

**West Chester Borough  
Chester County, Pennsylvania**

**Annual MS4 Status Report**

**Report Period from July 1, 2021 to June 30, 2022**

**Prepared for:  
West Chester Borough  
Chester County, PA**

**September 2022**

**Prepared by:**



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**WEST CHESTER BOROUGH  
CHESTER COUNTY, PENNSYLVANIA**

**ANNUAL MS4 STATUS REPORT  
REPORT PERIOD from JULY 1, 2021 to JUNE 30, 2022**

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## ANNUAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) STATUS REPORT

FOR THE PERIOD JULY 1, 2021 TO JUNE 30, 2022

GENERAL INFORMATION					
Permittee Name:	West Chester Borough	NPDES Permit No.:	PAI 130026		
Mailing Address:	401 East Gay Street	Effective Date:	June 1, 2019		
City, State, Zip:	West Chester, PA 19380	Expiration Date:	May 31, 2024		
MS4 Contact Person:	Sean Metrick	Renewal Due Date:	December 1, 2023		
Title:	Borough Manager	Municipality:	West Chester Borough		
Phone:	610-692-7574	County:	Chester		
Email:	smetrick@west-chester.com				
Co-Permittees (if applicable): N/A					
Appendix(ces) that permittee is subject to (select all that apply):					
<input type="checkbox"/> Appendix A <input checked="" type="checkbox"/> Appendix B <input type="checkbox"/> Appendix C <input type="checkbox"/> Appendix D <input checked="" type="checkbox"/> Appendix E <input type="checkbox"/> Appendix F					
WATER QUALITY INFORMATION					
Are there any discharges to waters within the Chesapeake Bay Watershed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Identify all surface waters that receive stormwater discharges from the permittee's MS4 and provide the requested information (see instructions).					
Receiving Water Name	Ch. 93 Class.	Impaired?	Cause(s)	TMDL?	WLA?
Plum Run	WWF	Yes	Water/Flow Variability	No	N/A
Blackhorse Run	TSF	Yes	Urban Runoff/Storm Sewers	No	N/A
Chester Creek Unnamed to (aka Goose Creek)	TSF	Yes	Municipal Point Source	Yes; TP	0.11 lbs/day
Taylor Run (via unnamed tributaries)	TSF	Yes	Habitat Modifications; Urban Runoff/Storm Sewers	No	N/A

**GENERAL MINIMUM CONTROL MEASURE (MCM) INFORMATION**

Have you completed all MCM activities required by the permit for this reporting period?  Yes  No

List the current entity responsible for implementing each MCM of your SWMP, along with contact name and phone number.

MCM	Entity Responsible	Contact Name	Phone
#1 Public Education and Outreach on Storm Water Impacts	West Chester Borough	Will Williams	484-887-2761
#2 Public Involvement/Participation	West Chester Borough	Will Williams	484-887-2761
#3 Illicit Discharge Detection and Elimination (IDD&E)	West Chester Borough	Will Williams	484-887-2761
#4 Construction Site Storm Water Runoff Control	West Chester Borough / DEP Statewide Program	BMPs #1-3 Will Williams; #4-8 DEP Statewide Program	484-887-2761
#5 Post-Construction Storm Water Management in New Development and Redevelopment	West Chester Borough / DEP Statewide Program	BMPs #1-3 Will Williams; #4-6 DEP Statewide Program	484-887-2761
#6 Pollution Prevention / Good Housekeeping	West Chester Borough	Will Williams	484-887-2761

**MCM #1 – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS**

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

- For new permittees only, has the written PEOP been developed and implemented within the first year of permit coverage?
- Date of latest annual review of PEOP: June 2022                      Were updates made?  Yes  No
- What were the plans and goals for public education and outreach for the reporting period? Verify whether any revisions are required and update PEOP accordingly.
- Did the MS4 achieve its goal(s) for the PEOP during the reporting period?  Yes  No
- Identify specific plans and goals for public education and outreach for the upcoming year: Re-evaluate the PEOP during the next year; develop a list of items that can be distributed to the public, analyze methods of distribution, and distribute the items.

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

- For new permittees only, have the target audience lists been developed and implemented within the first year of permit coverage?  Yes  No
- Date of latest annual review of target audience lists: June 2022                      Were updates made?  Yes  No

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

- For new permittees only, were stormwater educational and informational items produced and published in print and/or on the Internet within the first year of permit coverage?  Yes  No
- Date of latest annual review of educational materials: June 2022                      Were updates made?  Yes  No
- Do you have a municipal website?  Yes  No (URL: <https://www.west-chester.com/187/Stormwater-Management>)



**BMP #3: Regularly solicit public involvement and participation from the target audience groups using available distribution and outreach methods.**

1. At least one public meeting or other MS4 event must be held during the 5-year permit coverage period to solicit participation and feedback from target audience groups. Was this meeting or event held during the reporting period?

Yes  No If Yes, Date of Meeting or Event:

See attached Public Works Agendas and Council meeting minutes. Ordinance discussed at multiple meetings, and adopted at public meeting. Goose Creek Spring Cleanup manned by volunteers. The Spring Cleanup took place again this year (Streets/Sidewalks event), 52 volunteers picked up trash from streets, gutters, sidewalks and alleys from 120 blocks of the Borough. .

2. Report instances of cooperation and participation in MS4 activities; presentations the permittee made to local watershed and conservation organizations; and similar instances of participation or coordination with organizations in the community.

See included Borough Public Works Agendas and Council meeting minutes regarding stormwater and the Ordinance.

3. Report activities in which members of the public assisted or participated in the meetings and in the implementation of the SWMP, including education activities or efforts such as cleanups, monitoring, storm drain stenciling, or others.

Discussions at public meetings.

**MCM #2 Comments:**

**MCM #3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDD&E)**

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

1. For new permittees only, was the written IDD&E program developed within one year of permit coverage?

Yes  No

2. Date of latest annual review of IDD&E program: June 2022 Were updates made?  Yes  No

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

1. Have you completed a map(s) that includes all components of BMP #2?  Yes  No

2. Date of last update or revision to map(s): February 2022

3. Total No. of Outfalls in MS4: 49 Total No. of Outfalls Mapped: 49

4. Total No. of Observation Points: 2 Total No. of Observation Points Mapped: 2

5. During the reporting period, have you identified any existing outfalls that have not been previously reported to DEP in an NOI, application or annual report, or are any new MS4 outfalls proposed for the next reporting period?

Yes  No If Yes, select:  Existing Outfall(s) Identified  New Outfall(s) Proposed

**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, and any other components of the storm sewer collection system), including privately-owned components of the collection system where conveyances or BMPs on private property receive stormwater flows from upstream publicly-owned components.**

1. Have you completed a map(s) that includes all components of BMP #3?  Yes  No

If Yes and you are a new permittee and have not submitted the map(s) previously, attach the map(s) to this report.

If No, date by which permittee expects map(s) to be completed:

2. If Yes to #1, is the map(s) on the same map(s) as for outfalls and receiving waters?  Yes  No

3. Date of last update or revision to map(s): February 2022, copy included with report.

**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.**

For new permittees, all identified outfalls (and if applicable observation points) must be screened during dry weather at least twice within the 5-year period following permit coverage. For existing permittees, all identified outfalls (and if applicable observation points) must be screen during dry weather at least once within the 5-year period following permit coverage and, for areas where past problems have been reported or known sources of dry weather flows occur on a continual basis, outfalls must be screened annually during each year of permit coverage.

1. How many unique outfalls (and if applicable observation points) were screened during the reporting period?  
21

2. Indicate the percentage of all outfalls screened in the past five years. 100%

3. Indicate the percent of outfalls screened during the reporting period that revealed dry weather flows: 14%

4. Did any dry weather flows reveal color, turbidity, sheen, odor, floating or submerged solids?  Yes  No

5. If Yes for #4, attach all sample results to this report with a map identifying the sample location. Explain the corrective action(s) taken in the attachment. Locations noted and sample results included in the "Outfall Report". The Borough plans to investigate.

6. Do you use the MS4 Outfall Field Screening Report form (3800-FM-BCW0521) provided in the permit?  
 Yes  No If No, attach a copy of your screening report form.

**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.**

1. Do you have an ordinance (municipal) or SOP or other mechanism (non-municipal) that prohibits non-stormwater discharges?  Yes  No

If Yes, indicate the date of the ordinance or SOP: Chapter 94 Stormwater Management adopted 09-21-2022

2. If Yes to #1, is the ordinance or SOP consistent with DEP's 2022 Model Stormwater Management Ordinance (3800-PM-BCW0100j) with respect to authorized non-stormwater discharges?  Yes  No

If Yes to #2 and the ordinance or SOP has not been submitted to DEP previously, attach the ordinance or SOP.

3. Were there any violations of the ordinance or SOP during the reporting period?  Yes  No

If Yes to #3, complete the table below (attach additional sheets as necessary).

Violation Date	Nature of Violation	Responsible Party	Enforcement Taken

4. Did you approve any waiver or variance during the reporting period that allowed an exception to non-stormwater discharge provisions of an ordinance or SOP?  Yes  No

If Yes to #4, identify the entity that received the waiver or variance and the type of non-stormwater discharge approved.

**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.**

1. Was IDD&E-related information distributed to public employees, businesses, and the general public during the reporting period?  Yes  No

If Yes, what was distributed? Updated MCM#3 IDD&E Fact Sheet on webpage and at Public Works; "Report Problem or Violation" at webpage west-chester.com/190/Report-Problem-or-Violation

2. Is there a well-publicized method for employees, businesses and the public to report stormwater pollution incidents?

Yes  No

3. Do you maintain documentation of all responses, action taken, and the time required to take action?  Yes  No

**MCM #3 Comments:**

No stormwater problems were reported.

**MCM #4 – CONSTRUCTION SITE STORMWATER RUNOFF CONTROL**

Are you relying on PA's statewide program for stormwater associated with construction activities to satisfy this MCM?

Yes  No

*(If Yes, respond to questions for BMP Nos. 1, 2 and 3 only in this section. If No, respond to questions for all BMPs in this section)*

**BMP #1: The permittee may not issue a building or other permit or final approval to those proposing or conducting earth disturbance activities requiring an NPDES permit unless the party proposing the earth disturbance has valid NPDES Permit coverage (i.e., not expired) under 25 Pa. Code Chapter 102.**

During the reporting period, did you comply with 25 Pa. Code § 102.43 (relating to withholding building or other permits or approvals until DEP or a county conservation district (CCD) has approved NPDES permit coverage)?

Yes  No  Not Applicable (no building permit applications received)

**BMP #2: A municipality or county which issues building or other permits shall notify DEP or the applicable CCD within 5 days of the receipt of an application for a permit involving an earth disturbance activity consisting of one acre or more, in accordance with 25 Pa. Code § 102.42.**

During the reporting period, did you comply with 25 Pa. Code § 102.42 (relating to notifying DEP/CCD within 5 days of receiving an application involving an earth disturbance activity of one acre or more)?

Yes  No  Not Applicable (no building permit applications received)

**BMP #3: Enact, implement and enforce an ordinance or SOP to require the implementation and maintenance of E&S control BMPs, including sanctions for non-compliance, as applicable.**

1. Do you have an ordinance (municipal) or SOP or other mechanism (non-municipal) that requires implementation and maintenance of E&S control BMPs?  Yes  No

If Yes, indicate the date of the ordinance or SOP: Chapter 94 Stormwater Management adopted 9-21-2022

2. If Yes to #1, is the ordinance or SOP consistent with DEP's 2022 Model Stormwater Management Ordinance (3800-PM-BCW0100j)?  Yes  No

3. If Yes to #2 and the ordinance or SOP has not been submitted previously, attach a copy of the ordinance or SOP.

**BMP #4: Review Erosion and Sediment (E&S) control plans to ensure that such plans adequately consider water quality impacts and meet regulatory requirements.**

Specify the number of E&S Plans you reviewed during the reporting period:

**BMP #5: Conduct inspections regarding installation and maintenance of E&S control measures during earth disturbance activities. Maintain records of site inspections, including dates and inspection results, in accordance with the record retention requirements in this permit.**

Specify the number of E&S inspections you completed during the reporting period:

**BMP #6: Conduct enforcement when installation and maintenance of E&S control measures during earth disturbance activities does not comply with permit and/or regulatory requirements.**

Specify the number of enforcement actions you took during the reporting period for improper E&S:

**BMP #7: Develop and implement requirements for construction site operators to control waste at construction sites that may cause adverse impacts to water quality. The permittee shall provide education on these requirements to construction site operators.**

Specify the method(s) by which you are educating construction site operators on controlling waste at construction sites:

**BMP #8: Develop and implement procedures for the receipt and consideration of public inquiries, concerns, and information submitted by the public to the permittee regarding local construction activities.**

1. A tracking system has been established for receipt of public inquiries and complaints.  Yes  No

2. Specify the number of inquiries and complaints received during the reporting period:

**MCM #4 Comments:**

**MCM #5 – 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.**

1. Do you have an ordinance (municipal) or SOP or other mechanism (non-municipal) that requires implementation and maintenance of post-construction stormwater management (PCSM) BMPs?  Yes  No  
If Yes, indicate the date of the ordinance or SOP: Chapter 94 Stormwater Management adopted 9-21-2022
2. If Yes to #1, is the ordinance or SOP consistent with DEP's 2022 Model Stormwater Management Ordinance (3800-PM-BCW0100j)?  Yes  No
3. If Yes to #2 and the ordinance or SOP has not been submitted previously, attach a copy of the ordinance or SOP.

**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.**

1. Do you have an ordinance (municipal) or SOP or other mechanism (non-municipal) that encourages and expands the use of LID in new development and redevelopment?  Yes  No  
If Yes, indicate the date of the ordinance or SOP: 9/21/2022
2. If Yes to #1, is the ordinance or SOP consistent with DEP's 2022 Model Stormwater Management Ordinance (3800-PM-BCW0100j)?  Yes  No
3. If Yes to #2 and the ordinance or SOP has not been submitted previously, attach a copy of the ordinance or SOP.

**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.**

1. Do you have an inventory of all PCSM BMPs that were installed to meet requirements in NPDES Permits for Stormwater Discharges Associated with Construction Activities approved since March 10, 2003?  Yes  No  
If Yes to #1, complete Table 1 on the next page.
2. Has proper O&M occurred during the reporting period for all PCSM BMPs?  Yes  No
3. If No to #2, explain what action(s) the permittee has taken or plans to take to ensure proper O&M. NOTE: Borough performs PCSWM Inspections of all BMPs per Ordinance requirements and per PCSWM Agreements. Tracking Spreadsheet included; the Borough tracks all PCSWM BMPs required by Ordinance (including those for projects under one acre). Inspection memos for this permit year also included.

*If you are relying on PA's statewide program for stormwater associated with construction activities, you may skip to MCM #6, otherwise complete all questions for BMPs #4 - #6 in this section.*

**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.**

1. Specify the number of PCSM Plans reviewed during the reporting period for projects disturbing 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):
2. Has a tracking system been established and maintained to record qualifying projects and their associated BMPs?  
 Yes  No

**PCSM BMP INVENTORY**

**Table 1.** To complete the information needed for MCM #5, BMP #3, list all existing structural BMPs that discharge stormwater to the permittee's MS4 that were installed to satisfy PCSM requirements for earth disturbance activities under Chapter 102, and provide the requested information (see instructions).

<b>BMP No.</b>	<b>BMP Name</b>	<b>DA (ac)</b>	<b>Entity Responsible for O&amp;M</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Date Installed</b>	<b>O&amp;M Requirements</b>	<b>NPDES Permit No.</b>
1	Paxson	7.68	Paxson Park LP	39°57'8"	75°36'39"	7/29/2014	O&M Manual	PAI011505050
2	WCU Dorms Phase 1 Seepage Bed 1		University Student Housing LLC	39°57'6"	75°36'6"	9/3/2009	O&M Manual	PAG2001507079
3	WCU Dorms Phase 1 Seepage Bed 2		University Student Housing LLC	39°57'1"	75°36'2"	9/3/2009	O&M Manual	PAG2001507079
4	WCU Dorms Phase 1 Seepage Bed 3		University Student Housing LLC	39°57'0"	75°36'2"	9/3/2009	O&M Manual	PAG2001507079
5	WCU Dorms Phase 1 Seepage Bed 4		University Student Housing LLC	39°57'5"	75°36'6"	9/3/2009	O&M Manual	PAG2001507079
6	Union Station UG Bed #1	1.328	Davis Realty Holdings LP	39°57'33"	75°35'51"	10/7/2019	O&M Manual	PAG2001509014-R
7	Union Station UG Bed #2	0.521	Davis Realty Holdings LP	39°57'35"	75°35'50"	10/7/2019	O&M Manual	PAG2001509014-R
8	Union Station UG Bed #3	0.521	Davis Realty Holdings LP	39°57'37"	75°35'53"	10/7/2019	O&M Manual	PAG2001509014-R
9	Shanahan Townhomes UG Detention Storm Tank #1	2.3	105 Everhart Development, LLC	39°57'26"	75°36'51"	10/26/2012	O&M Manual	PAG2001509023
10	Shanahan Townhomes Infiltration Trench #1	0.21	105 Everhart Development, LLC	39°57'28"	75°36'50"	10/26/2012	O&M Manual	PAG2001509023
11	Shanahan Townhomes Infiltration Trench #2	0.17	105 Everhart Development, LLC	39°57'26"	75°36'53"	10/26/2012	O&M Manual	PAG2001509023

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12	WCU Recreation Ctr Infiltration Basin A		WCU	39°57'8"	75°36'15"		O&M Manual	
13	WCU Recreation Ctr Infiltration Basin B		WCU	39°57'7"	75°36'13"		O&M Manual	
14	WCU Recreation Ctr East Plaza Green Roof		WCU	39°57'8"	75°36'10"		O&M Manual	
15	WCU Recreation Ctr West Plaza Green Roof		WCU	39°57'7"	75°36'13"		O&M Manual	
16	WCU Recreation Ctr Bio-retention Area		WCU	39°57'7"	75°36'10"		O&M Manual	
17	220 E Chestnut St (120 E Gay St/220 Chestnut Assoc) UG SW Facility	1.372	220 Chestnut Associates, LP	39°57'45"	75°36'7"	11/3/2016	O&M Manual	PAI01151241
18	220 E Chestnut St (120 E Gay St/220 Chestnut Assoc) Green Roof		220 Chestnut Associates, LP	39°57'45"	75°36'7"	11/3/2016	O&M Manual	PAI01151241
19	220 E Chestnut St (120 E Gay St/220 Chestnut Assoc) Amended Soil Areas		220 Chestnut Associates, LP	39°57'45"	75°36'7"	11/3/2016	O&M Manual	PAI01151241
20	WCU Business & Public Affairs Ctr BioRetention Area A	0.34	WCU	39°57'16"	75°36'1"	3/15/2017	O&M Manual	PAG02001513014
21	WCU Business & Public Affairs Ctr BioRetention Area B		WCU	39°57'15"	75°36'1"	3/15/2017	O&M Manual	PAG02001513014
22	WCU Business & Public Affairs Ctr BioRetention Area C		WCU	39°57'15"	75°36'2"	3/15/2017	O&M Manual	PAG02001513014

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23	WCU Business & Public Affairs Ctr Subsurface Detention Basin #1		WCU	39°57'15"	75°36'3"	3/15/2017	O&M Manual	PAG02001513014
24	WCU Dorm "C" Subsurface Detention Basin		University Student Housing, LLC	39°57'2"	75°36'8"	6/22/2015	O&M Manual	
25	WCU Dorm "C" Street Sweeping Area 1	0.07	University Student Housing, LLC	39°57'60"	75°36'9"	6/22/2015	O&M Manual	
26	WCU Dorm "C" Street Sweeping Area 2	0.24	University Student Housing, LLC	39°57'2"	75°36'11"	6/22/2015	O&M Manual	
27	WCU Quad Additions Infiltration Basin 1	0.335	WCU	39°57'7"	75°35'53"	8/22/2014	O&M Manual	
28	WCU Quad Additions Infiltration Basin 2	0.678	WCU	39°57'9"	75°35'54"	8/22/2014	O&M Manual	
29	Sharpless Hall Redevelopment - The Hickman UG Infiltration Basin	0.81	Hickman Friends Senior Community of West Chester AKA Friends Meeting	39°57'49"	75°36'26"		O&M Manual	PAG02001516002
30	Sharpless Hall Redevelopment - The Hickman UG Inlet Filters		Hickman Friends Senior Community of West Chester AKA Friends Meeting	39°57'50"	75°36'27"		O&M Manual	PAG02001516002
31	Sharpless Hall Redevelopment - The Hickman Soil Restoration/Perm Veg		Hickman Friends Senior Community of West Chester AKA Friends Meeting	39°57'50"	75°36'27"		O&M Manual	PAG02001516002
32	WCU Commons Green Roof	0.911		39°57'7"	75°36'7"		O&M Manual	PAC150028
33	WCU Commons SW Detention Bed 1			39°57'6"	75°36'8"		O&M Manual	PAC150028
34	WCU Commons Extend SW Detention Vault #2	0.697		39°57'10"	75°36'8"		O&M Manual	PAC150028

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35	WCU Commons Extend SW Infiltration Bed #3			39°57'5"	75°36'5"		O&M Manual	PAC150028
36	WCU Commons Rain Garden #1			39°57'7"	75°36'5"		O&M Manual	PAC150028
37	WCU Commons Rain Garden #2			39°57'5"	75°36'5"		O&M Manual	PAC150028
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**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).**

1. During the reporting period have you inspected all qualifying development and redevelopment projects during the construction phase to ensure proper installation of approved structural BMPs?  
 Yes  No  Not Applicable (no qualifying projects during reporting period)
2. Has a tracking system been established and maintained to record results of inspections?  
 Yes  No

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

Have you developed a written plan that addresses: 1) minimum requirements for use of structural and/or non-structural BMPs in plans for development and redevelopment; 2) criteria for selecting and standards for sizing stormwater BMPs; and 3) implementation of an inspection program to ensure that BMPs are properly installed?  Yes  No

**MCM #5 Comments:**

### **MCM #6 – POLLUTION PREVENTION / GOOD HOUSEKEEPING**

**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.**

1. Have you identified all facilities and activities owned and operated by the permittee that have the potential to generate stormwater runoff into the MS4?  Yes  No
2. When was the inventory last reviewed? A map of borough owned / maintained properties is being created; the Borough will verify and the map will be revised accordingly, as well as documented during this permit term.
3. When was it last updated? Will be updated this permit term.

**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.**

1. Have you developed a written O&M program for the operations identified in BMP #1?  Yes  No
2. Date of last review or update to written O&M program: June 2019

**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.**

1. Have you developed an employee training program?  Yes  No
2. Date of last review or update to training program: May 2020                      Date of latest training: March 2022

3. Training topics covered:

Employee Good Housekeeping Training Manual / booklet read by new employees; see included acknowledgments. Also West Chester is a member of the Christina Watersheds Municipal Partnership (CWMP); the CWMP provided information and services to meet several MCMs. CWMP MS4 Annual report is included with this report.

4. Name(s) of training presenter(s):

Training program is a booklet to be read (by new employees); copy included with last year's report. CWMP hosted many webinars, workshops and volunteer events. See included CWMP Public Education and Public Outreach information.

5. Names of training attendees:

See included acknowledgment list / emails.

**MCM #6 Comments:**

The Borough did not have any inlets repairs from 7/21 – 6/22. There were storm pipe replaced.

**POLLUTANT CONTROL MEASURES (PCMs)**

Indicate the status of implementing PCMs in Appendices A, B and/or C by completing the table below. Skip this section if PCMs are not applicable.

Task	Date Completed	Attached	Anticipated Completion Date
Storm Sewershed Map(s)	June 2019	<input type="checkbox"/>	June 2019
Source Inventory	June 2020	<input type="checkbox"/>	June 2020
Investigation of Suspected Sources		<input type="checkbox"/>	prior to 9/30/2022
Ordinance/SOP for Controlling Animal Wastes		<input type="checkbox"/>	prior to 9/30/2022

**PCM Comments:** The Borough knows of no sanitary sewer discharges into Goose Creek; the Borough is also not aware of any goose problems.

**POLLUTANT REDUCTION PLANS (PRPs) AND TMDL PLANS**

1. Complete this section if the development and submission of a PRP and/or TMDL Plan was required as an attachment to the latest NOI or application or was required by the permit, regardless of whether DEP has approved the plan(s).

Type of Plan	Submission Date	DEP Approval Date	Surface Waters Addressed by Plan
<input type="checkbox"/> Chesapeake Bay PRP (Appendix D)			Chesapeake Bay
<input checked="" type="checkbox"/> Impaired Waters PRP (Appendix E)	July 31, 2018	June 1, 2019	Brandywine Creek, Blackhorse Run, Plum Run, Taylor Run, Chester (Goose) Creek
<input checked="" type="checkbox"/> TMDL Plan (Appendix F)	July 31, 2018	June 1, 2019	Chester Creek / Goose Creek
<input type="checkbox"/> Combined Chesapeake Bay / Impaired Waters PRP			Chesapeake Bay,
<input type="checkbox"/> Combined PRP / TMDL Plan			

Joint Plan (if checked, list the name of the MS4 group or names of all entities participating in the joint plan below)

Joint Plan Participants:

2. Identify the pollutants of concern and pollutant load reduction requirements under the permit (see instructions).

Type of Plan	TSS Load Reduction (lbs/yr)	TP Load Reduction (lbs/yr)	TN Load Reduction (lbs/yr)
<input type="checkbox"/> Chesapeake Bay PRP (Appendix D)			
<input checked="" type="checkbox"/> Impaired Waters PRP (Appendix E)	Brandywine Cr 60,946 Chester Cr 22,161		
<input checked="" type="checkbox"/> TMDL Plan (Appendix F)		Chester Cr 4.57	
<input type="checkbox"/> Combined Chesapeake Bay / Impaired Waters PRP			
<input type="checkbox"/> Combined PRP / TMDL Plan			

3. Date Final Report Demonstrating Achievement of Pollutant Load Reductions Due: May 31, 2024

4. Have any modifications to the plan(s) occurred since DEP approval?  Yes  No

If Yes to #4, was the updated plan(s) submitted to DEP?  Yes  No

If Yes to #4, did you comply with the public participation requirements of the applicable appendix?  Yes  No

If Yes to #4, describe the plan modifications.

5. Summary of progress achieved during reporting period.

Tree planting continuing / ongoing, and the Borough is organizing the planting records. 401 trees have been planted to date, 116 of which were planted in Fall 2018 and Spring 2019; 222 were planted in 2020-2021 (which includes 38 replacement trees; therefore 184 net trees); 101 trees were planted Spring 2022. 2022 Spring tree planting information is included. A Tree Location map has been created and is included ASKING ABOUT MAP. Discussion of revising the PRPs and TMDL reports begun. The Borough is also seeking other sites for BMPs.

6. Anticipated activities for next reporting period.

Revise PRP and TMDL plans. Looking for other sites for BMPs. Complete Greenview Alley projects.

**PRP/TMDL Plan Comments:**

**NEW BMPs FOR PRP/TMDL PLAN IMPLEMENTATION**

**Table 2.** List all new structural BMPs installed and ongoing non-structural BMPs implemented during the reporting period that are being used toward achieving load reductions in the permittee's PRP and/or TMDL Plan (see instructions).

BMP No.	BMP Name	DA (ac)	% Imp.	BMP Extent	Units	Latitude	Longitude	Date Installed or Implemented	Planning Area?	Ch. 102?	Annual Sediment Load Reduction (lbs/yr)
3	Street Sweeping (Chester Creek)					° ' "	° ' "	+25x/year	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2,288
4	Street Sweeping (Brandywine Cr)					° ' "	° ' "	+25x/year	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7,150
5	Tree Planting				401	° ' "	° ' "	2018-2022	<input checked="" type="checkbox"/>	<input type="checkbox"/>	79.24
						° ' "	° ' "		<input type="checkbox"/>	<input type="checkbox"/>	

**BMP INVENTORY FOR PRP/TMDL PLAN IMPLEMENTATION**

**Table 3.** List all existing structural BMPs that have been installed in prior reporting periods and are eligible to use toward achieving load reductions in the permittee's PRP and/or TMDL Plan (see instructions).

BMP No.	BMP Name	DA (ac)	% Imp.	BMP Extent	Units	Latitude	Longitude	Date Installed	Annual Sediment Load Reduction (lbs/yr)	Date of Latest Inspection	Satisfactory?
1	Fugett Park /Borough Hall Infiltration Basin (Chester Creek)	~3				75°35'56"	39°57'51"	February 2019	1,660 lbs/yr	9/12/19 8/18/20	yes
2	Veterans Park / Pine Alley Infiltration Basin (Brandywine Cr)	0.55				75°36'42"	39°57'39"	February 2019	483 lbs/yr	9/12/19 8/18/20	yes

### CERTIFICATION

**For PAG-13 Permittees:** I have read the latest PAG-13 General Permit issued by DEP and agree and certify that (1) the permittee continues to be eligible for coverage under the PAG-13 General Permit and (2) the permittee will continue to comply with the conditions of that permit, including any modifications thereto. I understand that if I do not agree to the terms and conditions of the PAG-13 General Permit, I will apply for an individual permit within 90 days of publication of the General Permit. I also acknowledge that any facility construction needed to comply with the General Permit requirements shall be designed, built, operated, and maintained in accordance with operative laws and regulations.

**For All Permittees:** I certify under penalty of law that this report was 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Sean Metrick

*Sean Metrick*

\_\_\_\_\_  
Name of Responsible Official

\_\_\_\_\_  
Signature

610-692-7574

September 28, 2022

\_\_\_\_\_  
Telephone No.

\_\_\_\_\_  
Date

**PHASE II STORM WATER MANAGEMENT PROGRAM PUBLIC EDUCATION AND PARTICIPATION PLAN:  
QUESTIONS FOR DEVELOPING YOUR PLAN**

**PUBLIC EDUCATION COMPONENT**

<b>Who Are We Trying to Educate?</b>	<b>How Large is the Audience?</b>	<b>How Do They Receive Information?</b>	<b>What Organizations Focus on Them?</b>	<b>Strategies for Distributing Educational Materials to this Audience</b>
Municipal Employees	<p>How many departments/agencies address storm water-related issues in their responsibilities?</p> <p><b>There are four (4):</b>            Building &amp; Housing (4)            Public Works (30)            Wastewater (16)            Sustainability (1)</p> <p>How many employees are there in these departments?</p> <p><b>Fifty-one (51)</b></p>	<p>What publications do employees regularly receive (e.g., new employee orientation guide; employee newsletter; paycheck)?</p> <p><b>Internal emails, memo notice board, SharePoint and monthly staff meetings.</b></p> <p>What is the community website?</p> <p><a href="http://www.west-chester.com">www.west-chester.com</a></p> <p>Where are central information sources located at each government facility?</p> <p><b>Website &amp; SharePoint</b></p> <p>When do staff meetings take place?</p> <p><b>At least once per month</b></p>	<p>What groups do local government employees belong to (e.g., unions; local watershed organizations; churches; special committees; nature centers; block clubs; etc.)?</p> <p><b>All of the above, but primarily AFSCME Union</b></p>	<ul style="list-style-type: none"> <li>• Use columns 2, 3, and 4 to determine the most appropriate ways to distribute information to a majority of the target audience.</li> <li>• <b>Newsletter</b></li> <li>• <b>Emails</b></li> <li>• <b>Website</b></li> <li>• <b>Special Committees</b></li> <li>• <b>Newspaper</b></li> </ul>

Who Are We Trying to Educate?	How Large is the Audience?	How Do They Receive Information?	What Organizations Focus on Them?	Strategies for Distributing Educational Materials to this Audience
Residents	<p>What is the total population of your community?</p> <p><b>Approximately 18,000</b></p> <p>How many households are located within your community?</p> <p><b>Approximately 5,000</b></p>	<p>What is the most popular newspaper in your community?</p> <p><b>Daily Local News</b></p> <p>What newsletters do residents receive and how often?</p> <p><b>Borough Newsletter and we are hoping every six (6) months</b></p> <p>What libraries do people visit?</p> <p><b>West Chester Public Library</b></p> <p>What churches do people attend?</p> <p><b>Various denominations of approximately 78 churches</b></p> <p>Are there programs in place to reach new residents that move to your community?</p> <p><b>Primarily website &amp; effort by realtors along with neighborhood groups.</b></p>	<p>What groups exist that target homeowners (e.g., homeowners associations; block clubs; neighborhood development associations; recreational groups; etc.)?</p> <p><b>All of the above in addition to neighborhood groups, e.g.:</b></p> <ul style="list-style-type: none"> <li>• Friends of Veteran Memorial Park</li> <li>• Friends of Everhart Park</li> <li>• Friends of Marshall Square Park</li> <li>• Friends of Hoopes Park</li> <li>• Friends of Barclay Park</li> <li>• CASE (southeast residents' neighborhood group)</li> </ul>	<ul style="list-style-type: none"> <li>• Building &amp; Housing informing developers</li> <li>• Daily Local News Newspaper</li> <li>• Borough Website</li> <li>• Storm Drain Labeling</li> <li>• Volunteer Group</li> <li>• Borough Newsletter</li> </ul> <p><b>In addition, by way of all these organizations meetings.</b></p>

Who Are We Trying to Educate?	How Large is the Audience?	How Do They Receive Information?	What Organizations Focus on Them?	Strategies for Distributing Educational Materials to this Audience
Schools	<p>How many schools are located in the community? (Classify as elementary schools, High schools, Colleges and/or universities).</p> <p><b>1 – University 1 – High School 1 – Elementary</b></p> <p>What is the approximate student population at each of these schools?</p> <p><b>University: 17,000 High: 1,226 Elementary: 800</b></p>	<p>Which schools have newspapers and how often do they go out?</p> <p><b>West Chester University &amp; morning announcements at other schools</b></p> <p>How often does the student body gather for assemblies?</p> <p><b>As need, varies</b></p> <p>When are guest speakers invited to visit the schools?</p> <p><b>No set schedule</b></p>	<p>What groups might students belong to at all levels (e.g., boy/girl scouts; 4-H Club; Junior Achievement; student councils; school environmental clubs; local chapters of environmental organizations; nature centers, etc.)?</p> <p><b>All of the above in addition to West Chester Area School District and Archdiocese of Philadelphia.</b></p>	<ul style="list-style-type: none"> <li>• <b>Primarily via Website</b></li> <li>• <b>Emails</b></li> <li>• <b>Individual School Boards</b></li> </ul>
Businesses	<p>How many businesses are located within your community?</p> <p><b>There are several hundred businesses in the Borough</b></p>	<p>What newsletters specifically target local businesses?</p> <p><b>BID (Business Improvement District), Daily Local News &amp; Chamber of Commerce Newsletter</b></p> <p>What newspapers and other periodicals do business owners subscribe to?</p> <p><b>Various Newspapers &amp; Periodicals including Daily Local News, News Magazines – time, Philadelphia Inquirer, etc.</b></p> <p>What local programs/organizations work to recruit and retain new businesses in your community?</p>	<p>What groups or associations might businesses belong to or communicate with businesses (e.g., chamber of commerce; trade associations; rotary club; community foundations; small business associations; etc.)?</p> <p><b>All of the above including:</b></p> <ul style="list-style-type: none"> <li>• <b>Better Business Bureau</b></li> <li>• <b>Chester County Art Association</b></li> <li>• <b>Chester County Library</b></li> <li>• <b>West Chester County Club</b></li> <li>• <b>West Chester Community Center</b></li> <li>• <b>Business Improvement District (BID)</b></li> <li>• <b>YMCA</b></li> <li>• <b>West Chester Area Senior Center</b></li> <li>• <b>Chamber of Commerce</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Primarily via Website</b></li> <li>• <b>Emails</b></li> <li>• <b>Public Hearing</b></li> <li>• <b>Chamber Newsletter</b></li> <li>• <b>BID</b></li> </ul>

Who Are We Trying to Educate?	How Large is the Audience?	How Do They Receive Information?	What Organizations Focus on Them?	Strategies for Distributing Educational Materials to this Audience
<p>Developers</p>	<p>How many developers and contractors work within your community?</p> <p><b>There are numerous that work within West Chester</b></p> <p>How many developers have submitted building permit requests?</p> <p><b>Approximately 557 permits issued</b></p>	<p>Where do developers go to get information on the community's development requirements?</p> <ul style="list-style-type: none"> <li>• <b>Building &amp; Housing Department</b></li> <li>• <b>Website</b></li> <li>• <b>Daily Local News</b></li> <li>• <b>Chamber of Commerce</b></li> </ul> <p>What newsletters specifically target developers in your area?</p> <p><b>Borough of West Chester and Building &amp; Housing Webpage</b></p> <p>What newspapers and other periodicals do developers subscribe to?</p> <p><b>Home Builders Association and Chamber of Commerce</b></p>	<p>What groups or associations might developers belong to or communicate with developers (e.g., chamber of commerce; trade associations; rotary club; community foundations; small business associations; etc.)?</p> <p><b>All of the above including Home Builders Association and both Chamber of Commerce Delaware and Chester County.</b></p>	<ul style="list-style-type: none"> <li>• <b>Advertisement in Daily Local</b></li> <li>• <b>Delaware County Daily Times</b></li> <li>• <b>Borough Webpage</b></li> </ul>

**PHASE II STORM WATER MANAGEMENT PROGRAM PUBLIC EDUCATION AND PARTICIPATION PLAN:  
QUESTIONS FOR DEVELOPING YOUR PLAN**

**PUBLIC PARTICIPATION COMPONENT**

Who Are We Trying to Involve?	What Organizations Do They Belong To?	What Volunteer Programs Do These Organizations Run?	What is the Scope of these Programs and How Often Do They Take Place?	Strategies for Partnering with Community Organizations to Involve the Public in Storm Water Management
Municipal Employees	<p>What groups do local government employees belong to (e.g., unions; local watershed organizations; churches; special committees; nature centers; block clubs; etc.)?</p> <p><b>All of the above &amp; AFSCME Union</b></p>	<p>List the volunteer programs that each organization listed in Column 1 administers within the community.</p> <p><b>First West Chester Fire Department</b></p>	<p>Describe the goals of each program listed in Column 2 and provide details on when and where volunteer activities take place.</p> <p><b>Primary goal is safety within the community</b></p>	<ul style="list-style-type: none"> <li>• Using the information in Columns 2, 3, and 4, describe the most appropriate ways to establish partnerships with existing volunteer programs in the community and incorporate storm water activities such as storm drain stenciling, stream clean-ups, and volunteer water quality monitoring.</li> </ul>
Residents	<p>What groups exist that target homeowners (e.g., homeowners associations; block clubs; neighborhood development associations; recreational groups; etc.)?</p> <p><b>All of the above including CASE and other neighborhood groups</b></p>	<p><b>Chester-Ridley Crum (CRC) Watershed Association</b></p>	<p><b>The CRC is a non-profit association that is dedicated to Watershed Improvement. They provide training and annual stream clean up.</b></p>	<ul style="list-style-type: none"> <li>• We donate employee time in clean-up efforts</li> <li>• Monetary sponsorship donations</li> <li>• Participate at regular meetings</li> </ul>
Schools	<p>What groups might students belong to at all levels (e.g., boy/girl scouts; 4-H Club; Junior Achievement; student councils; school environmental clubs; local chapters of environmental organizations; nature centers, etc.)?</p> <p><b>All of the above</b></p>	<ul style="list-style-type: none"> <li>• <b>Boys &amp; Girls Club</b></li> <li>• <b>Chester County (CCI)</b></li> </ul>	<p><b>The club initiates various activities within the Borough on a weekly basis.</b></p>	<ul style="list-style-type: none"> <li>• We could coordinate by having inlet tags replaced</li> <li>• Identify inlets that need cleaning, etc.</li> </ul>

Who Are We Trying to Involve?	What Organizations Do They Belong To?	What Volunteer Programs Do These Organizations Run?	What is the Scope of these Programs and How Often Do They Take Place?	Strategies for Partnering with Community Organizations to Involve the Public in Storm Water Management
Businesses	<p>What groups or associations might businesses belong to or communicate with businesses (e.g., chamber of commerce; trade associations; rotary club; community foundations; small business associations; etc.)?</p> <p><b>All of the above:</b></p> <ul style="list-style-type: none"> <li>• <b>Better Business Bureau</b></li> <li>• <b>BID</b></li> <li>• <b>Chamber of Commerce</b></li> <li>• <b>West Chester Country Club</b></li> </ul>	<p><b>Habitat for Humanity</b></p>	<p>This is a volunteer group that builds homes for needy residents.</p>	<ul style="list-style-type: none"> <li>• <b>By using these addresses, we could transmit newsletter and address certain meetings to spread pertinent information.</b></li> </ul>
Developers	<p>What groups or associations might developers belong to or communicate with developers (e.g., chamber of commerce; trade associations; rotary club; community foundations; small business associations; etc.)?</p> <p><b>All of the above and Home Builders Association</b></p>	<ul style="list-style-type: none"> <li>• <b>Adopt-A-Highway</b></li> <li>• <b>Habitat for Humanity</b></li> </ul>	<p>This is a volunteer group of residents that builds homes for those in need.</p>	<ul style="list-style-type: none"> <li>• <b>By utilizing contact information and through networking we could target their resources through meetings, etc.</b></li> </ul>



What can we help you find?



- Stream Protection Fee Program
- Reducing Pollutants
- Report Problem or Violation
- EPA Fact Sheets

You Are Here: [Government](#) > [Departments](#) > [Public Works](#) > Stormwater Management

## STORMWATER MANAGEMENT

### ABOUT THE BOROUGH'S STORMWATER SYSTEM

In 2003, West Chester began a comprehensive stormwater management program mandated by the Federal Environmental Protection Agency (EPA) and monitored by the Pennsylvania Department of Environmental Protection (PADEP). The program is designed to manage stormwater, both by protecting water quality and by preventing high volumes of runoff from causing flooding in developed areas. Any municipality with a population of at least 5,000, including counties, must comply with the program. The [Stream Protection Fee Program](#) was implemented in 2017 as a way to comply with this mandate by raising revenue to comprehensively address stormwater management in the borough.

### WATER POLLUTION

Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that release pollutants into waters of the United States. Point sources can be pipes or man-made ditches that carry stormwater from the street level to the nearest stream.

When left uncontrolled, these discharges can result in fish kills, destruction of wildlife habitats, and contamination of drinking water and recreational waterways. Sediment from yard debris and construction sites can cause stream bank erosion, vegetation destruction, and flooding. It is therefore extremely important to recognize that individual actions can multiply the effect on water quality.

### FACTORS TO POLLUTION

Concentrated development in urbanized areas substantially increases impervious surfaces, such as streets, driveways and parking lots. These surfaces are the primary collector of pollutants until a rain washes them into nearby storm drains. Common pollutants include pesticides, fertilizers, oils, salt, litter, and sediment. Storm drains do not run to treatment plants. They empty directly into waterways.

### PROTECTING WATER QUALITY

Because West Chester owns the stormwater conveyance system within the municipal boundaries, the responsibility lies with the borough to ensure that any water pollution entering the system is minimized to the fullest extent possible. The borough strives to protect water quality through:

- Education of residents, businesses, developers, and its own staff
- Use of Best Management Practices (BMPs) to reduce the discharge of pollutants into streams

For instance, a large component of the program is the requirement that the borough screens its stormwater outfalls for potential conditions of pollution and takes corrective action in the event a pollutant source is found.

### CITIZEN PARTICIPATION & AWARENESS

Another major component of the program requires an effort by the borough to increase citizen participation and awareness. It is important for West Chester's residents and businesses to be aware that increased stormwater runoff and pollution can occur from many different sources, and can cause a number of different problems.

### Contact Us



Don Edwards  
Director of Public Works

205 Lacey Street  
West Chester, PA 19380

Office: 610-696-5282  
Fax: 610-436-1383

E-mail

Office Hours: 8:00 AM -  
4:00 PM

### Quick Links

- [Chester County Conservation District](#)
- [Chester County Water Resources Authority](#)
- [Chester - Ridley - Crum Watersheds Association](#)

[VIEW ALL](#)



MEETING & DOCUMENT  
ARCHIVES



PERMITS, POSTINGS  
PAYMENTS & TICKET  
APPEALS



EMPLOYMENT  
OPPORTUNITIES



SUBMIT REQUESTS



PROPERTY INFORMATION  
SEARCH



ORDINANCES

## REDUCING POLLUTANTS

### CAR & TRUCK WASTE

Oil stains on your driveway and outdoor spills of antifreeze, brake fluid, and other automotive fluids are easily carried away by a rainstorm. Routine maintenance can prevent your car from leaking and help identify potential leaks. Pans, carpet scraps, and matting can also catch drips.

Never dump used oil, antifreeze, or gasoline down a storm drain, in a ditch, or on the ground. These wastes will end up in a nearby lake or stream, or they may pollute your drinking water.

### SAFE DISPOSAL

To learn how to safely dispose of automotive waste, please visit the [Chester County Solid Waste Authority website](#).

### HOUSEHOLD PRODUCTS STORED OUTSIDE THE HOME

Most households store lawn and garden products like weed killers, insect killers, and fertilizers. If these products reach stormwater or floodwater systems, it can transport them into surface water and possibly to your drinking water.

Pool chemicals, salt for water softeners, and a wide variety of other chemical products can also cause trouble if they washed into the system. Keeping such products in waterproof containers and storing them up high and out of the potential path of runoff or floods is important.

### CHEMICAL WASTE

When mixing chemicals, try to do so within a washtub so spills will be contained. If you spill chemicals, act quickly to contain and clean up the spill. Using more pesticides or fertilizers than you need only invites problems. Timing of applications is important. Do not apply pesticides if rain is expected within 24 hours.

### ANIMAL WASTE

The risk of stormwater contamination increases if pet wastes are allowed to accumulate in animal pen areas or left on sidewalks, streets, or driveways where runoff can carry them to storm sewers. Droppings may either be buried or wrapped and put in the garbage for disposal.

<https://extension.psu.edu/roadside-guide-to-clean-water-proper-pet-waste-disposal>

### YARD & GARDEN WASTE

If left on sidewalks, driveways or roads, grass clippings and other yard wastes will wash away, clogging storm sewers. Rather sweep clippings back onto the grass and compost leaves and garden wastes on your property to recycle nutrients.

## REPORT PROBLEM OR VIOLATION

### WHAT TO REPORT

Citizens can help report violations or problems they notice in their local streams before more damage and pollution occurs. You may be the first to recognize illicit discharges. This typically are any other flows other than rainwater being directed into storm sewers or out of pipes into streams. Dry weather flows defined as flows from stormwater outfall pipes after a 48-hour period without rain, should also be reported to your municipality for further investigation.

New stormwater regulations from Pennsylvania's Department of Environmental Protection (DEP) require that your municipality investigate more thoroughly potentially illicit discharges into our streams. You can help by promptly reporting the following events to the authorities listed below.

### REPORTABLE PROBLEMS OR VIOLATIONS

- Clogged or leaking sewer lines
- Dry weather flows from outfall pipes into streams
- Dumping, spills, or other directed discharges, other than rainwater, into storm sewers or streams
- Inadequately treated discharges from sewage treatment plants
- Fish kills
- Observed pollution event or pollutants in streams
- Sediment leaving a construction site during rain events and other violations
- Water main breaks

### WHO TO CALL

Issue	Contact	Availability	Phone Number	Additional Information
Water Quality	DEP Water Quality Hotline	Anytime Including Weekends and Evenings	484-250-5990	
Water Quality Complaints	DEP Water Quality Complaints	Weekdays 8:30 a.m. - 4:30 p.m.	484-250-5991	
Off-Site Discharge of Sediment, Erosion, and Other Improper Controls During Construction	Chester County Conservation District		610-925-4920	Send Photo, Full Address, and Directions
Clogged or Leaking Sanitary Sewer Lines	Borough of West Chester	Weekdays	610-696-5282	After Hours and on Weekends, Call West Chester Police at 610-696-2700
Sewage Smell in Creek	Borough of West Chester	Weekdays	610-696-5282	After Hours and on Weekends, Call West Chester Police at 610-696-2700
Illegal Discharges Into Creeks or Storm Drains	Borough of West Chester	Weekdays	610-696-5282	After Hours and on Weekends, Call West Chester Police at 610-696-2700
Fish Kills	Pennsylvania Fish and Boat Commission	Anytime	717-626-0228	For 24-Hour Service, Call DEP Hotline at 484-250-5900
Dry Weather Outfall Flows	Borough of West Chester	Weekdays	610-696-5282	
Broken Water Mains	Aqua Pennsylvania	Anytime	610-525-1402	

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## EPA FACT SHEETS

[Be Storm Water Smart](#) - Understanding How Storm Water Affects Your Wallet, Safety, Health & Environment in Pennsylvania

[MS4 Program Overview Fact Sheet \(PDF\)](#)

[Illicit Dumping Fact Sheet \(PDF\)](#)

[Green Infrastructure - Healthy Communities \(PDF\)](#)

[NPDES Urban Facts \(PDF\)](#)

[Facts About Nutrient Pollution EPA \(PDF\)](#)

[MS4 Resource Guide IDDE \(PDF\)](#)

[Everhart Street & Niels Street Rain Gardens/Bioretenion](#)

[Hoopes Alley Porous Pavers](#)

[Fact Sheet on Illicit Discharge Detection & Elimination](#)

**HOMEOWNER'S GUIDE TO STORM WATER WEBINAR**

**HOMEOWNER'S GUIDE TO STORM WATER WEBINAR**



Please note, the webinar is free to watch at any time. [Click here to watch.](#)

## MANAGEMENT OF CLEANING WASTEWATER

This fact sheet addresses the management of water used for the purpose of cleaning vehicles, equipment and structures. Following a cleaning event, such water is considered “wastewater” that must be managed to prevent pollution to streams, lakes, and other water bodies. Pennsylvania’s Clean Streams Law prohibits the discharge of substances causing pollution to waters of the Commonwealth without a permit. The purpose of this fact sheet is to describe acceptable methods of managing cleaning wastewaters without the need for a permit from the Pennsylvania Department of Environmental Protection (DEP).

### **What substances used in or result from cleaning operations could cause pollution?**

The ingredients contained in soaps, car wash, degreasers, and related cleaning agents have the potential to adversely affect waters of the Commonwealth. Particles removed as a result of cleaning may also cause pollution, and such particles could contain pollutants such as metals. Other substances such as oil and grease, if washed into water bodies, can also cause pollution.

### **What are acceptable methods for managing cleaning wastewaters?**

The best approach for managing cleaning wastewater is to collect the wastewater at the location where cleaning is performed and reuse/recycle the wastewater or otherwise dispose of the wastewater into a public sewer system or at a sewage treatment facility. A permit is not generally necessary for reusing or recycling wastewater, but approval from the owner of a sewer system or sewage treatment facility may be necessary.

Waters of the Commonwealth includes groundwater. The discharge of pollutants to groundwater requires a permit from DEP under Pennsylvania’s Clean Streams Law. However, using its discretion, DEP does not generally require a permit for the discharge of cleaning wastewater to the ground surface if such discharges are not routine, are directed into vegetated areas and do not contain chemicals that would cause groundwater pollution. For example, wastewater resulting from the cleaning of trucks every few months could be directed to a well-vegetated area that will promote infiltration through the ground without a permit. A commercial car wash that frequently discharges some or all of its cleaning wastewater to the ground surface would usually require a permit. Therefore, if collection of wastewaters for reuse/recycling or disposal into a sewer system is considered infeasible, discharge to a vegetated area of the ground surface can be an acceptable alternative if the practice does not cause pollution and is done infrequently.

Waters of the Commonwealth also includes storm sewers. Discharges of cleaning wastewater to storm sewers should generally be avoided. In some cases it may be difficult to avoid discharges to storm sewers, such as car washing by residents in cities. Where no other alternative exists, it may be acceptable to discharge to storm sewers if cleaning agents are not used and the discharge is infrequent. If possible, direct the wastewater first into a vegetated area before allowing the wastewater to enter storm sewers.

In summary the options for managing cleaning wastewaters are, in order of preference:

1. Collect wastewater and reuse or recycle it.
2. Collect wastewater for transport to a sewage treatment facility or discharge to a public sewer system.
3. If the generation of cleaning wastewater is infrequent, direct the wastewater into a well-vegetated ground surface area for infiltration.
4. If the generation of cleaning wastewater is infrequent, vegetated ground surface areas are not available and cleaning agents are not used, discharge the wastewater to storm sewers.

5. Obtain a permit from DEP for routine discharges directly to surface waters and for routine land application of the wastewater.

**Do non-profit organizations that hold car washes to raise money need a permit?**

No organization is required to obtain a DEP permit if the wastewater does not enter waters of the Commonwealth and if one of the alternatives discussed in this fact sheet are used to manage the wastewater.

**May chemicals (e.g., strong acids or caustics) be used to clean buildings?**

Yes, as long as the wastewater is captured and collected or otherwise prevented from entering waters of the Commonwealth, including storm sewers.

**While cleaning buildings, if not using harsh chemicals, may the wastewater run off the property untreated?**

If the cleaning is infrequent, wastewater is directed into a well-vegetated ground surface area for infiltration and the wastewater will not run off into waters of the Commonwealth, this practice may be acceptable. If any type of cleaning agent is used, allowing the wastewater to flow into storm sewers is generally unacceptable.

**May cleaning wastewater from car washes or other facilities be discharged to on-lot septic systems?**

No, cleaning wastewater is considered industrial waste and should not generally be discharged to onlot systems. However, such wastewater may be discharged into public sewer systems with the authorization of the owner of the sewer system.

**May someone who causes pollution due to cleaning wastewater be penalized?**

If DEP determines that the management of cleaning wastewaters has caused pollution to waters of the Commonwealth, the responsible party could be liable for civil penalties up to \$10,000 per day under the Clean Streams Law.

For questions, contact the Clean Water Program in DEP's regional offices (visit DEP's website at [www.dep.pa.gov](http://www.dep.pa.gov) and select Regional Resources) or contact:

Department of Environmental Protection  
Bureau of Clean Water  
Division of Operations, Monitoring and Compliance  
Harrisburg, PA 17105-8774  
Phone: 717-787-6744

For more information, visit [www.dep.pa.gov](http://www.dep.pa.gov).



## Stormwater is Everyone's Business

Stormwater is water that originates from rain, snow and ice melt. It can soak into the soil or run off impervious surfaces carrying pollutants such as motor oil, fertilizers and pet waste directly into streams untreated. During storm events, high levels of stormwater runoff can cause streambank erosion and flooding. Polluted runoff is a threat to drinking water and water quality for wildlife.

**Learn how you can make a difference at [www.cwmp.org](http://www.cwmp.org):**

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- **Building Project Resources** - Thinking about a home addition or additional paving? Learn about what stormwater requirements may apply to you.
- **Farmer Resources** - Information on conservation plans, nutrient management and other agricultural support
- **Stormwater Regulations** - learn about local, county and state regulations
- **Calendar** - check a calendar of upcoming workshops and volunteer events

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Did you know that in Pennsylvania, every municipality with an urbanized area and impaired stream must develop and implement a municipal stormwater management plan? Learn more by visiting your municipality's web site.

- |                           |                           |                         |
|---------------------------|---------------------------|-------------------------|
| Birmingham Township       | Honey Brook Borough       | Thornbury Township      |
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| Franklin Township         | Penn Township             | West Whiteland Township |
|                           | Pocopson Township         |                         |
|                           | Sadsbury Township         |                         |
|                           | South Coatesville Borough |                         |



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**1760 Unionville-Wawaset Rd | West Chester, PA 19382**  
**610-793-1090 x103 | [www.brandywineredclay.org](http://www.brandywineredclay.org)**

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## 2021/2022 CWMP MS4 Municipal Report for Cost-Share Partners

Prepared by Brian Winslow, Watershed Conservation Director, Brandywine Red Clay Alliance

CWMP is supported through the generous cost-sharing support from the following municipalities in 2021/2022:

Avondale Borough	New Garden Township
Birmingham Township	New London Township
Caln Township	Parkesburg Borough
City of Coatesville	Penn Township
Downingtown Borough	Pocopson Township
East Bradford Township	Sadsbury Township
East Brandywine Township	South Coatesville Borough
East Caln Township	Thornbury Township
East Fallowfield Township	Upper Uwchlan Township
East Marlborough Township	Uwchlan Township
East Whiteland Township	Valley Township
Franklin Township	Wallace Township
Honey Brook Borough	West Bradford Township
Honey Brook Township	West Chester Borough
Kennett Square Borough	West Goshen Township
Kennett Township	West Grove Borough
London Grove Township	West Pikeland Township
Londonderry Township	West Whiteland Township
Modena Borough	Westtown Township

This report summarizes activities by CWMP and its Planning Team organizations to help municipalities meet their MS4 requirements, especially MCM's 1, 2 and 6. As a cost share participant, these municipalities help to financially support these activities and many are active participants in the meetings, events and activities listed in this report.

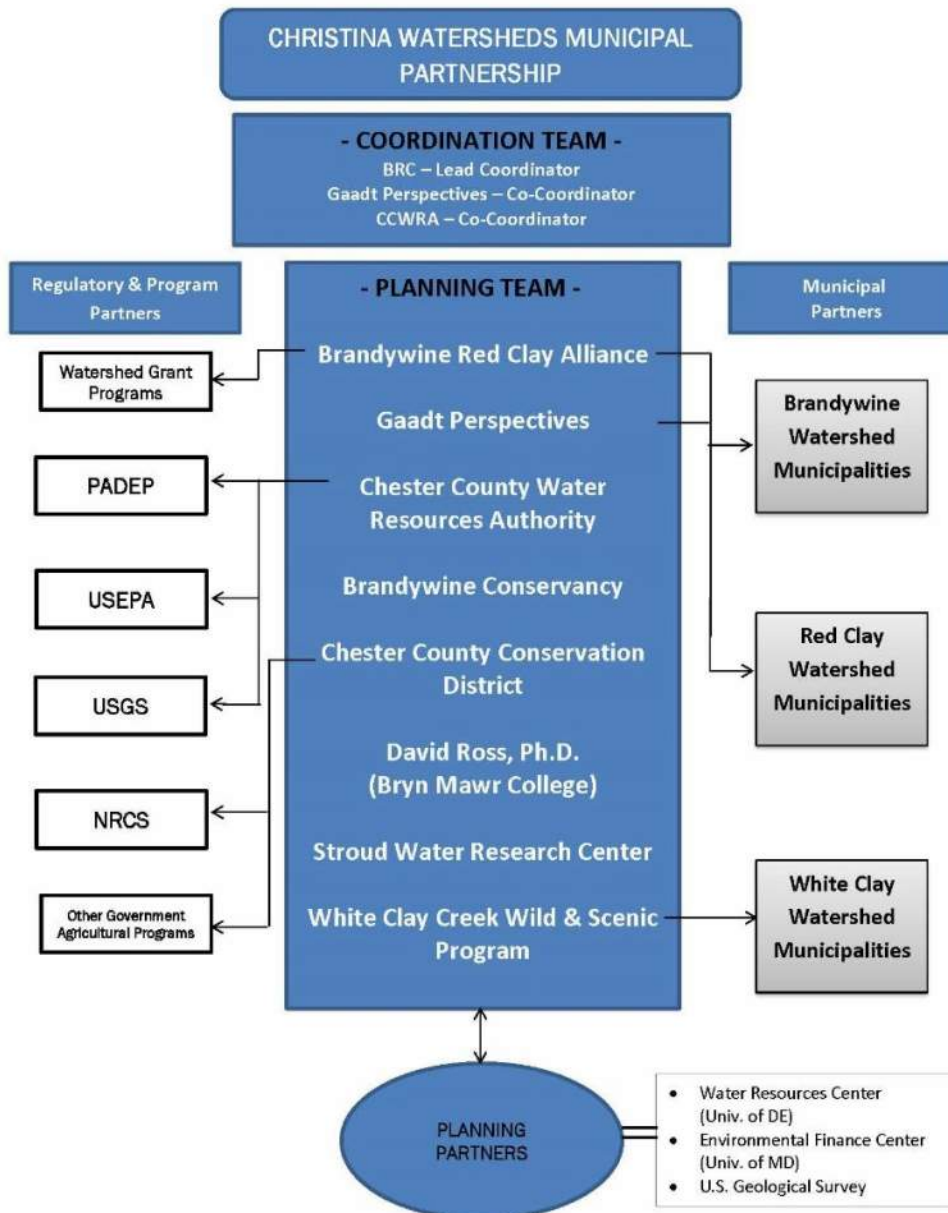


**The municipalities listed on page 1 of this report supported CWMP activities in 2021/2022 through a cost-share contribution. CWMP provides many resources for residents, elected officials, municipal staff and consultants outlined in this report. The following is a summary of CWMP, it's Planning Team Organization and scope of work.**

The Christina Watersheds Municipal Partnership (CWMP) is a long-term partnership of Pennsylvania municipalities, county agencies, and watershed conservation organizations. The mission of CWMP is *to facilitate and support engagement and collaboration of Pennsylvania municipalities, landowners, and other stakeholders to restore and protect the water quality of streams in the Brandywine Creek, Red Clay Creek and White Clay Creek watersheds.*

CWMP has been helping municipalities in the Chester County Pennsylvania portion of the Christina Watershed meet their MS4 requirements since the inception of Pennsylvania's MS4 program. Municipal members of CWMP participate in CWMP meetings, workshops and receive communications, technical assistance and materials from CWMP to help them meet their MS4 requirements. CWMP also provides a number of print, electronic and other resources each year to cost-share municipalities to assist with stormwater public education, outreach, staff training and technical assistance. These resources include an annual stormwater education advertisement (print and digital) and a broad array of resources and event calendar available on our website at [www.cwmp.org](http://www.cwmp.org).

The CWMP Planning Team meets at least 10 times a year to coordinate CWMP activities and identify opportunities to assist municipalities to improve water quality from a watershed perspective. Our Planning Team members bring the support and expertise of their organizations to this effort. Planning team members include: Brandywine Red Clay Alliance, Brandywine Conservancy, Chester County Conservation District, Chester County Water Resources Authority, David Ross Ph.D. (ret. Bryn Mawr College), Gaadt Perspectives, Stroud Water Research Center, White Clay Wild and Scenic Program, University of Maryland Environmental Finance Center and University of Delaware Water Resources Center.



4.29.2019

The [www.CWMP.org](http://www.CWMP.org) website launched in January 2021 is an example of the benefits derived from the collaboration of CWMP’s planning team. Municipal members pay an annual cost share to participate in CWMP activities. This fee helps to support the time and expenses devoted to this effort by planning team members. Funding received from annual municipal member fees covers only a fraction of CWMP’s total annual operating costs, with grants and in-kind donations covering the remaining expenses. Each dollar contributed by municipalities through their annual cost share is leveraged by an equal or greater value of grant dollars and in-kind contributions from planning team members.

## MCM #1- Public Education and Outreach on Stormwater Impacts

CWMP SUMMARY of MCM #1 Activities 2021/2022 Presented by CWMP Planning Team Organizations				
PLANNED ACTIVITIES			ACCOMPLISHMENTS	
Activity	Target Audience	Planned Timeframe	Date Completed	# People Reached
<b>1</b> <u>Maintain <a href="http://www.cwmp.org">www.cwmp.org</a> website with stormwater resources, calendar of events and technical assistance</u>	Home owners, farmers, developers, municipal staff and elected officials	July 1, 2021- June 30, 2022	New website was completed in Jan. 2021 on-going maintenance and updates of site through this time period	From Google Analytics: -3,971 users -4,586 sessions -7,206 pageviews
<b>2</b> <u>Stormwater Education Ad: "Stormwater is Everyone's Business"</u>	Chester County residents	Fall 2021	4 run dates in Daily Local News October 24, 29,31 and Nov. 3 4 run dates in the Southern Chester County News: Nov. 4, 11, 18 and 25 Digital Ad run dates Nov. 12, 16, 23, 29	From Google Analytics: -2,622 pageviews -655 on line links from Daily Local digital ads
<b>3</b> <u>World Water Day and Earth Day Ads: "You Can Help Reduce Flooding and Improve Water Quality"</u>	Chester County Residents	Spring 2022,	3 run dates in Daily Local, March 20, 22 and April 22,  3 run dates in Southern Chester County News, March 24, 31 and April 21,  2 digital ads ran on March 22 and 28	From Google Analytics: -1,500 page views Digital ads -30,034 digital impressions -440 total clicks to <a href="http://www.cwmp.org">www.cwmp.org</a>

**CWMP SUMMARY of MCM #1 Activities 2021/2022  
Presented by CWMP Planning Team Organizations**

PLANNED ACTIVITIES			ACCOMPLISHMENTS		
	Activity	Target Audience	Planned Timeframe	Date Completed	# People Reached
4	<b><u>Green Stormwater Infrastructure Guide printed</u></b>	Residential, commercial and organizational landowners, municipal staff and officials	Winter 2021/22	Feb. 1, 2022	1,000 guides printed and distributed to municipalities to share. Also created digital PDF versions and shared with municipalities and posted at <a href="https://cwmp.org/cwmp_munis/">https://cwmp.org/cwmp_munis/</a>
5	<b><u>Water Education Programs presented to youth through school and scout programs and Summer Camps</u></b>	Youth ages 4-18 in Chester County	July 1, 2021- June 30, 2022	Includes programs presented during this time	Summary of all programs: 79 School and scout programs presented to 1,884 youth attended 45 week long summer camp sessions presented to 594 youth (note summer of 2021 attendance)
6	<b><u>Adult oriented stormwater education events and programs</u></b>	Adults 18 and over in Chester County	July 1, 2021- June 30, 2022	Includes all programs presented during this time	Summary of all programs: 16 adult programs presented 574 adults attended (note due to covid, fewer #'s of programs offered during this time)

**MCM 1 Details of activity provided by CWMP 2021/2022**

- **CWMP website, [www.cwmp.org](http://www.cwmp.org), provides a large variety of on-line stormwater resources for homeowners, farmers, developers and municipal staff and elected officials.** Many CWMP cost-share municipalities listed on page 1 of this report, post links to these shared resources provided via the website to educate residents about stormwater related issues. This website includes:
  - Calendar of stormwater education, outreach and engagement activities
  - Stormwater resources for homeowners, developers, farmers
  - Municipal Partner resources for municipal staff and elected officials

- Stormwater training resources for municipal staff
- MS4 information and resources for residents, staff and elected officials
- CWMP Google Discussion Group with 37 members
- List of stormwater grant sources
- Links to related stormwater resources and trainings
- MS4 Technical Assistance/Load & Reduction Calculations
- Stormwater articles to be re-published by municipalities (be sure to re-publish articles in your municipality)
- NEW this year: added a Communication and Outreach Toolbox with sample social media posts on stormwater topics for municipalities to cut and paste into their social media and more.

We encourage municipalities to post the CWMP calendar via a Google Calendar link on their website and provide links to [www.cwmp.org](http://www.cwmp.org) in their newsletters, websites and social media to help meet their stormwater education requirements. For information and guides on how to make these links, contact [bwinslow@brandywineredclay.org](mailto:bwinslow@brandywineredclay.org).

### **Website Visitation Data July 1, 2021 – June 30, 2022**

*User data From Google Analytics:*

- 3,971 users
- 4,586 sessions
- 7,206 pageviews

Digital stormwater ads were purchased in Fall 2021 and Spring 2022 to drive residents to visit the cwmp.org website and had good results: 2,622 and 1,500 pageviews for fall 2021 and spring 2022 ad respectively; fall ad produced 655 links to CWMP website while the spring ad had 30,034 digital impressions and 440 links to website.

- **CWMP purchased a series of print and digital advertisements promoting stormwater education and driving readers to the CWMP.org website to see further educational materials. The following ads were run:**
  - **Fall 2021 CWMP Stormwater Advertisements**- Ad was titled “Stormwater is Everyone’s Business” and encouraged readers to learn more about what they could do at home by visiting the website for more information.
    - Four run dates in Daily Local News (see ad in appendix): Oct. 24, , Oct. 29, Oct. 31, and Nov 3
    - Four run dates in the Southern Chester County News: November 4, 11, 18 and 25
    - Digital Ad run dates (see ad in appendix): Nov. 12, 16, 23, 29
  - **Spring 2022 CWMP Stormwater Advertisement**- Ad was titled “You Can Help Reduce Flooding and Improve Water Quality”, ads ran around World Water Day (March 20) And Earth Day, April 22, (see copy of ads in appendix)
    - 3 run dates in Daily Local, March 20, 22 and April 22,
    - 3 run dates in Southern Chester County News, March 24, 31 and April 21,
    - 2 digital ads ran on March 22 and 28

**CWMP Planning Team members Brandywine Conservancy and Brandywine Red Clay Alliance created a Green Stormwater Guide (20 pages)** featuring 16 best management practices and printed 1,000 copies for CWMP to be distributed through municipalities to landowners, residents, developers and township staff and elected officials to promote these practices to improve stormwater (see sample in appendix). Digital PDF versions were also created to share electronically and on the CWMP website ([https://cwmp.org/cwmp\\_munis/](https://cwmp.org/cwmp_munis/)).

**CWMP Planning Team organizations offer a variety of water quality and stormwater education programs each year.** CWMP has asked all of these organizations to report their attendance at these activities for use in MS4 reports where

appropriate. The following is a summary of the 2021/2022 stormwater and water quality activities hosted by CWMP partner organizations and their collaborators.

\*\*\*Attendance is reduced from previous years by all Planning Team Organizations due to the Covid-19 pandemic, as of spring 2022, some formal indoor programs and larger events were beginning to re-open. Data includes virtual and in-person programs.

**Highlights of the report for MCM 1 include:**

- **CWMP Organizations offered a Grand total of 169 programs/events, serving 4,586, participants, 560 volunteers and recording 1,681 volunteer hours for MCM 1, 2 and 6.**
- **CWMP Organizations offered 140 MCM 1 Public Education activities, serving 3,052 participants. These included:**
  - 45 week long summer camp sessions with water education included offered by Brandywine Red Clay Alliance in Summer of 2021 with 594 children participating
  - 79 School and youth programs offered by Brandywine Red Clay Alliance to 1,884 children and youth.
  - 16 adult and family water education programs by all CWMP Planning Team members serving 574 participants

For similar reports, PADEP has requested that the municipality of participants be reported. As public organizations, our planning team organizations serve the broader watershed community and most programs target the entire watershed, not a specific municipality, even though the activity may be located there. Tracking attendance by municipality is especially difficult and rarely done. Many organizations only track by zip code, and some do not keep track on attendees locations at all. The attendance recorded here should be counted as Chester County targeted water education activities.

An excel spreadsheet of all the submitted data is available upon request.

## MCM #2- Public Involvement Participation

<b>CWMP SUMMARY OF MCM #2 ACTIVITIES 2021/2022</b> <b>Presented by CWMP Planning Team Organizations</b> <b>Public Participation And Involvement Accomplishments</b>					
<b>PLANNED ACTIVITIES</b>				<b>ACCOMPLISHMENTS</b>	
	<b>Activity</b>	<b>Target Audience</b>	<b>Planned Timeframe</b>	<b>Date Completed</b>	<b># People Reached/ results</b>
1	<b><u>Stormwater Outreach Events- ie. Festivals, exhibits, activities for the public</u></b>	Chester County Residents; homeowners, businesses, organizations	July 1, 2021 – June 30, 2022	June 30, 2022	11 outreach events 1,401 participants <i>(note: due to Covid, # of programs offered and attendance is lower than normal, as public events were just opening back up in spring 2022)</i>
2	<b><u>Volunteer outreach activities including; litter clean-ups, tree planting and buffer maintenance activities</u></b>	Chester County Residents; homeowners, businesses, organizations	July 1, 20201 – June 30, 2022	June 30, 2022	13 volunteer outreach activities 560 volunteers 1,681 volunteer hours
3	<b><u>Distribution of free tree through Keystone 10 Million Tree Program by Chester County Conservation District and Brandywine Red Clay Alliance</u></b>	Chester County Residents; homeowners, businesses, organizations, municipalities, parks	Fall 2021 & Spring 2022	October, 2021 May 2022	Total of 4,500 trees distributed to 29 landowners/organizations

### MCM 2 – CWMP Details of Activities

- **CWMP Planning Team Organizations offered the following activities:**
  - 11 Outreach events reaching 1,401 participants
  - 24 Activities including clean-ups and tree plantings with 560 volunteers contributing 1,681 volunteer hours
  - These events included Clean-up Events:
  - Brandywine Cleanup, hosted by Brandywine Red Clay Alliance
    - April 23, 2022 - 170 volunteers contributed 420 hours to clean up 32 miles of roads
  - Red Clay Valley Cleanup, hosted by Brandywine Red Clay Alliance,
    - March 26, 2022. 300 volunteers contributed 900 hours to clean up roads in Chester County, PA portion of the watershed.



*Clean up event in Pocopson and East Bradford Township*

- Tree Planting events
  - Stroud Water Research hosted several tree planting and maintenance events with 31 volunteers contributing 77 hours
  - White Clay Wild and Scenic planted 270 trees in Franklin Preserve with 20 volunteers contributing 60 hours
  - BRC planted 125 trees/shrubs at Nixon Park in Borough of Kennett Square and Kennett Township with 24 volunteers contributing 96 hours
  - BRC planted 425 trees and 600 live stake shrubs on Plum Run in E. Bradford Twp with 20 volunteers contributing 80 hours
  - Chester County Conservation District distributed 4,500 trees to 29 residential landowners in fall 2021 and spring 2022 through Keystone 10 Million Tree Project



*Tree planting on Plum Run at Strode's Mill Barn, E. Bradford*

## MCM # 6 – Pollution Prevention/ Good Housekeeping

<b>CWMP SUMMARY OF MCM #6 ACTIVITIES 2021/2022 Professional Training for Municipal Staff and Official Accomplishments</b>					
<b>PLANNED ACTIVITIES</b>			<b>ACCOMPLISHMENTS</b>		
	<b>Activity</b>	<b>Target Audience</b>	<b>Planned Timeframe</b>	<b>Date Completed</b>	<b># People Reached/ results</b>
1	<b><u>Road BMP's Bus Tour and Workshop, presentation included bus tour of road projects, presentation on Dirt and Gravel Low Volume Road and urban BMP sites</u></b>	Road Masters, Public Works and Municipal Staff and Supervisors	Fall 2021	October 8, 2021	Half Day Workshop 17 participants
2	<b><u>CWMP Meeting; Presentations on salt impacts, Act 167 model ordinance &amp; DEP update</u></b>	Municipal staff, engineers and supervisors	Fall 2021	December 8, 2021	25 participants
3	<b><u>Joint meeting with CWMP and Christina Basin Task Force on new EPA funding tool, FITS, via webinar</u></b>	municipal staff, engineers and supervisors, as a joint meeting included participants from Delaware and outside of Chester County	Spring 2022	March 29, 2022	35 participants
4	<b><u>Joint offering of CWMP and Christina Basin Task Force: Discussion of flooding form Tropical Storm Ida in Chester County and New Castle County (DE)</u></b>	municipal staff, engineers and supervisors, as a joint meeting included participants from Delaware and outside of Chester County	Winter 2021	December 3, 2021	52 participants, via Zoom

5	<b><u>CWMP Newsletters and emails sent to CWMP municipal partners: to keep them informed of upcoming events, grant funding, updates to CWMP website and DEP updates to share</u></b>	Municipal staff, engineers and supervisors	July 1, 2021 to June 30, 2022	4 Newsletters and 2 email updates sent during this time	Each mailing sent to 101 contacts on CWMP mailing list, total 606 unique contacts sharing CWMP information.
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**MCM #6 Comments:**

Quarterly CWMP meetings are intended for municipal staff, engineers and elected officials responsible and/or interested in stormwater and meeting MS4 requirements. These meeting can be used to satisfy the requirements of MCM # 6. Regular email newsletters and email updates keep CWMP participants up to date on upcoming events, grant deadlines, resources and website updates. The topics listed above were covered at CWMP meetings during this time period. Many of these workshops and past presentations were recorded and are available to view on the CWMP YouTube channel.

A Road BMP Bus Tour and Workshop was presented in fall 2021 with support from the Chester County Conservation District and featured several road BMP’s funded by the Dirt and Gravel Road Low Volume Road program with a presentation as well as urban BMP’s installed in West Chester Borough. A presentation on leveraging road BMP grants and stormwater grants to accomplish both goals concluded the workshop. A Lawn to Meadow workshop was planned for spring 2022, but delayed until September to see a meadow in full bloom and to better discuss maintenance issues with a meadow site tour.

Other sources of staff training are also available and all are listed on the CWMP website at <https://cwmp.org/stormwater-training/>

**APPENDIX**  
**SAMPLE DOCUMENTS, PHOTOS, ETC.**



## Stormwater is Everyone's Business

Stormwater is water that originates from rain, snow and ice melt. It can soak into the soil or run off impervious surfaces carrying pollutants such as motor oil, fertilizers and pet waste directly into streams untreated. During storm events, high levels of stormwater runoff can cause streambank erosion and flooding. Polluted runoff is a threat to drinking water and water quality for wildlife.

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### Stormwater is Everyone's Business

flooding, erosion and pollution impact drinking water, human and wildlife health.

Learn how you can make a difference at [www.cwmp.org](http://www.cwmp.org):

- Homeowner Resources
- Building Project Resources
- Farmer Resources
- Stormwater Regulations
- Calendar of workshops and events



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### Celebrate Earth Day on April 22nd

#### You Can Help Reduce Flooding and Improve Water Quality

**Learn how** **Click Here**



- Plant a tree or shrub to help absorb stormwater and provide shade
- Reduce lawn areas with conservation plantings of native vegetation
- Catch rainwater from downspouts by installing a rain barrel or rain garden
- Reduce impervious paving or replace with porous pavements
- Volunteer at litter clean up or tree planting events
- Learn more at a workshop or virtual program at <https://cwmp.org/ownr-calendar/>



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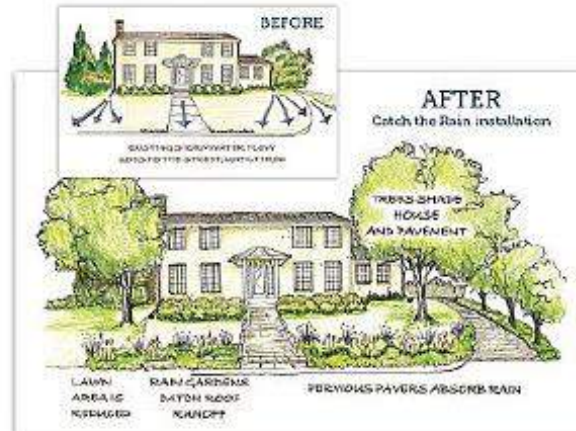
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**TRENDING:** 2022 Year in Review

Palatka's World Water Day March 22, 2022

**Celebrate World Water Day, March 22, 2022**  
**You Can Help Reduce Flooding and Improve Water Quality**



Graphic created by Beth Burnam, provided by Brandywine Conservancy

**Learn how at [www.cwmp.org](http://www.cwmp.org):**

- **Plant a tree or shrub** to help absorb stormwater and provide shade
- **Reduce lawn areas** with conservation plantings of native vegetation
- **Catch rainwater from downspouts** by installing a rain barrel or rain garden
- **Reduce impervious paving** or replace with pervious pavers
- **Volunteer** at litter clean-up or tree planting event
- **Learn more** at a workshop or virtual program at <https://cwmp.org/cwmp-calendar/>

**Sponsored and Paid for by:**

Did you know that in Pennsylvania, every municipality with an urbanized area and impaired stream must develop and implement a municipal stormwater management plan? Learn more by visiting your municipality's web site.

- |                           |                           |                         |
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| East Whiteland Township   | Parkesburg Borough        | West Pikeland Township  |
| Franklin Township         | Penn Township             | West Whiteland Township |
|                           | Pocopson Township         |                         |
|                           | Sadsbury Township         |                         |
|                           | South Coatesville Borough |                         |



[www.cwmp.org](http://www.cwmp.org)

CWMP is a partnership of municipalities, county agencies, and watershed conservation organizations to restore and protect the water quality of streams in the Brandywine Creek, Red Clay Creek and White Clay Creek watersheds. For a list of all partners visit: [www.cwmp.org/about/](http://www.cwmp.org/about/)



Sample of 1 Of 16 pages of Best Management Practices featured in the guide

## Permeable Pavement

The permeable or porous pavement design allows water to filter quickly and infiltrate the underlying soil. Some examples of permeable pavement include pervious asphalt or concrete, interlocking concrete pavers, or permeable lattice pavers. Unlike pervious asphalt and concrete, which allows water to percolate through, concrete pavers provide gaps in or between the pavers to allow water to pass between those gaps and infiltrate into the ground. Project sites require permeable soils and a deeper stone base to store water while infiltrating.

### Benefits

- Stormwater volume control
- Groundwater recharge
- Cost-effective

### Applications

- Parking lots
- Overflow parking
- Residential driveways
- Sidewalks
- Sports courts
- Must have permeable soils, on flat or gradual surfaces

### Operation and Maintenance

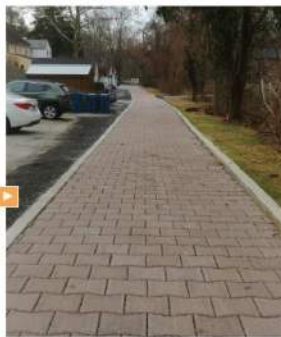
- Clean outlets
- Vacuum or sweep debris depending on the type of surface
- Keep soil and sediment off permeable paving

### Steps

- Determine if the site has permeable soils
- Requires design by a landscape architect or engineer
- Install porous pavement
- Maintain and inspect annually

### Cost

- Installation Cost: between \$5 to \$15 per square foot, with infiltration bed\*
- Maintenance Cost: between \$400 to \$500 per year for vacuuming a half-acre lot (only for porous asphalt and concrete)\*
- [Green Values Stormwater Management Calculator \(icmt.org\)](http://GreenValuesStormwaterManagementCalculator.icmt.org)



Permeable paving in West Chester Borough, PA.



Installing permeable paving at West Chester University, West Chester Borough, PA.



Pervious overflow grassed parking area at Dansko Company store and outlet, Penn Township, PA.



Pervious paver parking spaces at Chadds Ford, Chadds Ford Township, PA.

**Additional Resources:** Penn State Extension's guidance on porous and permeable paving.  
<http://extension.psu.edu/roadside-guide-to-clean-water-porous-and-permeable-paving-materials>

Flyer sent to all municipalities for Road BMP workshop

## Road BMPs Bus Tour & Workshop for Road Masters, Public Works, and Township Staff

The Christina Watersheds Municipal Partnership invites you to attend this bus tour and workshop designed to provide Township staff with the information they need to manage and improve their roadside stormwater infrastructure.



### Presentations Include:

- Bus tour, making stops along Dirt and Gravel Low Volume Road (DGLVR) and urban project sites in Newlin Township and West Chester Borough presented by Jim Demchak - Chester County Conservation District and Courtney Finneran and Andrew Potts, Water Resources Project Manager, Jacobs
- DGLVR Project Site Examples presented by Wade Brown – Center for DGLVR
- Creative Funding Options for Road BMPs presented by Ellen Kohler, University of Maryland Environmental Finance Center

**October 8th, 2021**

8:30am-12:30pm

Brandywine Red Clay Alliance,  
Browning Barn  
1760 Unionville Wawaset Road, West  
Chester, PA 19382

This is a free workshop for CWMP cost-share participants which includes morning refreshments, 3 PDH credits, and lunch. Non-members pay \$50 for the workshop. Please click [HERE](#) to register for the event.

Safety protocols will be in place due to COVID-19. Please bring a face mask; they will be required on the bus.

Please contact Brian Winslow at [bwinslow@brandywineredclay.org](mailto:bwinslow@brandywineredclay.org) with any questions.



*Financial and other support for this project is provided by the Pennsylvania's Dirt and Gravel Low Volume Roads Program and CWMP municipal cost share partners. For more information about CWMP visit [www.cwmp.org](http://www.cwmp.org)*

### Road BMP Bus Tour and workshop



## Planning and Funding Coordination

Click on a step on the right to view planning and funding considerations for each component of a source water protection program.





## BE A GOOD STORMWATER NEIGHBOR

*By Christina Kundrat, Watershed Conservation Intern,  
Brandywine Red Clay Alliance*

In recent years, flooding has become increasingly dangerous and devastating in Chester County and across the country. In fact, flooding is the most prevalent natural disaster in Pennsylvania causing over \$1 million worth of property damage annually. Chester county has 2,800 miles of streams and around 250 problem areas of known flooding. Many smaller flooding issues cause erosion and flooded basements on residential properties. Although these statistics are alarming, there are ways residents can help prevent flooding and be good stormwater neighbors to each other.

Being a good stormwater neighbor means carrying out practices on your property to help mitigate flooding, while not disrupting the property and boundaries of your neighbors. The most important thing to remember is that stormwater does not follow property lines. Even if you and your neighbors have fences the outflow of water will go wherever it wants. This can lead to neighbor disputes, which should be handled with cooperation and open communication. To avoid conflicts, familiarize yourself with how rainwater and snow melt flow onto your property. Look for entrances, exits and problem areas where flooding occurs.

Continue reading [here](#).

**Stormwater Articles:** This article and several others are provided to CWMP member municipalities by CWMP Planning Team members and partners. Publishing and posting these articles is encouraged and can be added to your municipal newsletters or websites without further permission if published as written and if credit is given to the author and their organization as listed at the end of each article. Please contact the author to approve any changes.

\*\*\*  
October 2021

## RESOURCES FOR HOMEOWNER BUILDING PROJECTS

The [Building Project Resources](#) tab on the CWMP.org website is designed to provide homeowners with information and resources about stormwater considerations when building an addition or increasing pavement and impervious surfaces on their property with links to local and state regulations.

The page also helps municipalities meet their MS4 requirements for public education and outreach (MCM 1 and 2). Municipalities can simply provide a link to the page on your stormwater website.

*The page provides  
detailed information  
on 4 stages of  
management:*

- 1) planning for runoff*
- 2) controlling runoff during construction,*
- 3) managing completed projects*
- 4) long-term maintenance*



# Stream Protection Program

# 2022 Update

## West Chester Borough



Established in 2016, the Stream Protection Fee provides a dedicated funding source for stormwater management and stormwater regulatory compliance for the Borough's municipal separate storm sewer system or "MS4". This includes maintaining and replacing existing elements of the MS4 (consisting of 23 miles of underground stormwater conveyance lines, 865 inlets, 172 manholes, and 53 outfalls), investment in new infrastructure to better manage stormwater while reducing pollutant loads, maintaining required MS4 permits, and regulatory reporting to state and federal environmental agencies.

## Project & Grant Updates

### Street Trees

Thanks to a \$10,000 grant from PECO over 200 new street trees were planted throughout the Borough. Residents may request a free street tree, and receive a \$50 rebate towards their SPF, by emailing [SPF@west-chester.com](mailto:SPF@west-chester.com). As a reminder, extensive pruning or removal of street trees requires a permit from the Borough.

### Plum Run Stream Restoration

The Plum Run watershed collects stormwater runoff from several hundred properties in the southwest corner of the Borough, including most of the WCU campus. Runoff from severe precipitation events had damaged the creek bed, severely eroded several properties, and was creating sedimentation issues downstream in area waterways. Completed in 2021, This project reestablished the natural channel of the stream, rebuilt and "armored" the stream banks, and reinforced the outfalls along approximately 700' of the stream.



# Stream Protection Program

## 2022 Update

### West Chester Borough



#### Illicit Discharge Detection and Elimination

The Pennsylvania Department of Environmental Protection requires the Borough to regularly test all outfalls (points where the storm sewer “daylights” into surface waterways) for non-stormwater discharges that could indicate an intentional or accidental illicit discharge of pollutants into the MS4. Common examples are chlorinated water from emptied pools, improperly-disposed motor or cooking oil, or infiltration of sewage from cracked sanitary sewer lines. When problems are found, the Borough’s Public Works Department traces the issue upstream in the storm sewer until the problem is located and eliminated.



#### John O. Green Memorial Park

Delayed due to the COVID-19 pandemic, this year the Borough completed a large project in the John O. Green Park, including many stormwater features that will alleviate downstream flooding of Goose Creek and earn the Borough credit towards its DEP-mandated phosphorous and sediment-reduction goals. Stormwater features include new trench drains and inlets, vegetated curbs, new street trees, and a large area of permeable pavement.



#### Greenview Park

Stormwater improvements are coming to the Greenfield Park area in 2022! These improvements will better manage stormwater and redirect drainage from the park to Goose Creek, downstream of the culvert at Linden & Franklin streets, a pinch point that backs up during heavy precipitation events. These improvements will be funded primarily by a grant from the Chester County Conservation District.

This and the other budgeted capital projects can be found in the 2022 SPF budget, posted online at [west-chester.com/SPF](http://west-chester.com/SPF)

# Guide To Green Stormwater Infrastructure



BRANDYWINE  
CONSERVANCY



Brandywine  
Red Clay Alliance



Storm drain leading to a Bioswale at Veterans Memorial Park West Chester Borough

One of the most effective ways to improve water quality in our streams, reduce the impacts of flooding and reduce erosion is to address stormwater runoff from new and existing development, roads, parking lots, commercial and residential lots. In the past, the building of stormwater infrastructure required catchments, pipes, and other "hard" infrastructure to move stormwater runoff as quickly as possible to the closest waterway. This resulted in a rush of stormwater into our streams during each rain event causing erosion, flooding, and the flushing of pollutants from the land and impervious surfaces directly into our waterways. The development of new Green Stormwater Infrastructure closely mimics natural systems to address these issues. Intended for landowners, HOA's, developers, business owners, and municipal and government officials, this guide introduces 16 practices and encourages implementation.

## Introduction to Green Stormwater Infrastructure

Green Stormwater Infrastructure (GSI) is a form of stormwater management that mimics the natural water cycle by promoting infiltration at the source of stormwater runoff. Unlike gray stormwater infrastructure—designed to move stormwater as quickly as possible—GSI aims to treat stormwater at its source and then slowly and naturally absorb it into the soil or native vegetation or filters into the groundwater and streams. Compared to highly engineered gray conveyance systems, GSI is cost-effective, resilient, and provides communities with enhanced aesthetics and natural resource benefits. In addition to effectively managing stormwater, GSI also helps filter air pollutants, regulates temperatures, sequesters carbon, provides habitat, and reduces energy and water demands.

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## Bioretention

A bioretention system is a shallow, vegetated depression that helps store, filter, and infiltrate stormwater. Typically, retention basins include an underdrain pipe that drains excess water into existing stormwater systems. By providing temporary stormwater storage, bioretention basins filter out pollutants and debris before releasing water into local waterways. Bioretention basins also slow the release of stormwater, decreasing stream erosion. The use of native, water-tolerant vegetation can increase absorption rates, reducing the amount of stormwater released into streams.

### Benefits

- Filters pollution
- Increases soil infiltration
- Encourages groundwater recharge
- Reduces runoff
- Increases plant absorption

### Applications

- Commercial developments
- Cultural and community facilities
- Residential yards and subdivisions
- Parking lot islands
- Along roadways
- Areas near downspouts
- Basin retrofitting

### Cost

- The approximate cost per acre is between \$5,000 to \$10,000 and \$3 to \$15 per square foot\*
- The maintenance cost is like other landscaped areas



Residential bioretention basin in Westtown Township, PA.



Bioretention basin in West Chester Borough, PA.

### Operation and Maintenance

Green stormwater infrastructure requires regular maintenance of vegetation, like any landscaped area. An Operation and Maintenance (O & M) plan is recommended and may be required for larger projects to ensure long term maintenance.

- Removal of debris (4 times annually and after every storm event of over 1 inch)
- Replace mulch seasonally until establishing 75% ground cover
- Remove invasive plants; replace any dead native plants twice a year
- Mowing should occur outside of the retention area once a month
- Trim the grass and wildflowers in the bioretention area annually using handheld trimmers to prevent compaction
- Conduct regular inspections until established vegetation is in the bioretention area; after that, twice a year
- For the first growing season, water regularly until vegetation is established
- Inspect vegetation, inlet, and outlet structures twice a year

### Steps

- Identify low lying sites adjacent to stormwater discharge areas like parking lots and downspouts
- Evaluate soil conditions for permeable soils and stormwater volumes
- Develop a site-sensitive design with a landscape architect or qualified professional
- Select native plants that are water tolerant and provide aesthetic value
- Installation by a landscaper or trained crew
- Once established, regular maintenance is required



Bioretention basin at Hillendale Elementary School, Pennsbury Township, PA.



Bioretention basin in Unionville Community Park, East Marlborough Township, PA.

Additional Resources: Philadelphia Water Department's Stormwater Management Practice Guidance: Chapter 4.1 Bioinfiltration/Bioretention. [www.pwdplanreview.org/manual/chapter-4/4.1-bioinfiltration-bioretention](http://www.pwdplanreview.org/manual/chapter-4/4.1-bioinfiltration-bioretention)

# Bioswales

A bioswale is a linear, vegetated trench or ditch that helps convey stormwater while slowing down water flow to remove debris and pollutants. Like bioretention basins, bioswales often have drainage pipes that transport excess water to existing stormwater systems. Bioswales do not require much space and can replace traditional grass swales and storm drain pipes and gutters in parking lots or along roadways.

## Benefits

- Slow stormwater runoff
- Increase soil infiltration
- Filter debris and pollutants
- Provides additional habitat
- Aesthetic value

## Applications

- Parking lots
- Along roadways, driveways, and trails
- Replacement for mowed grassed swales

## Operation and Maintenance

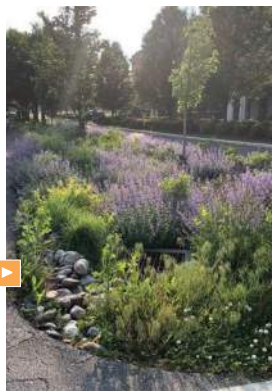
Green stormwater infrastructure requires regular maintenance of vegetation, like any landscaped area. An Operation and Maintenance (O & M) plan is recommended and may be required for larger projects to ensure long term maintenance.

- Removal of debris (4 times annually and after every storm event of over 1 inch)
- Remove invasive plants; replace any dead native plants twice a year
- Trim grass and wildflowers within the bioretention area annually using handheld trimmers to prevent compaction
- Conduct regular inspections until vegetation is established; after that, twice a year
- For the first growing season, water regularly until vegetation is established
- Inspect vegetation, inlet, and outlet structures twice a year

## Steps

- Identify low lying sites adjacent to stormwater discharge areas like parking lots and downspouts
- Evaluate soil conditions for permeable soils and stormwater volumes
- Develop a site-sensitive design with a landscape architect or qualified professional
- Select native plants that are water tolerant and provide aesthetic value
- Installation by a landscaper or trained crew
- Once established, regular maintenance is required

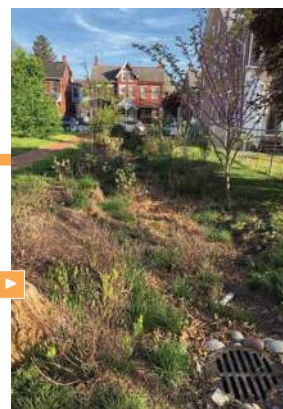
Additional Resources: [Urban Green-Blue Grids' guidance on bioswales](http://www.urbangreenbluegrids.com/measures/bioswales)



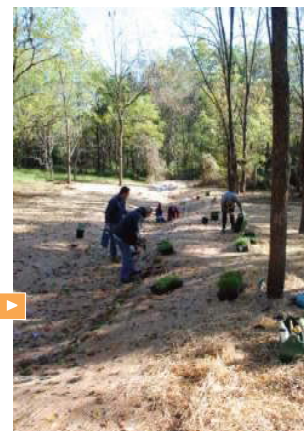
Bioswale between parking lot and roadway in Lancaster City, PA.

## Cost

- The cost ranges between \$5 to \$25 per square foot\*
- The maintenance cost is between \$0.06 to \$0.21 per square foot\*
- [Green Values Stormwater Management Calculator \(cnt.org\)](http://www.cnt.org)



Bioswale in Veterans Memorial Park in West Chester Borough, PA.



Bioswale planting at Myrick Conservation Ctr., Pocopson Township, PA.

# Rain Garden Systems

A rain garden design collects rain from roofs, driveways, sidewalks, roads, and other areas that contribute to runoff. Unlike bioretention areas and bioswales, rain gardens are used for smaller sites, yet a series of rain gardens can be used for larger areas. Rain gardens are close to stormwater sources on the ground level, allowing water to pool and infiltrate the soil. They use native plants that effectively absorb and filter water. Depending on the type of storm, rain gardens typically take between 12 to 72 hours to drain and remain dry, to prevent mosquito breeding, until the next storm.

## Benefits

- Maintains clean rainwater
- Creates habitat
- Prevents local flooding
- Filters pollution
- Improves community aesthetics

## Applications

- Private residences
- Cultural and community facilities
- Small lots
- Urban areas
- Parking lots

## Operation and Maintenance

- Water new plants every other day for the first two weeks
- Fertilizers are not necessary; maintain the mulch until establishing vegetated groundcover
- Minimal weeding after the first summer of growth
- Cut back growth after each winter
- Inspect inlets, outlets, and invasive plants at least twice a year

## Steps

- Identify a low-lying area at least 10' away from foundations
- Evaluate soil conditions for permeability
- Create a depression at least 6" deep
- Direct runoff to the site by redirecting downspouts and creating curb cuts
- Create an outlet for overflow during storm events
- Select a variety of native plants, grasses, and wildflowers to ensure a strong root system to prevent erosion



Mature rain garden at private residence.



Rain Garden at Avon Grove Library, West Grove Borough, PA.



Newly planted rain garden collecting stormwater, West Grove Borough, PA.

## Cost

- Prices for Rain Gardens vary based on size, site conditions, soil, and selected plants. General cost estimates range between \$1 to \$16 per square foot depending on installation by a landscaper or a landowner\*
- Maintenance cost would be equivalent to other forms of landscaping, approximately \$0.31 to \$0.61 per square foot\*
- [Green Values Stormwater Management Calculator \(cnt.org\)](http://www.cnt.org)

Additional Resources: [Penn State Extension's An Introduction to Rain Gardens](https://extension.psu.edu/an-introduction-to-rain-gardens)

# Downspout Planters

Downspout planters are planted boxes layered with gravel, soil and plants, ideally native water-tolerant plants. These planters are connected to downspouts, slowing down the flow of stormwater and providing water for the plants. The excess water then filters through soil and stones and drains back to the stormwater system. These planters come in varied sizes, provide temporary stormwater storage, enhance the aesthetic value of properties, and require less watering than typical gardens.

## Benefits

- Temporary water storage
- Compact alternative to a rain garden
- Water filtration
- Water conservation
- Aesthetic Value

## Applications

- Buildings with external downspouts
- Urban areas with less room for traditional rain gardens

## Cost

- Costs vary based on the size and materials used. On average, downspout planters cost \$5 per square foot; however, they can range between \$0.55 to \$24 per square foot\*
- [Green Values Stormwater Management Calculator \(cnt.org\)](https://www.cnt.org/green-values-stormwater-management-calculator)

## Operation and Maintenance

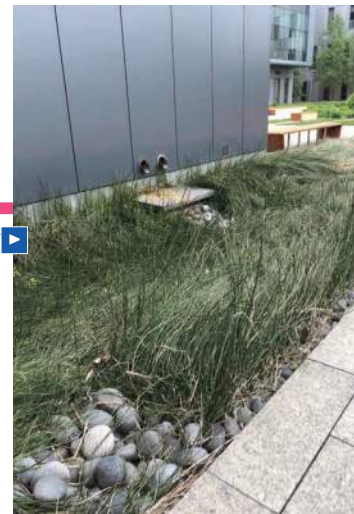
- Water newly planted vegetation for the first several weeks
- Water during droughts
- Check overflow drains for debris periodically after rainstorms
- Ensure the downspout remains connected after intense storms
- Keep gutters clear of leaves and debris

## Steps

- Select a flat site near a building downspout
- Choose or build a planter
- Determine the size of the roof that will drain to the downspout
- Depending on the size of the roof, it may be necessary to install a diverter to limit the direct flow of runoff to the planter
- Install planter drainage system
- Connect to downspout
- Plant with native plants



Large in ground downspout planter. (Photo credit- "Flow-Through Planters" by Michael Feagans is licensed under CC BY-NC-SA 2.0).



Large downspout planter at University of Delaware, Newark, DE.



Residential downspout planter installed through the Philadelphia Water Department's Rain Check program. (Photo credit- "Downspout Planter" by Home Science is licensed under CC BY-SA 2.0).

Additional Resources: [Philadelphia Water Department's Stormwater Management Practice Guidance: Chapter 4.1 Bioinfiltration/Bioretenion.](https://www.pwdraincheck.org/en/stormwater-tools/metal-downspout-planters)

<https://www.pwdraincheck.org/en/stormwater-tools/metal-downspout-planters>

# Stormwater Planters

Stormwater planters are built along the sidewalk, between the sidewalk and street, and collect stormwater runoff from the sidewalk and road. These planters usually have concrete sides to provide structure for the plants and are lined with permeable fabric and stones, then topped with soil and plants. The concrete sides have inlets or cutouts to allow water to flow in and overflow pipes to drain excess water to existing storm sewers. Most stormwater planter designs allow water to infiltrate the ground; however, some simply filter stormwater before directing water back to the storm sewer system. When used with other forms of green infrastructure, the effectiveness of stormwater planters can increase.

## Benefits

- Provides storage
- Decreases stormwater flow rate
- Infiltration
- Aesthetic value
- A buffer between pedestrians and motorists
- Cost-effective

## Applications

- Between sidewalks and roadways

## Cost

- Stormwater planters' cost between \$4 to \$8 per square foot; however, this cost varies based on site conditions and size\*
- [Green Values Stormwater Management Calculator \(cnt.org\)](https://www.cnt.org/green-values-stormwater-management-calculator)

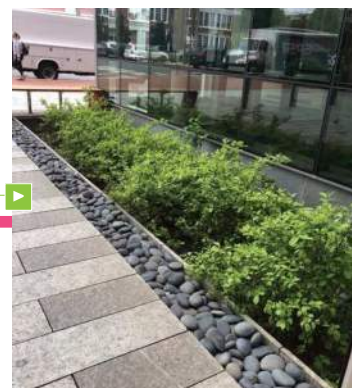
## Operation and Maintenance

Green stormwater infrastructure requires regular maintenance of vegetation, like any landscaped area. An Operation and Maintenance (O & M) plan is recommended and may be required for larger projects to ensure long term maintenance.

- Weeding out invasive plants
- Replace mulch until established vegetated cover exists
- Debris removal
- Check the structure periodically and after severe storms to ensure everything is working properly
- Check and clean the drainage system periodically

## Steps

- Evaluate soil conditions, may require soil amendments
- Install drainage system
- Plant with native plants



Stormwater planter along sidewalk at University of Delaware, Newark, DE.



Stormwater planter along residential street in West Chester Borough, PA.

Additional Resources: [Green Building Alliance's guidance on stormwater planters](https://www.gb-a.org/resources/green-building-methods/stormwater-planters/)

<https://www.gb-a.org/resources/green-building-methods/stormwater-planters/>

# Stormwater Curb Bump-Out

As the name suggests, stormwater curb bump-outs are vegetated areas where the curb extends several feet into the street. Stormwater bump-outs are usually placed at the corners of intersections or in the middle of a block. These bump-outs are planted with short shrubs and other plants to maintain driver eyelines. Curb cuts allow stormwater to flow into the bump-out, where the water is filtered and absorbed by the plants, and the remaining water can soak into the ground. Bump-outs direct excess water to the existing stormwater sewers in extreme storm events.

## Benefits

- Filters and stores stormwater
- Traffic calming
- Pedestrian safety, when located at crosswalks
- Works with existing infrastructure
- Prevents illegal parking at corners

## Applications

- Along low-lying streets
- Urban and Suburban streets
- Retrofits

## Cost

- Stormwater bump-outs cost between \$4 to \$30 per square foot; however, this cost varies based on site conditions and size\*
- [Green Values Stormwater Management Calculator \(cnt.org\)](http://www.greenvvalues.org/Stormwater-Management-Calculator)

## Operation and Maintenance

Green stormwater infrastructure requires regular maintenance of vegetation, like any landscaped area. An Operation and Maintenance (O & M) plan is recommended and may be required for larger projects to ensure long term maintenance.

- Weeding out invasives
- Replace mulch until established with vegetative cover
- Debris removal
- Check the structure periodically or after severe storms to ensure everything is working properly
- Check and clean the drainage system periodically

## Steps

- Select a low-lying site at intersections or mid-block
- Evaluate soil conditions
- Install drainage system
- Plant with native plants
- Work with local municipality to determine the right of way and traffic needs



Stormwater bump-out at an intersection in West Chester Borough, PA.



Stormwater bump-out along the street in West Chester Borough, PA.



Crosswalk with stormwater bump-out in Lancaster City, PA.

Additional Resources: [Stormwater PA's Case study on stormwater bumpouts.](http://www.stormwaterpa.org/stormwater-bumpouts.html)  
<http://www.stormwaterpa.org/stormwater-bumpouts.html>

# Cisterns & Rain Barrels

Rain barrels and cisterns are rainwater storage systems that collect water from rooftops. These temporary storage systems reduce the volume of stormwater inundating storm sewers on rainy days. Some systems slowly drain into nearby natural areas—rain gardens, bioswales, and stormwater planters, while other systems provide the property with non-potable water for gardening, toilets, showers, etc.

## Benefits

- Supplemental water supply
- Reduces water use
- Reduces stormwater runoff
- Reduces water bill

## Applications

- Residential
- Commercial
- Can be used for indoor or outdoor grey water

## Cost

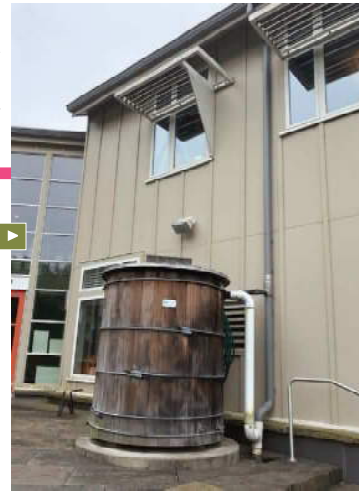
- Cisterns cost between \$500 to \$5,000\*
- Rain Barrels cost between \$100 to \$300 depending on their size and plumbing requirements\*
- [Green Values Stormwater Management Calculator \(cnt.org\)](http://www.greenvvalues.org/Stormwater-Management-Calculator)

## Operation and Maintenance

- Water must be discharged before the next storm
- Clean annually
- Periodically check to ensure everything is functioning properly

## Steps

- Select a flat site near a building downspout
- Determine the size of the roof that will drain to the storage system
- Choose a cistern or rain barrel
- Install storage system
- Install a fine mesh to the top of rain barrel to prevent mosquito breeding



Rainwater cistern at Stroud Water Research Center, West Marlborough Township, PA.



Typical rain barrel downspout connection, private residence.

Additional Resources: [Penn State Extension's guidance on rain barrels.](https://extension.psu.edu/rain-barrels-for-water-conservation)  
<https://extension.psu.edu/rain-barrels-for-water-conservation>

# Permeable Pavement

The permeable or porous pavement design allows water to filter quickly and infiltrate the underlying soil. Some examples of permeable pavement include pervious asphalt or concrete, interlocking concrete pavers, or permeable lattice pavers. Unlike pervious asphalt and concrete, which allows water to percolate through, concrete pavers provide gaps in or between the pavers to allow water to pass between those gaps and infiltrate into the ground. Project sites require permeable soils and a deeper stone base to store water while infiltrating.

## Benefits

- Stormwater volume control
- Groundwater recharge
- Cost-effective

## Applications

- Parking lots
- Overflow parking
- Residential driveways
- Sidewalks
- Sports courts
- Must have permeable soils, on flat or gradual surfaces

## Operation and Maintenance

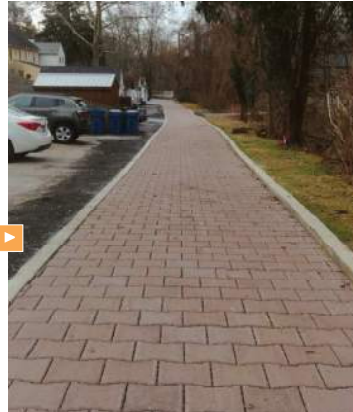
- Clean outlets
- Vacuum or sweep debris depending on the type of surface
- Keep soil and sediment off permeable paving

## Steps

- Determine if the site has permeable soils
- Requires design by a landscape architect or engineer
- Install porous pavement
- Maintain and inspect annually

## Cost

- Installation Cost: between \$5 to \$15 per square foot, with infiltration bed\*
- Maintenance Cost: between \$400 to \$500 per year for vacuuming a half-acre lot (only for porous asphalt and concrete\*)
- [Green Values Stormwater Management Calculator \(cnt.org\)](https://www.cnt.org/green-values-stormwater-management-calculator)



Permeable paving in West Chester Borough, PA.



Installing permeable paving at West Chester University, West Chester Borough, PA.



Pervious overflow grassed parking area at Dansko Company store and outlet, Penn Township, PA.



Pervious paver parking spaces at Chadds Ford, Chadds Ford Township, PA.

Additional Resources: [Penn State Extension's guidance on porous and permeable paving.](https://extension.psu.edu/roadside-guide-to-clean-water-porous-and-permeable-paving-materials)  
<https://extension.psu.edu/roadside-guide-to-clean-water-porous-and-permeable-paving-materials>

# Tree Trenches and Filter Boxes

Tree trenches and filter boxes are used along streetscapes and parking lots to store and filter stormwater. These trenches and filter boxes typically connect to an underground engineered system that directs stormwater into the tree trench for storage, absorption, and infiltration. This underground trench or box is lined with permeable fabric and stone, then topped with soil. Redirected stormwater waters trees while discharging the remaining filtered water into the existing stormwater system.

## Benefits

- Reduce and filter stormwater
- Increase tree canopy
- Provide buffer for pedestrians
- Benefits of street trees
  - ▶ Temperature regulation
  - ▶ Air quality
  - ▶ Aesthetic value
  - ▶ Increased property value
- Enhance tree health

## Applications

- Incorporate in existing streetscapes

## Operation and Maintenance

- Tree Maintenance
  - ▶ Water Trees
  - ▶ Mulch as needed
  - ▶ Treat diseased trees
  - ▶ Remove litter
- Inspect erosion, sediment buildup, and tree conditions annually
- Inspect the pipe system bi-annually

## Steps

- Select appropriate site next to sidewalks, roads, and gathering areas
- Evaluate soil conditions, may require soil amendments
- Install drainage system
- Plant with native trees

## Cost

- Construction: Installation can cost between \$50 to \$600 per tree\*
- Maintenance can cost between \$100 to \$500 per year\*
- Some systems can be large and elaborate and more costly\*
- [Green Values Stormwater Management Calculator \(cnt.org\)](https://www.cnt.org/green-values-stormwater-management-calculator)



Tree trench on the sidewalk along an urban street. (Photo Credit- "Washington Ave Tree Trench" by Philadelphia Water Department is licensed under CC BY 2.0).



Tree trenches lining Ben Franklin Parkway, Philadelphia. (Photo credit- "Tree Trenches on Ben Franklin Parkway" by Philadelphia Water Department is licensed under CC BY 2.0).



Tree trenches in Hoyer Heights, Minneapolis. (Photo credit- "Hoyer Heights Tree Trenches" by Mississippi WMO is licensed under CC BY-NC 2.0).



Construction of tree trench in Hoyer Heights, Minneapolis. (Photo credit- "Hoyer Heights Tree Trenches" by Mississippi WMO is licensed under CC BY-NC 2.0).

Additional Resources: [New Jersey Rutgers Cooperative Extension Fact sheet on Tree Boxes](https://njaes.rutgers.edu/fs1209/)  
<https://njaes.rutgers.edu/fs1209/>  
 Delaware Department of Environmental Resources Green Infrastructure Fact Sheet for Tree Boxes and Tree Trenches  
[https://documents.dnrec.delaware.gov/GI/Documents/Green%20Infrastructure/Tree%20Box%20FS\\_04-1.pdf](https://documents.dnrec.delaware.gov/GI/Documents/Green%20Infrastructure/Tree%20Box%20FS_04-1.pdf)

# Lawn to Meadow Conversion

Converting mowed lawn areas to native wildflower pollinator and grass meadows reduces stormwater runoff through infiltration since turfgrass has shallow roots and compacted soils while meadow plants have deep roots and porous soils. These plants stabilize soils to help reduce erosion along streams. Meadows also help to filter fertilizers and other pollutants from stormwater runoff. Meadows require less mowing and maintenance, with benefits for native wildlife and pollinators.

## Benefits

- Reduces stormwater runoff and erosion
- Filter pollutants carried in stormwater runoff
- Increase wildlife biodiversity
- Provides valuable pollinator habitat
- Provides year-round aesthetic beauty
- Reduces costs of weekly mowing

## Applications

- Residential and HOA areas
- Parks, cultural, and community sites
- Commercial sites and schools

## Operation and Maintenance

- Seasonal mowing until a meadow is established
- Annual mowing after establishment
- Annual removal of invasive plants

## Steps

- Must kill off turf grasses with herbicide, tilling, or black plastic
- Planting with native meadow mix, typically late fall or spring
- Annual mowing and invasive removal

## Cost

- \$250- 300 per 1,000 sq. Ft "do it yourself costs" without labor, contracted costs are \$1,000- 2,500 per 1,000 sq. Ft. For installation by qualified landscaper\*



Meadow plantings at Kennett Golf and Country Club, East Marlborough Township, PA.



Area of lawn converted to a wildflower meadow during the first year in Broad Run Park, West Bradford. As the meadow matures, more diverse vegetation is likely to be established.



Naturalized landscaping at Hillendale Elementary School in Pennsbury Township, PA.



Meadow planting at Unionville Community Park, East Marlborough Township, PA.

Additional Resources: [Pennsylvania Department of Conservation & Natural Resources guidance on lawn conversion.](https://www.dcnr.pa.gov/Conservation/Water/LawnConversion/Pages/default.aspx)  
<https://www.dcnr.pa.gov/Conservation/Water/LawnConversion/Pages/default.aspx>

# Riparian Buffer Plantings

Planting the riparian zones, a minimum of 35 feet on both sides of streams with native meadow, shrubs, and trees provides water quality benefits. The native vegetation is deep-rooted, prevents erosion, and filters pollution from stormwater runoff from entering the stream. Shade from a forested stream buffer reduces the stream's water temperatures, and leaves provide nutrients to aquatic wildlife. Establishing a forested stream buffer is one of the most effective water quality improvements.

## Benefits

- Reduces stormwater runoff and erosion
- Filters pollutants carried in stormwater runoff
- Shades streams for cooler water temperatures
- Provides nutrients to streams
- Increase wildlife biodiversity
- Provides year-round aesthetic beauty

## Applications

- Residential and HOA areas
- Parks, cultural, and community sites
- Commercial sites and schools

## Cost

- \$1,000 - \$3,200 per acre depending on size of trees and planting density\*
- Add \$6 to \$15 per tree for planting if using paid crews\*
- Annual maintenance costs \$500 - \$1,000 using contracted crews\*
- Grants may be available through conservation districts and conservation organizations

## Operation and Maintenance

- Seasonal mowing or weed trimming between trees until trees are 6 - 8 feet tall
- Maintain deer/mammal protection for the first 4 - 10 years
- Remove invasive vines and plants competing with trees seasonally

## Steps

- Identify riparian buffer zone, prevent future mowing and livestock access
- Develop a planting plan with experienced professional
- Purchase plant material at local nurseries or through conservation organization plant sales
- Plant trees with volunteers or paid crews
- Install deer protection tubes or wire caging
- Inspect after major storms



Buffer planting on Plum Run, East Bradford, PA.



Volunteer tree planting on Black Horse Run, East Bradford- by fire department.



Maturing buffer planting, Parkesburg, PA.

Additional Resources: [The Brandywine Conservancy's Riparian Buffer Guide.](https://www.brandywine.org/sites/default/files/media/BrandywineConservancy-RiparianBufferGuide.pdf)  
<https://www.brandywine.org/sites/default/files/media/BrandywineConservancy-RiparianBufferGuide.pdf>

# Underground Infiltration Systems

An underground infiltration system comprises of a series of pipes, vaults, or modular structures designed to store and infiltrate stormwater underground temporarily. This practice requires permeable soils and the excavation of soils replaced with gravel and storage systems. These systems are an alternative to above-ground detention basins, especially in areas with limited space. These infiltration systems can be located under other land use such as parking lots, lawns or play areas.

## Benefits

- Promotes infiltration of stormwater runoff
- Reduces stormwater runoff to streams
- Pre-treatment systems may capture sediment and other pollutants
- Replaces need for above ground detention basins
- Saves space in small project sites

## Applications

- Residential lots (<10 acres)
- Commercial sites and schools (<10 acres)
- Under parking lots, play areas or other compatible land uses

## Cost

- Average costs range between \$1.19- \$2.68 per square foot\*
- Some systems can be large and elaborate and more costly\*

## Operation and Maintenance

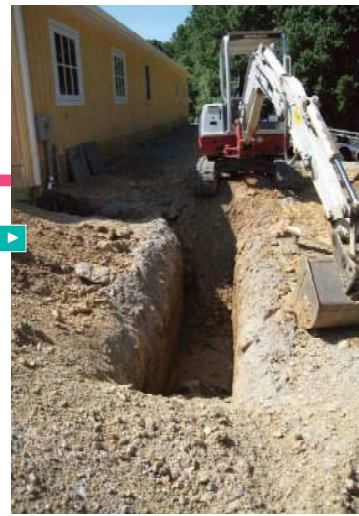
- Inspect after every major storm for the first few months after installation
- Semi-annually inspect pretreatment devices for sediment build up and damage
- Semi-annually check drainage three days after a storm to ensure proper percolation

## Steps

- Hire engineering or a similar firm to calculate stormwater needs, design system and apply for required permits
- Identify site, test soils for permeability
- Hire contractor to excavate site and install infiltration system
- Identify and mark off the location to ensure no soil compaction occurs from heavy equipment
- Replace topsoil and appropriate geotextile fabrics over infiltration system
- Connect infiltration system to the downspouts and catch basins



An underground stormwater infiltration system under construction at a park in Minneapolis. (Photo credit: "Infiltration System" by Mississippi WMO is licensed under CC BY-NC 2.0).



Excavation of hookup to underground infiltration system in Coatesville, PA.



Installation of an underground infiltration system in Coatesville, PA.

Additional Resources: [Philadelphia Water Department's Stormwater Management Practice Guidance: Chapter 4.8 Subsurface Detention](https://www.pwdplanreview.org/manual/chapter-4/4.8-subsurface-detention)

# Dry Well and Small-Scale Infiltration Trenches

These practices are a small-scale version of an underground storage and infiltration system that temporarily stores and then infiltrates stormwater runoff from roofs and other surfaces. Rainwater is directed from the roof or other surfaces into an underground gravel pit with a prefabricated plastic container or into a linear trench lined with geotextile fabric. These underground pits or trenches drain stormwater into the surrounding soil slowly. If designed properly, these should drain within 72 hours of a rain event. These features may require a pretreatment system to prevent clogging and potential groundwater contamination.

## Benefits

- Reduces stormwater runoff
- Increase groundwater recharge
- Can help reduce the size of downstream stormwater management structures
- Save above ground space, especially on small lots because the system is located underground

## Applications

- Residential lots (<5 acres)
- Commercial sites and schools (<5 acres)

## Cost

- Average costs range between \$1.19- \$2.68 per square foot\*
- Approximately \$250 for a 50-gallon dry well/ additional costs for perforated pipe in trench applications\*

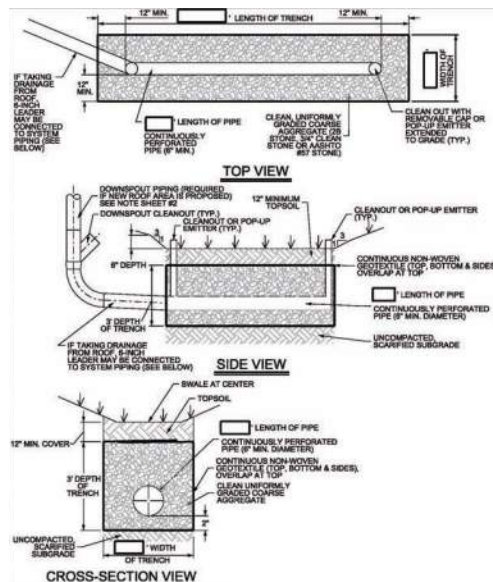
## Operation and Maintenance

- Inspect after every major storm for the first few months after installation
- Semi-annually inspect pretreatment devices for sediment build up and damage
- Semi-annually check drainage three days after a storm to ensure proper percolation

## Steps

- Hire engineering company, landscape company or you may be able to complete installation yourself
- Measure surface area of new impervious surfaces and calculate size of pit/ trench for infiltration
- Identify and mark off the location of the dry well/trench to ensure no soil compaction occurs from heavy equipment
- Begin dry well/trench installation after site construction is completed or protect the location with a berm, silt fence, or compost sock to prevent sediment build-up in the area
- Install dry well/trench, line with geotextile fabric and stone
- Replace topsoil, seed and stabilize topsoil
- Connect dry well/trench to the downspout

Infiltration trench design and concept developed by CEDARVILLE Engineering Group, LLC (CEG) and included in the [Chester County Act 167 Stormwater Management Model Ordinance, Appendix A.](#)



Simple infiltration design that can be installed by homeowner or landscape company.

Additional Resources: [New Jersey Department of Environmental Protection's Stormwater Best Management Practices Manual, Chapter 9.2: Dry Wells.](https://www.nj.gov/dsp/stormwater/bmp_manual/NJ_SWRMP_9.2-dry-wells.pdf)

# Green Roofs

Vegetative or green roofs typically consist of 3-6 inches of growth media over a waterproof roof membrane on flat or gently sloped roofs. The growth media is planted with vegetation selected for year-round cover withstanding heat, cold, drought, and rain events. The growth media with vegetative cover can absorb a 1/4 inch rain or more, reducing or delaying stormwater run-off from typical impervious roof systems.

## Benefits

- Reduce and delay stormwater runoff
- Filters stormwater runoff leaving roof system
- Reduces "heat island effect" and can provide cooler buildings
- Extends life of roofing membranes by preventing UV light degradation
- Provides aesthetic beauty in urban environments

## Applications

- Commercial buildings
- Cultural buildings and schools
- Small scale residential applications

## Operation and Maintenance

- Watering is only needed in the first growing season
- Seasonal weeding of vegetation
- Inspect roof outlets

## Steps

- Determine if roof structure can support additional weight of green roof system
- Contract with green roof professional to design green roof system
- Select appropriate vegetation
- Installation by qualified work crews

## Cost

- Commercially designed and installed green roofs cost \$20 to \$30/ square foot\*



Typical green roof vegetation.



Green roof at West Chester University, West Chester Borough, PA.



Green roof at University of Delaware, Newark, DE.



Green roof with pavilion and patio area at Dansko Company store and outlet, Penn Township, PA.

Additional Resources: [Penn State Extension's guidance on green roofs, https://extension.psu.edu/green-roofs-for-stormwater](https://extension.psu.edu/green-roofs-for-stormwater)

# Conservation Design / Reducing Paved Areas

Hard, impervious surfaces like concrete and pavement speed up stormwater runoff. By decreasing or removing these surfaces, stormwater can be absorbed into the ground naturally, reducing runoff from that area. New site plans can employ conservation design and low impact strategies that allow for greater densities of development areas that preserve greater area for open spaces. These plans often utilize many of the practices featured in this guide. In new or redeveloped areas where it is not practical to remove all paved surfaces—parking lots or driveways, other solutions may be possible, like using permeable paving materials or reducing the paved area. For instance, a parking lot with two-way cart paths could be converted into a one-way cart path. Where pavement can be removed, depaved areas can be planted with native vegetation that can provide multiple benefits.

## Benefits

- Reduces stormwater runoff
- Revegetated areas provide additional stormwater filtration and habitat creation
- Traffic calming (when cartway widths are reduced)
- Increased open space areas and lots with access to open spaces
- Greater wildlife biodiversity
- Aesthetic beauty

## Applications

- Residential and HOA areas
- Parks, cultural, and community sites
- Commercial sites and schools

## Operation and Maintenance

- Operation and Maintenance costs would be the same as other paved surfaces but may decrease as the amount of paved surfaces decrease
- If paved areas were converted to vegetated areas or permeable paving, additional maintenance would be required

## Steps

- Hire engineer/planning firm with experience in conservation design
- In new developments, identify natural areas and features to preserve as open space, restrict new development outside of these areas
- If planning areas with new pavement, identify ways to reduce paving during the design process
- In areas with existing pavement, identify areas of unused or underused impervious surfaces
- Determine if the paved area can be eliminated and revegetated or if the area could be converted to permeable paving

## Cost

- For new development: If conservation design is a priority at the beginning, costs may be similar to conventional designs while infrastructure costs are often lower due to less pavement, utility lengths, stormwater pipes and infrastructure
- For existing developments:
  - ▶ Average costs range between \$0.27-\$0.69 per square foot\*.
  - ▶ An additional cost would be added for any conversion to pervious paving or vegetated landscapes

Conservation design images and concept development courtesy of Gaadt Perspectives, LLC, Chester County Planning Commission, and Chester County Water Resources Authority, as appears in Chester County's Act 167 Stormwater Management Model Ordinance, Appendix B (<https://www.chesco.org/757/About-CCWRA>)



Cul de sac with landscaped island to reduce the amount of paving.



Existing Conditions: Identify natural features and sensitive areas to preserve, focus new development outside of these areas



Conventional Layout: Seek to maximize number of lots, but increase length of paved surfaces, utilities and storm water infrastructure



Conservation Design: Increases density of lots while decreasing pavement and length of utilities, while increasing preservation of open spaces and natural areas

# Constructed Wetlands

Constructed wetlands allow natural treatment utilizing wetland vegetation, soils, and microbial assemblages. Water filtration systems refine water sources—oceans, lakes, and streams, from pollutants for improved water quality regarding the health and safety of individuals, vegetation, and species within the ecosystem. When water flows through a constructed wetland, filtration begins as solids suspend within the vegetation, and plants or microorganisms absorb less soluble pollutants. For example, wetland microbes transform nitrogen into NO<sub>3</sub> or NH<sub>4</sub>, an inorganic form, for plant growth within the wetland.

## Benefits

- Utilizes natural resources for water filtration
- Allows for a self-renewal process as nitrogen naturally encourages plant growth
- Reduces wastewater odors
- Supports current wildlife and natural resources
- Restores aquatic systems
- Low cost
- Utilizes little energy for operation

## Applications

- Sites in proximity to streams, lakes, or other water sources
- Low, flat areas, with water flow sloping down for gravity flow
- Drained wetlands
- Sites with compacted soil for seepage

## Cost

- Average costs range between \$0.27-\$0.54 per square foot\*



Constructed wetland at Dansko distribution warehouse in Penn Township, PA.



Trail through constructed wetlands at University of Delaware, Newark, DE.

## Operation and Maintenance

Green stormwater infrastructure requires regular maintenance of vegetation, like any landscaped area. An Operation and Maintenance (O & M) plan is recommended and may be required for larger projects to ensure long term maintenance.

- Remove solids and floatable substances blocking water flow
- Remove unwanted/harmful species
- Remove accumulated sediment
- Access inlet and outlet structures
- Constructed wetlands require a maintenance operator for regular inspections



Constructed wetland at Dansko distribution warehouse in Penn Township, PA.



Trail through constructed wetlands at University of Delaware, Newark, DE.

## Steps

- Constructed Wetlands require a general construction storm water CWA Section 402 (NPDES) permit and a Storm Water Pollution Prevention Plan permit
- Construction must not harm current wildlife and water systems but also must allow for continued growth

**Additional Resources:** [The EPA's guidance on constructed wetlands](https://www.epa.gov/wetlands/constructed-wetlands)  
<https://www.epa.gov/wetlands/constructed-wetlands>

# Local Resources and Funding

A wide variety of public and private funding sources may assist in planning and implementing these GSI practices. Many require matching funds from the landowner, local municipality, or other partners. Funding sources include:

- [Chester County Planning Commission](#)
- [Chester County Conservation District](#)
- City of Newark
- Delaware Department of Natural Resources and Environmental Control (DNREC)
- Local municipalities, park authorities
- [National Fish and Wildlife Foundation](#) (Both private and federal funds from US Fish and Wildlife)
- [New Castle County, \(DE\) Conservation District](#)
- [PADEP Growing Greener program](#)
- [PADCED Watershed Restoration Program](#)
- [PA DCNR grant programs](#)
- Water Utilities and other businesses with an interest in clean water
- [TreeVitalize Watershed Grants](#) (Tree planting)
- [US EPA and other federal funding programs](#)

Brandywine Conservancy and Brandywine Red Clay Alliance prepared this booklet as part of our participation in the Brandywine Christina Cluster of the Delaware River Watershed Initiative (DRWI). Funding provided by William Penn Foundation. The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of the William Penn Foundation.

**For more information about addressing stormwater pollution, practices, and funding, visit the Christina Watersheds Municipal Partnership (CWMP) website at [www.cwmp.org](http://www.cwmp.org)**

If your property is in the White Clay Creek, Red Clay Creek or Plum Run watersheds, additional resources may be available through the [Catch the Rain program](#), which is a voluntary program for suburban homeowners in these watersheds.

**For more information about these Green Stormwater Infrastructure Practices and sources of technical assistance and funding, contact:**

**Brandywine Conservancy**  
[www.brandywine.org/conservancy](http://www.brandywine.org/conservancy)  
[conservancy@brandywine.org](mailto:conservancy@brandywine.org)  
 610-388-2700

**Brandywine Red Clay Alliance**  
[www.brandywineredclay.org](http://www.brandywineredclay.org)  
[info@brandywineredclay.org](mailto:info@brandywineredclay.org)  
 610-793-1090

**The Brandywine-Christina Cluster of the DRWI is working to improve the water quality in our watershed through land preservation, agricultural best practices, stream restoration, and addressing stormwater impacts. Members are:**

- [Brandywine Conservancy](#)
- [Brandywine Red Clay Alliance](#)
- [Natural Lands](#)
- [Stroud Water Research Center](#)
- [The Nature Conservancy of Pennsylvania and Delaware](#)
- [University of Delaware Water Resources Center](#)



**LEGAL NOTICES**

NOTICE IS GIVEN that on September 21, 2022 at 6:30 p.m., prevailing time, Council for the Borough of West Chester, Chester County, Pennsylvania, will hold a public hearing as part of the regularly scheduled public meeting at the Borough of West Chester's municipal building located at 401 East Gay Street, West Chester, Pennsylvania, to consider the adoption of, and if approved, Borough Council will adopt an Ordinance with the following title: AN ORDINANCE OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, AMENDING THE BOROUGH OF WEST CHESTER STORMWATER MANAGEMENT ORDINANCE, WHICH WAS ADOPTED ON DECEMBER 18, 2013 AS ORDINANCE NO. 18-2013 AND IS CODIFIED IN CHAPTER 94 OF THE BOROUGH OF WEST CHESTER CODE, AND ADOPTING AMENDMENTS REQUIRED BY THE 2022 CHESTER COUNTY MODEL ACT 167 STORMWATER MANAGEMENT ORDINANCE. The Ordinance proposes to amend the Borough's Stormwater Management Ordinance which is codified in Chapter 94 of the Borough Code to be consistent with the Chester County 2022 Model Act 167 Stormwater Management Ordinance. The principal provisions of the Ordinance are summarized in the Table of Contents for the Ordinance which is set forth below: ARTICLE I - GENERAL PROVISIONS Â§94-101. Short Title Â§94-102. Statement of Findings Â§94-103. Purpose Â§94-104. Statutory Authority Â§94-105. Applicability Â§94-106. Exemptions and Modified Requirements Â§94-107. Repealer Â§94-108. Severability Â§94-109. Compatibility with Other Ordinances or Legal Requirements Â§94-110. Financial Security Â§94-111. Waivers Â§94-112. Erroneous Permit ARTICLE II - DEFINITIONS Â§94-201. Interpretation Â§94-202. Definitions ARTICLE III - STORMWATER MANAGEMENT STANDARDS Â§94-301. General Requirements Â§94-302. Permit Requirements by Other Governmental Entities Â§94-303. Erosion and Sediment Control Â§94-304. Site Design Process Â§94-305. Water Quality and Runoff Volume Requirements Â§94-306. Infiltration Requirements Â§94-307. Stream Channel Protection Requirements Â§94-308. Stormwater Peak Rate Control Requirements Â§94-309. Calculation Methodology Â§94-310. Other Requirements Â§94-311. Other Conveyance and System Design Standards Â§94-312. Riparian Buffers ARTICLE IV- STORMWATER MANAGEMENT (SWM) SITE PLAN REQUIREMENTS Â§94-401. General Requirements Â§94-402. SWM Site Plan Contents Â§94-403. SWM Site Plan Submission Â§94-404. SWM Site Plan Review Â§94-405. Revision of SWM Site Plans Â§94-406. Resubmission of Inconsistent or Noncompliant SWM Site Plans ARTICLE V - PERFORMANCE AND INSPECTION OF REGULATED ACTIVITIES, AND FINAL AS-BUILT PLANS Â§94-501. Performance and Inspection of Regulated Activities Â§94-502. Final As-Built Plans ARTICLE VI - FEES AND EXPENSES Â§94-601. Site Plan Review and Inspection Fees Established Â§94-602. Expenses Covered by Fees ARTICLE VII - OPERATION AND MAINTENANCE (O&M) RESPONSIBILITIES AND EASEMENTS Â§94-701. General Requirements for Protection, Operation and Maintenance of Stormwater BMPs and Conveyances Â§94-702. Operation and Maintenance Plans Â§94-703. Operation and Maintenance Agreements Â§94-704. Easements and Deed Restrictions Â§94-705. Other Post-construction Responsibilities Â§94-706. Municipal Stormwater Control and BMP Operation and Maintenance Fund and Inspection and BMP Operations and Maintenance Requirements ARTICLE VIII - PROHIBITIONS Â§94-801. Prohibited Discharges Â§94-802. Prohibited Connections Â§94-803. Roof Drains and Sump Pumps Â§94-804. Alteration of BMPs ARTICLE IX - ENFORCEMENT AND PENALTIES Â§94-901. Public Nuisance Â§94-902. Right of Entry Â§94-903. Enforcement Â§94-904. Suspension and Revocation of Permits and Approvals Â§94-905. Violations and Penalties Â§94-906. Appeals Â§94-907. Effective Date The full text of the Ordinance is available on the Borough's website [www.west-chester.com](http://www.west-chester.com). In addition, a certified copy of the proposed Ordinance is on file at the offices of the Daily Local News by calling (215) 648-1066 and the Chester County Law Library, Chester County Justice Center, Suite 2400, 201 West Market Street, West Chester, Pennsylvania 19380. Those individuals with disabilities and ADA accommodations for effective participation in the meeting should contact 610-692-7574 prior to the meeting. All attempts will be made for reasonable accommodations. Kristin S. Camp, Esquire Borough Solicitor DLN 9/12; 1a

Appeared in: **Daily Local News** on Monday, 09/12/2022

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**BOROUGH OF WEST CHESTER**  
**CHESTER COUNTY, PENNSYLVANIA**

**ORDINANCE NO. 09-2022**

**AN ORDINANCE OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, AMENDING THE BOROUGH OF WEST CHESTER STORMWATER MANAGEMENT ORDINANCE, WHICH WAS ADOPTED ON DECEMBER 18, 2013 AS ORDINANCE NO. 18-2013 AND IS CODIFIED IN CHAPTER 94 OF THE BOROUGH OF WEST CHESTER CODE, AND ADOPTING AMENDMENTS REQUIRED BY THE 2022 CHESTER COUNTY MODEL ACT 167 STORMWATER MANAGEMENT ORDINANCE.**

**BE IT ENACTED AND ORDAINED** by Borough Council of the Borough of West Chester, as follows:

**SECTION 1.** The Borough of West Chester Stormwater Management Ordinance, which is codified in Chapter 94 of the Borough of West Chester Code, is amended to adopt in its place the revised Ordinance which is attached hereto as Exhibit "A".

**SECTION 2. SEVERABILITY.** If any sentence, clause, section, or part of this Ordinance is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts hereof. It is hereby declared as the intent of the Council of the Borough of West Chester that this Ordinance would have been adopted had such unconstitutional, illegal, or invalid sentence, clause, section or part thereof not been included therein.

**SECTION 3. REPEALER.** Ordinance No. 18-2013 is hereby repealed and replaced in its entirety with the Ordinance attached hereto as Exhibit "A".

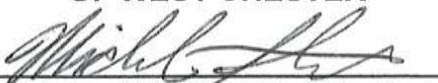
**SECTION 4. EFFECTIVE DATE.** This Ordinance shall become effective upon enactment as provided by law.

ENACTED AND ORDAINED THIS 21 DAY OF SEPTEMBER, 2022.

**ATTEST:**

  
\_\_\_\_\_  
Sean Metrick, Secretary

**COUNCIL FOR THE BOROUGH OF  
OF WEST CHESTER**

By:   
\_\_\_\_\_  
Michael Stefano, President

APPROVED THIS 21 DAY OF SEPTEMBER, 2022.


  
\_\_\_\_\_  
Lillian L. DeBaptiste, Mayor

EXHIBIT "A"

# Chapter 94

## Stormwater Management

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### Article I

#### General Provisions

**§ 94-101 Short title.**

This chapter shall be known as "the Borough of West Chester's Stormwater Management Ordinance."

**§ 94-102 Statement of findings.**

Borough Council of the Borough finds that:

- A. Inadequate management of accelerated stormwater runoff resulting from land disturbance and development throughout a watershed increases flooding, flows and velocities, contributes to erosion and sedimentation, overtaxes the capacity of streams and storm sewers, greatly increases the cost of public facilities to convey and manage stormwater, undermines floodplain management and flood reduction efforts in upstream and downstream communities, reduces infiltration and groundwater recharge, increases nonpoint source pollution to waterways, and threatens public health and safety.
- B. Inadequate planning and management of stormwater runoff resulting from land disturbance and development throughout a watershed can harm surface water resources by changing the natural hydrologic patterns, accelerating stream flows (which increase scour and erosion of stream beds and stream banks, thereby elevating sedimentation), destroying aquatic habitat, and elevating aquatic pollutant concentrations and loadings such as sediments, nutrients, heavy metals, and pathogens. Groundwater resources are also impacted through loss of recharge.
- C. A comprehensive program of stormwater management, including minimization of impacts of new development, redevelopment, and other earth disturbance activities causing accelerated runoff and erosion and loss of natural infiltration, is fundamental to the public health, safety, and general welfare of the people of the Borough and all of the people of the commonwealth, their resources, and the environment.
- D. Stormwater is an important water resource that provides infiltration and groundwater recharge for water supplies and baseflow of streams, which also protects and maintains surface water quality.
- E. Impacts from stormwater runoff can be minimized by reducing the volume of stormwater generated and by using project designs that maintain the natural hydrologic regime and sustain high water quality, infiltration, stream baseflow, and aquatic ecosystems. Cost-effective and environmentally sensitive stormwater management can be achieved through the use of nonstructural site design techniques that minimize impervious surfaces, reduce disturbance of land and natural resources, avoid sensitive areas (i.e., riparian buffers, floodplains, steep slopes, wetlands, etc.), and consider topography and soils to maintain the natural hydrologic regime.
- F. Public education on the control of pollution from stormwater is an essential component in successfully addressing stormwater.
- G. Federal and state regulations require the Borough to implement a program of stormwater controls. The Borough is required to obtain a permit and comply with its provisions for stormwater discharges.

from its separate storm sewer system under the National Pollutant Discharge Elimination System (NPDES).

- H. Non-stormwater discharges to municipal or other storm sewer systems can contribute to pollution of the waters of the commonwealth.
- I. The use of green infrastructure, low impact development (LID), and Conservation Design (CD) are intended to address the root cause of water quality impairment by using systems and practices which use or mimic natural processes to: 1) infiltrate and recharge, 2) evapotranspire, and/or 3) harvest and use precipitation near where it falls to earth. Green infrastructure practices, LID, and CD contribute to the restoration or maintenance of pre-development hydrology.

**§ 94-103 Purpose.**

The purpose of this chapter is to protect public health, safety and general welfare, property and water quality by implementing drainage and stormwater management practices, criteria, and provisions included herein for land development, construction and earth disturbance activities, to achieve the following throughout the Borough:

- A. Reduce the frequency and magnitude of flooding and stormwater impacts affecting people, property, infrastructure and public services.
- B. Sustain or improve the natural hydrologic characteristics and water quality of groundwater and surface waters.
- C. Protect natural resources, including riparian and aquatic living resources and habitats.
- D. Maintain the natural hydrologic regime of land development sites and their receiving watersheds.
- E. Minimize land disturbance and protect and incorporate natural hydrologic features, drainage patterns, infiltration, and flow conditions within land development site designs.
- F. Reduce and minimize the volume of stormwater generated, and manage and release stormwater as close to the source of runoff as possible.
- G. Provide infiltration and maintain natural groundwater recharge to protect groundwater supplies and stream baseflows, prevent degradation of surface water and groundwater quality, and to otherwise protect water resources.
- H. Reduce stormwater pollutant loads to protect and improve the chemical, physical, and biological quality of ground- and surface waters.
- I. Reduce scour, erosion and sedimentation of stream channels.
- J. Reduce flooding impacts and preserve and restore the natural flood-carrying capacity of streams and their floodplains.
- K. Protect adjacent and downgradient lands from adverse impacts of direct stormwater discharges.
- L. Minimize impervious surfaces and connected impervious surfaces to promote infiltration and reduce the volume and impacts of stormwater runoff.
- M. Provide proper long-term operation and maintenance of all permanent stormwater management facilities, BMPs and conveyances that are implemented within the Borough.
- N. Reduce the impacts of runoff from existing developed land undergoing redevelopment while encouraging new development and redevelopment in urban areas and areas designated for growth.

- O. Implement an illicit discharge detection and elimination program that addresses non-stormwater discharges.
- P. Provide stormwater management performance standards and design criteria on watershed-based basis.
- Q. Provide standards to meet certain NPDES stormwater permit requirements.
- R. Meet legal water quality requirements under state law, including regulations at 25 Pa. Code Chapter 93, to protect, maintain, reclaim and restore the existing and designated uses of the waters of the commonwealth.
- S. Implement the requirements of total maximum daily load (TMDLs) where applicable to waters within or impacted by the Borough.
- T. Provide review procedures and performance standards for stormwater planning and management.
- U. Fulfill the purpose and requirements of PA Act 167 (PA Act 167, Section 3):

"(1) Encourage planning and management of stormwater runoff in each watershed which is consistent with sound water and land use practices.

(2) Authorize a comprehensive program of stormwater management designated to preserve and restore the flood carrying capacity of commonwealth streams; to preserve to the maximum extent practicable natural stormwater runoff regimes and natural course, current and cross-section of water of the commonwealth; and to protect and conserve groundwaters and groundwater recharge areas.

(3) Encourage local administration and management of stormwater consistent with the commonwealth's duty as trustee of natural resources and the people's constitutional right to the preservation of natural, economic, scenic, aesthetic, recreational and historic values of the environment."

**§ 94-104 Statutory authority.**

The Borough is empowered or required to regulate land use activities that affect runoff and surface and groundwater quality and quantity by the authority of:

- A. Act of October 4, 1978, P.L. 864 (Act 167) 32 P.S. § 680.1 et seq., as amended, the "Stormwater Management Act" (hereinafter referred to as "the Act");
- B. Act of July 31, 1968, P.L. 805, No. 247, 53 P.S. § 10101, et seq., as amended, the Pennsylvania Municipalities Planning Code, Act 247, hereinafter referred to as the "MPC").

**§ 94-105 Applicability.**

A. The following activities are regulated by this chapter:

- (1) All regulated activities as defined in this chapter including, but not limited to, new development, redevelopment, and earth disturbance activities that are located within the Borough shall be subject to regulation by this chapter.
- (2) When a building and/or grading permit is required for any regulated activity on an existing parcel or approved lot created by a subdivision and/or improved as a land development project, issuance of the permit shall be conditioned upon adherence to the terms of this chapter.
- (3) This chapter contains the stormwater management performance standards and design criteria that are necessary from a watershed-based perspective. The Borough's stormwater management conveyance and system design criteria (e.g., inlet spacing, inlet type, collection system design and details, outlet

structure design, etc.) shall continue to be regulated by the applicable municipal ordinance(s) and applicable state regulations, or as included in § 94-311 of this chapter.

- B. Duty of persons engaged in a regulated activity. Notwithstanding any provision(s) of this chapter, including exemptions, any landowner or any person engaged in a regulated activity, including but not limited to the alteration or development of land, which may affect stormwater runoff characteristics, shall implement such measures as are reasonably necessary to prevent injury to health, safety, or other property. Such measures also shall include actions as are required to manage the rate, volume, direction, and quality of resulting stormwater runoff in a manner which otherwise adequately protects health, property, and water quality of waters of the commonwealth.
- C. Phased and incremental project requirements.
  - (1) Any regulated activity (including but not limited to new development, redevelopment, or earth disturbance) that is to take place incrementally or in phases, or occurs in sequential projects on the same parcel or property, shall be subject to regulation by this chapter if the regulated impervious surface or earth disturbance exceeds the corresponding threshold for exemption (as presented in Table 106.1 "Thresholds for Regulated Activities Exempt From Chapter Provisions").
  - (2) The date of adoption of this chapter shall be the starting point from which to consider tracts as parent tracts relative to future subdivisions, and from which impervious surface and earth disturbance computations shall be cumulatively considered, unless such requirements have previously been adopted, then the earliest date of the applicable municipal ordinance adoption shall remain as the starting point. For example: If, after adoption of this chapter, an applicant proposes construction of a four-hundred-square-foot garage, that project would be exempt from the requirements of this chapter as noted in Table 106.1. If, at a later date, an applicant proposes to construct a three-hundred-square-foot room addition on the same property, the applicant would then be required to implement the stormwater management and plan submission requirements of this chapter for the cumulative total of 700 square feet of additional impervious surface added to the property since adoption of this chapter.
- D. Notwithstanding anything to the contrary contained herein, the provisions of Article VIII, titled, "Prohibitions" shall apply to every person in the Borough regardless if they are engaged in a regulated activity.

**§ 94-106 Exemptions and modified requirements.**

**A. Requirements for exempt activities.**

- (1) An exemption from any requirement of this chapter shall not relieve the applicant from implementing all other applicable requirements of this chapter or from implementing such measures as are necessary to protect public health, safety, and welfare, property and water quality.
- (2) An exemption shall not relieve the applicant from complying with the requirements for state-designated special protection waters designated by PADEP as high-quality (HQ) or exceptional-value (EV) waters, or any other current or future state or municipal water quality protection requirements.
- (3) An exemption under this chapter shall not relieve the applicant from complying with all other applicable municipal ordinances or regulations.

**B. General exemptions. Regulated activities that**

- (1) are less than 500 square feet of regulated impervious surfaces and less than 2,500 square feet of earth disturbance;
- (2) are listed in Subsection C, are exempt from those (and only those) requirements of this chapter that are included in the sections and articles listed in Table 106.1. Exemptions are for the items noted in Table 106.1 only, and shall not relieve the landowner from other applicable requirements of this

chapter. Exemption shall not relieve the applicant from implementing such measures as are necessary to protect health, safety, and welfare, property, and water quality.

**TABLE 106.1**  
**Thresholds for Regulated Activities that are Exempt from the Provisions of this Ordinance as Listed Below**

Ordinance Article/Section	Activities Listed in Subsection 106.C.	Less Than 500 Square Feet of Proposed Regulated Impervious Surfaces and Less Than 2,500 Square Feet of Proposed Earth Disturbance	Equal To or Greater Than 500 Square Feet of Regulated Impervious Surfaces or Equal To or Greater Than 2,500 Square Feet of Proposed Earth Disturbance
Article I	Not Exempt	Not Exempt	Not Exempt
Article II	Not Exempt	Not Exempt	Not Exempt
Sections 302, and 303, 311	Not Exempt	Not Exempt	Not Exempt
Sections 301, 304, 305, 306, 307, 308, 309, and 310	Exempt	Exempt	Not Exempt
Article IV	Exempt	Exempt	Not Exempt
Article V	Exempt	Exempt	Not Exempt
Article VI	Exempt	Exempt	Not Exempt
Article VII	Exempt	Exempt	Not Exempt
Article VIII	Not Exempt	Not Exempt	Not Exempt
Article IX	Not Exempt	Not Exempt	Not Exempt
Other Erosion, Sediment and Pollution Control Requirements	Must comply with Title 25, Chapter 102 of the PA Code and other applicable State and municipal codes, including the Clean Streams Law.		

- C. Exemptions for specific activities. The following specific regulated activities are exempt from the requirements of §§ 94-301, 94-304, 94-305, 94-306, 94-307, 94-308, 94-309 and 94-310, and Articles IV, V, VI and VII of this chapter (as shown in Table 106.1), unless otherwise noted below. All other conveyance and system design standards established by the Borough in other codes or ordinances shall be required, and all other provisions of this chapter shall apply.
- (1) Emergency exemption: emergency maintenance work performed for the protection of public health, safety and welfare. This exemption is limited to repair of the existing stormwater management facility; upgrades, additions or other improvements are not exempt. A written description of the scope and extent of any emergency work performed shall be submitted to the Borough within two calendar days of the commencement of the activity. A detailed plan shall be submitted no later than 30 days following commencement of the activity. If the Borough finds that the work is not an emergency, then the work shall cease immediately and the requirements of this chapter shall be addressed as applicable.

- (2) Maintenance: any maintenance to an existing stormwater management system, stormwater management facility, BMP or conveyance made in accordance with plans and specifications approved by the Municipal Engineer or Borough.
- (3) Existing landscaping: use of land for maintenance, replacement or enhancement of existing landscaping.
- (4) Gardening: use of land for gardening for home consumption.
- (5) Agricultural-related activities:
  - (a) Agricultural activities (as defined in Article II), when performed in accordance with the requirements of 25 Pa. Code Chapter 102.
  - (b) Conservation practices (as defined in Article II) that do not involve construction of any new or expanded impervious surfaces.
  - (c) High tunnels (as defined in § 94-202), if: **[Added 10-16-2019 by Ord. No. 18-2019]**
    - [1] The high tunnel or its flooring does not result in an impervious area exceeding 25% of all structures located on the owner's total contiguous land area; and
    - [2] The high tunnel meets one of the following:
      - [a] The high tunnel is located at least 100 feet from any perennial stream or watercourse, public road or neighboring property line;
      - [b] The high tunnel is located at least 35 feet from any perennial stream or watercourse, public road, or neighboring property line and located on land with a slope not greater than 7%; or
      - [c] The high tunnel is supported with a buffer or diversion system that does not directly drain into a stream or other watercourse by managing stormwater runoff in a manner consistent with the requirements of this chapter.
- (6) Forest management: forest management operations, which are consistent with a sound forest management plan as filed with the Borough and which comply with the Pennsylvania Department of Environmental Protection's management practices contained in its publication "Soil Erosion and Sedimentation Control Guidelines for Forestry" (as amended or replaced by subsequent guidance). Such operations are required to have an erosion and sedimentation control plan, which meets the requirements of 25 Pa. Code Chapter 102 and meets the erosion and sediment control standards of § 94-303 of this chapter.
- (7) Maintenance of existing gravel and paved surfaces: Replacement of existing gravel and paved surfaces shall meet the erosion and sediment control requirements of 25 Pa. Code Chapter 102 and § 94-303 of this chapter, and is exempt from all other requirements of this chapter listed in Subsection C above. Resurfacing of existing gravel and paved surfaces is exempt from the requirements of this chapter listed above. Construction of new or additional impervious surfaces shall comply with all requirements of this chapter as indicated in Table 106.1.
- (8) Municipal roadway shoulder improvements: shoulder improvements conducted within the existing roadway cross section of municipal-owned roadways, unless an NPDES permit is required, in which case the proposed work must comply with all requirements of this chapter.

- (9) In-place replacement, repair, or maintenance of residential impervious surfaces: the replacement of existing residential patios, decks, driveways, pools, garages, and/or sidewalks that are accessory to an existing one- or two-family dwelling unit in the exact footprint of the existing impervious surface.
- D. Modified requirements for small projects. Regulated activities that involve 500 square feet but less than 1,000 square feet of regulated impervious surfaces and 2,500 square feet but less than 5,000 square feet of earth disturbance may apply the modified requirements presented in the "Simplified Approach to Stormwater Management for Small Projects" (Simplified Approach) (Appendix A) to comply with the requirements of §§ 94-304, 94-305, 94-306, 94-307, 94-308, 94-309 and 94-310, and Articles IV, V, VI and VII of this chapter (as shown in Table 106.1). The applicant shall first contact the Municipal Engineer to confirm that the proposed project is eligible for use of the Simplified Approach and is not otherwise exempt from these chapter provisions; to determine what components of the proposed project are to be considered as impervious surfaces; and to determine if other known site or local conditions exist that may preclude the use of any techniques included in the Simplified Approach. Appendix A includes instructions and procedures for preparation, submittal, review and approval of documents required when using the Simplified Approach and shall be adhered to by the applicant. Infiltration testing for projects using the simplified approach is recommend but is not required by this Ordinance. All other provisions of this chapter shall apply.

**TABLE 106.2**  
**Thresholds for Regulated Activities that are Eligible for "Modified" Requirements**  
**for the Provisions of this Ordinance that are Listed Below**

Ordinance Article/Section	Activities Listed in Subsection 106.D
Article I	All Provisions Apply
Article II	All Provisions Apply
Sections 302, and 303, 311	All Provisions Apply
Sections 301, 304, 305, 306, 307, 308, 309, and 310	Exempt if Modified Requirements of 106.D are Applied
Article IV	Exempt if Modified Requirements of 106.D are Applied
Article V	Exempt if Modified Requirements of 106.D are Applied
Article VI	Exempt if Modified Requirements of 106.D are Applied
Article VII	Exempt if Modified Requirements of 106.D are Applied
Article VIII	All Provisions Apply
Article IX	All Provisions Apply
Other Erosion, Sediment and Pollution Control Requirements	Must comply with Title 25, Chapter 102 of the PA Code and other applicable State and municipal codes, including the Clean Streams Law.

Table 106.2 Notes:

- "Modified Requirements" – Regulated Activities listed within the Subsections of this Ordinance noted in Table 106.2 are eligible for exemption only from the indicated sections and subsections of this Ordinance and only if the modified requirements of Subsections 106.D are met to the satisfaction of the Municipality; all other provisions of this Ordinance apply.

**§ 94-107 Repealer.**

The Stormwater Management Ordinance adopted on December 18, 2013, as Ordinance No. 2013, which is codified in Chapter 94 of the Borough Code, is hereby repealed. Any other ordinance or ordinance provision of the Borough Code which is inconsistent with any of the provisions of this chapter is hereby repealed to the extent of the inconsistency only.

**§ 94-108 Severability.**

If any sentence, clause, section or part of this chapter is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts of this chapter. It is hereby declared the intent of Borough Council of the Borough that this chapter would have been adopted had such unconstitutional, illegal or invalid provision, sentence, clause, section or part thereof not been included herein.

**§ 94-109 Compatibility with other ordinances or legal requirements.**

- A. Approvals issued and actions taken pursuant to this chapter do not relieve the applicant of the responsibility to secure and comply with other required permits or approvals for activities regulated by any other applicable code, rule, act, law, regulation, or ordinance.
- B. To the extent that this chapter imposes more rigorous or stringent requirements for stormwater management than any other code, rule, act, law, regulation or ordinance, the specific requirements contained in this chapter shall take precedence.
- C. Nothing in this chapter shall be construed to affect any of the Borough's requirements regarding stormwater matters that do not conflict with the provisions of this chapter, such as local stormwater management design criteria (e.g., inlet spacing, inlet type, collection system design and details, outlet structure design, etc.). The requirements of this chapter shall supersede any conflicting requirements in other municipal ordinances or regulations.

**§ 94-110 Financial security.**

For all activities requiring submittal of a stormwater management (SWM) site plan that involve subdivision or land development, the applicant shall post financial security with the Borough for the timely installation and proper construction of all stormwater management facilities as required by the approved SWM site plan and this chapter, and such financial security shall:

- A. Be equal to or greater than the full construction cost of the required facilities except to the extent that financial security for the cost of any of such improvements is required to be and is posted with the Pennsylvania Department of Transportation in connection with a highway occupancy permit application; and
- B. Be determined, collected, applied and enforced in accordance with Sections 509 through 511 of the MPC and the provisions of the Borough's Subdivision and Land Development Ordinance (SALDO).

**§ 94-111 Waivers.**

- A. General. The requirements of this chapter are essential and shall be strictly adhered to. For any regulated activity where, after a close evaluation of alternative site designs, it proves to be impracticable to meet any one or more of the mandatory minimum standards of this chapter on the site, the Borough may approve measures other than those in this chapter, subject to Subsections B and C.
- B. The Borough Council shall have the authority to waive or modify the requirements of one or more provisions of this chapter if the literal enforcement will exact undue hardship because of peculiar conditions pertaining to the land in question, provided that such modification will not be contrary to the public interest and that the purpose and intent of the chapter is observed. Cost or financial burden shall not be considered a hardship. Modification may also be considered if an alternative standard or approach can be demonstrated to provide equal or better achievement of the results intended by the

chapter. A request for modification shall be in writing and accompany the SWM site plan submission. The request shall state in full the grounds and facts on which the request is based, the provision or provisions of the chapter involved and the minimum modification necessary.

- C. PADEP approval required. No waiver or modification of any regulated stormwater activity involving Earth Disturbance greater than or equal to one (1) acre may be granted by the Municipality unless that action is approved in advance by PADEP or the Chester County Conservation District.

**§ 94-112 Erroneous permit.**

Any permit or authorization issued or approved based on false, misleading or erroneous information provided by an applicant is void without the necessity of any proceedings for revocation. Any work undertaken or use established pursuant to such permit or other authorization is unlawful. No action may be taken by a board, agency, or employee of the Municipality purporting to validate such a violation.

## **Article II Definitions**

**§ 94-201 Interpretation.**

For the purposes of this chapter, certain terms and words used herein shall be interpreted as follows:

- A. Words used in the present tense include the future tense; the singular number includes the plural, and the plural number includes the singular; words of masculine gender include feminine gender; and words of feminine gender include masculine gender.
- B. The word "includes" or "including" shall not limit the term to the specific example, but is intended to extend its meaning to all other instances of like kind and character.
- C. The word "person" includes an individual, partnership, public or private association or corporation, firm, trust, estate, Borough, governmental unit, public utility or any other legal entity whatsoever which is recognized by law as the subject of rights and duties. Whenever used in any section prescribing or imposing a penalty, the term "person" shall include the members of a partnership, the officers, members, servants and agents of an association, officers, agents and servants of a corporation, and the officers of a Borough.
- D. The words "shall" and "must" are mandatory; the words "may" and "should" are permissive.
- E. The words "used" or "occupied" include the words "intended, designed, maintained, or arranged to be used, occupied, or maintained."
- F. The definitions in this chapter are for the purposes of enforcing the provisions of this chapter and have no bearing on other municipal regulations or ordinances.

**§ 94-202 Definitions.**

As used in this chapter, the following terms shall have the meanings indicated:

**AGRICULTURAL ACTIVITY**

Activities associated with agriculture such as agricultural cultivation, agricultural operation, and animal heavy use areas. This includes the work of producing crops including tillage, plowing, disking, harrowing, planting or harvesting crops; or pasturing and raising of livestock; and installation of conservation measures. Construction of new buildings or impervious area is not considered an agricultural activity.

**APPLICANT**

A landowner, developer, or other person who has filed an application to the Borough for approval to engage in any regulated activity as defined in this chapter.

**AS-BUILT PLAN (DRAWINGS)**

Engineering or site plans or drawings that document the actual locations, dimensions and elevations of the improvements, and building components, and changes made to the original design plans. The final version of these documents, or a copy of same, are signed and sealed by a qualified licensed professional and submitted to the Borough at the completion of the project, as per the requirements of § 94-502 of this chapter, as "final as-built plans."

**BANKFULL**

The channel at the top-of-bank or point from where water begins to overflow onto a floodplain.

**BASEFLOW**

Portion of stream discharge derived from groundwater; the sustained discharge that does not result from direct runoff or from water diversions, reservoir releases, piped discharges, or other human activities.

**BMP (BEST MANAGEMENT PRACTICE)**

Activities, facilities, designs, measures, or procedures used to manage stormwater impacts from regulated activities, to provide water quality treatment, infiltration, volume reduction, and/or peak rate control, to promote groundwater recharge, and to otherwise meet the purposes of this chapter. Stormwater BMPs are commonly grouped into one of two broad categories or measures: "structural" or "nonstructural." In this chapter, nonstructural BMPs or measures include certain low impact development and conservation design practices used to minimize the contact of pollutants with stormwater runoff. These practices aim to limit the total volume of stormwater runoff and manage stormwater at its source by techniques such as protecting natural systems and incorporating existing landscape features. Nonstructural BMPs include, but are not limited to, the protection of sensitive and special value features such as wetlands and riparian areas, the preservation of open space while clustering and concentrating development, the reduction of impervious cover, and the disconnection of rooftops from storm sewers. Structural BMPs are those that consist of a system that is designed and engineered to capture and treat stormwater runoff. Structural BMPs include, but are not limited to, a wide variety of practices and devices from large-scale retention ponds and constructed wetlands to small-scale underground treatment systems, infiltration facilities, filter strips, bioretention, wet ponds, permeable paving, grassed swales, riparian buffer, sand filters, detention basins, and manufactured devices. Structural and nonstructural stormwater BMPs are permanent appurtenances to the Site. [See also Stormwater Management Facility and Stormwater Control Measure (SCM)]

**BOROUGH**

West Chester Borough, Chester County, Pennsylvania.

**BUFFER**

See "riparian buffer."

**CARBONATE GEOLOGY or CARBONATE ROCK FORMATIONS**

See "karst."

**CFS**

Cubic feet per second.

**CHANNEL**

A natural or artificial open drainage feature that conveys, continuously or periodically, flowing water and through which stormwater flows. Channels include, but shall not be limited to, natural and man-made drainageways, swales, streams, ditches, canals, and pipes flowing partly full.

**CN**

Curve number.

## **COMMONWEALTH**

Commonwealth of Pennsylvania.

## **CONSERVATION DISTRICT**

The Chester County Conservation District.

## **CONSERVATION DESIGN**

A series of holistic land development design goals that maximize protection of key land and environmental resources, preserve significant concentrations of open space and greenways, evaluate, and maintain site hydrology, and ensure flexibility in development design to meet community needs for complimentary and aesthetically pleasing development. Conservation design encompasses the following objectives: conservation/enhancement of natural resources, wildlife habitat, biodiversity corridors, and greenways (interconnected open space); minimization of environmental impact resulting from a change in land use (minimum disturbance, minimum maintenance); maintenance of a balanced water budget by making use of site characteristics and infiltration; incorporation of unique natural, scenic and historic site features into the configuration of the development; preservation of the integral characteristics of the site as viewed from adjoining roads; and reduction in maintenance required for stormwater management practices. Such objectives can be met on a site through an integrated development process that respects natural site conditions and attempts, to the maximum extent possible, to replicate or improve the natural hydrology of a site.

## **CONSERVATION PLAN**

A plan written by a planner certified by NRCS that identifies conservation practices and includes site-specific BMPs for agricultural plowing or tilling activities and animal heavy use areas.

## **CONSERVATION PRACTICES**

Practices installed on agricultural lands to improve farmland, soil and/or water quality which have been identified in a current conservation plan.

## **CONVEYANCE**

A natural or man-made, existing or proposed stormwater management facility, feature or channel used for the transportation or transmission of stormwater from one place to another. For the purposes of this chapter, conveyance shall include pipes, drainage ditches, channels and swales (vegetated and other), gutters, stream channels, and like facilities or features.

## **DESIGN STORM**

The magnitude and temporal distribution of precipitation from a storm event measured in probability of occurrence (e.g., a five-year storm) and duration (e.g., 24 hours), used in the design and evaluation of stormwater management systems. Also see "return period."

## **DETENTION BASIN**

An impoundment designed to collect and retard stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate. Detention basins are designed to drain completely shortly after any given rainfall event.

## **DETENTION or TO DETAIN**

Capture and temporary storage of runoff in a stormwater management facility for release at a controlled rate.

## **DETENTION VOLUME**

The volume of runoff that is captured and released into the waters of the commonwealth at a controlled rate.

**DEVELOPER**

A person, company, or organization who seeks to undertake any regulated activities at a site in the Borough.

**DIAMETER AT BREAST HEIGHT (DBH)**

The outside bark diameter of a tree at breast height which is defined as 4.5 feet (1.37 meters) above the forest floor on the uphill side of the tree.

**DISTURBED AREA**

Land area disturbed by or where an Earth Disturbance Activity is occurring or has occurred.

**DRAINAGE AREA**

That land area contributing runoff to a single point (including but not limited to the point/line of interest used for hydrologic and hydraulic calculations) and that is enclosed by a natural or man-made ridgeline.

**EARTH DISTURBANCE or EARTH DISTURBANCE ACTIVITY**

A construction or other human activity which disturbs the surface of the land, including, but not limited to, clearing and grubbing; grading; excavations; embankments; road maintenance; land development; building construction; and the moving, depositing, stockpiling, or storing of soil, rock, or earth materials.

**EASEMENT**

A right of use granted by a landowner to allow a grantee the use of the designated portion of land for a specified purpose, such as for stormwater management or other drainage purposes.

**EROSION**

The process by which the surface of the land, including water/stream channels, is worn away by water, wind, or chemical action.

**EROSION AND SEDIMENT CONTROL PLAN**

A plan required by the Conservation District or the Borough to minimize accelerated erosion and sedimentation, and that must be prepared and approved per the applicable requirements.

**EVAPOTRANSPIRATION (ET)**

The combined processes of evaporation from the water or soil surface and transpiration of water by plants.

**FEMA**

Federal Emergency Management Agency.

**FLOOD**

A temporary condition of partial or complete inundation of land areas from the overflow of streams, rivers, and other waters of this commonwealth.

**FLOODPLAIN**

Any land area susceptible to inundation by water from any natural source or delineated by applicable FEMA maps and studies as being a special flood hazard area.

**FLOODWAY**

The channel of the watercourse and those portions of the adjoining floodplains that are reasonably required to carry and discharge the one-hundred-year flood (also called the base flood or one percent (1%) annual chance flood). Unless otherwise specified, the boundary of the floodway is as indicated on maps and flood insurance studies provided by FEMA. In an area where no FEMA maps or studies have defined the boundary of the floodway, it is assumed, absent evidence to the contrary,

that the floodway extends from the center line of the stream and to 50 feet beyond the top of the bank of the stream on both sides.

### **FOREST MANAGEMENT/TIMBER OPERATIONS**

Planning and activities necessary for the management of forest lands. These include timber inventory, preparation of forest management plans, silvicultural treatment, cutting budgets, logging road design and construction, timber harvesting, site preparation, and reforestation.

### **FREEBOARD**

A vertical distance between the design high-water elevation and the elevation of the top of a dam, levee, tank, basin, swale, or diversion berm. The space is required as a safety margin in a pond or basin.

### **GEOTEXTILE**

A fabric manufactured from synthetic fiber that is used to achieve specific objectives, including infiltration, separation between different types of media (i.e., between soil and stone), or filtration.

### **GOVERNING BODY**

The Borough Council of the Borough of West Chester.

### **GRADE/GRADING**

1. (noun) A slope, usually of a road, channel, or natural ground, specified in percent and shown on plans as specified herein. 2. (verb) To finish the surface of a roadbed, the top of an embankment, or the bottom of an excavation.

### **GREEN INFRASTRUCTURE**

Systems and practices that use or mimic natural processes to infiltrate, evapotranspire, or reuse stormwater on the site where it is generated.

### **GROUNDWATER**

Water that occurs in the subsurface and fills or saturates the porous openings, fractures and fissures of underground soils and rock units.

### **GROUNDWATER RECHARGE**

The replenishment of existing natural groundwater supplies from infiltration of rain or overland flow.

### **HEC-1**

The U.S. Army Corps of Engineers, Hydrologic Engineering Center (HEC) hydrologic runoff model.

### **HEC-HMS**

The U.S. Army Corps of Engineers, Hydrologic Engineering Center (HEC) - Hydrologic Modeling System (HMS).

### **HIGH TUNNEL**

A structure which meets the following:

- A. Is used for the production, processing, keeping, storing, sale or shelter of an agricultural commodity as defined in Section 2 of the Act of December 19, 1974 (P.L. 973, No. 319), known as the "Pennsylvania Farmland and Forest Land Assessment Act of 1974," or for the storage of agricultural equipment or supplies; and
- B. Is constructed with all the following:
  - (1) Has a metal, wood or plastic frame;

- (2) When covered, has a plastic, woven textile or other flexible covering; and
- (3) Has a floor made of soil, crushed stone, matting, pavers or a floating concrete slab.

**HOTSPOTS**

Areas where prior or existing land use or activities can potentially generate highly contaminated runoff with concentrations of pollutants in excess of those typically found in stormwater.

**HYDROLOGIC REGIME**

The hydrologic system, cycle or balance that sustains the quality and quantity of stormwater, stream baseflow, storage, and groundwater supplies under natural conditions.

**HYDROLOGIC SOIL GROUP (HSG)**

A classification of soils, by the Natural Resources Conservation Service (NRCS), into four runoff potential groups. The groups range from A soils, which are very permeable and produce little runoff, to D soils, which are not very permeable and produce much more runoff.

**IMPERVIOUS SURFACE**

A surface that has been compacted or covered with a layer of material so that it prevents or is resistant to infiltration of water, including but not limited to: structures such as roofs, buildings, storage sheds; other solid, paved or concrete areas such as streets, driveways, sidewalks, parking lots, patios, decks, swimming pools, tennis or other paved courts; or athletic playfields comprised of synthetic turf materials. For the purposes of determining compliance with this chapter, compacted soils or stone surfaces used for vehicle parking and movement shall be considered impervious. Surfaces that were designed to allow infiltration (i.e., pavers and areas of porous pavement) are not to be considered impervious surface if designed to function as a BMP per review by the Municipal Engineer. Additionally, for the purposes of determining compliance with this Ordinance, the total horizontal projection area of all ground-mounted and free-standing solar collectors, including solar photovoltaic cells, panels, and arrays, shall be considered pervious so long as the designs note that natural vegetative cover will be preserved and/or restored underneath the solar photovoltaic cells, panels, and arrays, and the area disturbed is planned as a vegetated pervious surface.

**INFILTRATION**

Movement of surface water into the soil, where it is absorbed by plant roots, evaporated into the atmosphere, or percolated downward to recharge groundwater.

**INFILTRATION FACILITY**

A stormwater BMP designed to collect and discharge runoff into the subsurface in a manner that allows infiltration into underlying soils and groundwater (e.g., french drains, seepage pits, or seepage trenches, etc.).

**INTERMITTENT STREAM**

A defined channel in which surface water is absent during a portion of the year, in response to seasonal variations in precipitation or groundwater discharge.

**INVERT**

The lowest surface, the floor or bottom of a culvert, pipe, drain, sewer, channel, basin, BMP or orifice.

**KARST**

A type of topography that is formed over limestone or other carbonate rock formations by dissolving or solution of the rock by water, and that is characterized by closed depressions, sinkholes, caves, a subsurface network of solution conduits and fissures through which groundwater moves, and no perennial surface drainage features.

## **LAND DEVELOPMENT**

Any of the following activities:

- A. The improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving:
  - (1) A group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or
  - (2) The division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants by means of, or for the purpose of, streets, common areas, leaseholds, condominiums, building groups, or other features;
- B. A subdivision of land;
- C. Development in accordance with Section 503(1.1) of the Pennsylvania Municipalities Planning Code (as amended).

## **LANDOWNER**

The legal or beneficial owner or owners of land including the holder of an option or contract to purchase (whether or not such option or contract is subject to any condition), a lessee if they are authorized under the lease to exercise the rights of the landowner, or other person having a proprietary interest in the land.

## **LICENSED PROFESSIONAL**

A Pennsylvania registered professional engineer, registered landscape architect, registered professional land surveyor, or registered professional geologist, or any person licensed by the Pennsylvania Department of State or qualified by law to perform the work required by the chapter within the Commonwealth of Pennsylvania.

## **LIMITING ZONE**

A soil horizon or condition in the soil profile or underlying strata that includes one of the following:

- A. A seasonal high-water table, whether perched or regional, determined by direct observation of the water table or indicated by other subsurface or soil conditions.
- B. A rock with open joints, fracture or solution channels, or masses of loose rock fragments, including gravel, with insufficient fine soil to fill the voids between the fragments.
- C. A rock formation, other stratum, or soil condition that is so slowly permeable that it effectively limits downward passage of water.

## **LOW IMPACT DEVELOPMENT (LID)**

Site design approaches and small-scale stormwater management practices that promote the use of natural systems for infiltration, evapotranspiration, and reuse of rainwater. LID can be applied to new development, urban retrofits, and revitalization projects. LID utilizes design techniques that infiltrate, filter, provide evapotranspiration and store runoff close to its source. Rather than rely on costly large-scale conveyance and treatment systems, LID addresses stormwater through a variety of small, cost-effective landscape features located on-site.

## **MAINTENANCE**

The action taken to restore or preserve the as-built functional design of any stormwater management facility or system.

**MPC**

Act of July 31, 1968, P.L. 805, No. 247, 53 P.S. § 10101 et seq., as amended, the Pennsylvania Municipalities Planning Code, Act 247.

**MFEMP**

Mushroom Farm Environmental Management Plan

**MS4**

Municipal separate storm sewer system.

**MUNICIPAL ENGINEER**

A professional engineer licensed as such in the Commonwealth of Pennsylvania, duly appointed as the engineer for a Borough, planning agency, or joint planning commission.

**NEW DEVELOPMENT**

Any regulated activity involving placement or construction of new impervious surface or grading over existing pervious land areas not classified as redevelopment as defined in this chapter.

**NOAA**

National Oceanic and Atmospheric Administration.

**NONPOINT SOURCE POLLUTION**

Pollution that enters a water body from diffuse origins in the watershed and does not result from discernible, confined, or discrete conveyances.

**NONSTORMWATER DISCHARGES**

Water flowing in stormwater collection facilities, such as pipes or swales, which is not the result of a rainfall event or snowmelt.

**NONSTRUCTURAL BEST MANAGEMENT PRACTICE (BMPs)**

See "best management practice (BMP)."

**NPDES**

National Pollutant Discharge Elimination System, the federal government's system for issuance of permits under the Clean Water Act, which is delegated to PADEP in Pennsylvania.

**NRCS**

Natural Resource Conservation Service (previously Soil Conservation Service, SCS), an agency of the U.S. Department of Agriculture.

**PADEP**

Pennsylvania Department of Environmental Protection.

**PARENT TRACT**

The parcel of land from which a land development or subdivision originates, determined from the date of March 17, 2004.

**PEAK DISCHARGE**

The maximum rate of stormwater runoff from a specific storm event.

**PennDOT**

Pennsylvania Department of Transportation.

**PENNSYLVANIA STORMWATER BEST MANAGEMENT PRACTICES MANUAL (PA BMP MANUAL)**

Document Number 363-0300-002 (December 2006, and as subsequently amended).

**PERVIOUS SURFACE or PERVIOUS AREA**

Any area not defined as impervious surface.

**PLANNING COMMISSION**

The Planning Commission of West Chester Borough.

**POINT SOURCE**

Any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, or conduit from which stormwater is or may be discharged, as defined in state regulations at 25 Pa. Code § 92.1.

**POSTCONSTRUCTION**

Period after construction during which disturbed areas are stabilized, stormwater controls are in place and functioning, and all proposed improvements approved by the Borough are completed.

**PREDEVELOPMENT**

Ground cover conditions assumed to exist within the proposed disturbed area prior to commencement of the regulated activity for the purpose of calculating the predevelopment water quality volume, infiltration volume, and peak flow rates as required in this chapter.

**PRETREATMENT**

Techniques employed in stormwater BMPs to provide storage or filtering, or other methods to trap or remove coarse materials and other pollutants before they enter the stormwater system, but may not necessarily be designed to meet the entire water quality volume requirements of this chapter.

**PROPOSED IMPERVIOUS SURFACE**

All new, additional and replacement impervious surfaces.

**RAINFALL INTENSITY**

The depth of accumulated rainfall per unit of time.

**RECHARGE**

The replenishment of groundwater through the infiltration of rainfall, other surface waters, or land application of water or treated wastewater.

**REDEVELOPMENT**

Any regulated activity that involves demolition, removal, reconstruction, or replacement of existing impervious surface(s).

**REGULATED ACTIVITY**

Any earth disturbance activity(ies) or any activity that involves the alteration or development of land in a manner that may affect stormwater runoff.

**REGULATED EARTH DISTURBANCE ACTIVITY**

Any activity involving earth disturbance subject to regulation under 25 Pennsylvania Code Chapter 92.a, Chapter 102, or the Clean Streams Law.

**REGULATED IMPERVIOUS SURFACE**

A proposed impervious surface as part of a current proposed activity and all existing impervious surfaces installed after December 18, 2013 [date of adoption of 2013 Countywide Model Stormwater Ordinance.

**RETENTION BASIN**

An impoundment that is designed to temporarily detain a certain amount of stormwater from a catchment area and which may be designed to permanently retain stormwater runoff from the catchment area; retention basins always contain water.

**RETENTION or TO RETAIN**

The prevention of direct discharge of stormwater runoff into surface waters or water bodies during or after a storm event by permanent containment in a pond or depression; examples include systems which discharge by percolation to groundwater, exfiltration, and/or evaporation processes and which generally have residence times of less than three days.

**RETENTION VOLUME/REMOVED RUNOFF**

The volume of runoff that is captured and not released directly into the surface waters of the commonwealth during or after a storm event.

**RETURN PERIOD**

The average interval, in years, within which a storm event of a given magnitude can be expected to occur one time. For example, the twenty-five-year-return-period rainfall would be expected to occur on average once every 25 years; or, stated in another way, the probability of a twenty-five-year storm occurring in any one year is four-one hundredths (0.04) (i.e., a four-percent chance).

**RIPARIAN**

Pertaining to anything connected with or immediately adjacent to the banks of a stream or other body of water.

**RIPARIAN BUFFER**

An area of land adjacent to a body of water and managed to maintain vegetation to protect the integrity of stream channels and shorelines, to reduce the impact of upland sources of pollution by trapping, filtering, and converting sediments, nutrients, and other chemicals, and to supply food, cover and thermal protection to fish and other aquatic species and wildlife.

**RUNOFF**

Any part of precipitation that flows over the land surface.

**SALDO**

See Subdivision and Land Development Ordinance.

**SCS**

Soil Conservation Service, now known as the Natural Resources Conservation Service.

**SEDIMENT**

Soil or other materials transported by, suspended in or deposited by surface water as a product of erosion.

**SEPARATE STORM SEWER SYSTEM**

A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) primarily used for collecting and conveying stormwater runoff.

**SHEET FLOW**

A flow process associated with broad, shallow water movement on sloping ground surfaces that is not channelized or concentrated.

**SITE**

Total area of land in the Borough where any proposed regulated activity, as defined in this chapter, is planned, conducted, or maintained or that is otherwise impacted by the regulated activity.

**SOIL COVER COMPLEX METHOD**

A method of runoff computation developed by NRCS that is based on relating soil type and land use/cover to a runoff parameter called curve number (CN).

**STATE WATER QUALITY REQUIREMENTS**

The regulatory requirements to protect, maintain, reclaim, and restore water quality under Pennsylvania Code Title 25 and the Clean Streams Law.

**STORM FREQUENCY**

See "return period."

**STORMWATER**

Drainage runoff from the surface of the land resulting from precipitation or snow or ice melt.

**STORMWATER CONTROL MEASURE**

Physical features used to effectively control, minimize, and treat stormwater runoff. [See Best Management Practice (BMP)].

**STORMWATER MANAGEMENT FACILITY**

Any feature, natural or man-made, that, due to its condition, design, or construction, conveys, stores, or otherwise affects stormwater runoff quality, rate, or quantity, including Best Management Practices and Stormwater Control Measures. Typical stormwater management facilities include, but are not limited to, detention and retention basins, open channels, storm sewers, pipes, and infiltration facilities.

**STORMWATER MANAGEMENT (SWM) SITE PLAN**

The plan prepared by the applicant or its representative, in accordance with the requirements of Article IV of this chapter, indicating how stormwater runoff will be managed at a particular site in accordance with this chapter, and including all necessary design drawings, calculations, supporting text, and documentation to demonstrate that chapter requirements have been met, herein referred to as "SWM site plan." All references in this chapter to "final" or "approved" SWM site plans shall incorporate the approved SWM site plan and all subsequent approved revisions thereto.

**STREAM**

A natural watercourse.

**STRUCTURAL BEST MANAGEMENT PRACTICES**

See "BMP (best management practices)."

**SUBDIVISION**

The division or redivision of a lot, tract, or parcel of land as defined in The Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247 (as amended).

**SUBDIVISION AND LAND DEVELOPMENT ORDINANCE**

Subdivision and Land Development Ordinance of West Chester Borough, Chester County, PA, as amended.

**SWALE**

An artificial or natural waterway or low-lying stretch of land that gathers and conveys stormwater or runoff, and is generally vegetated for soil stabilization, stormwater pollutant removal, and infiltration.

**SWM SITE PLAN**

See "stormwater management site plan."

**TIMBER OPERATIONS**

See "forest management."

**TOP-OF-BANK**

Highest point of elevation of the bank of a stream or channel cross section at which a rising water level just begins to flow out of the channel and into the floodplain.

**USDA**

United States Department of Agriculture.

**WATERCOURSE**

A channel or conveyance of surface water having a defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

**WATERSHED**

Region or area drained by a river, watercourse, or other body of water, whether natural or artificial.

**WATERS OF THE COMMONWEALTH**

Any and all rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs, and all other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of the commonwealth.

**WATER TABLE**

The uppermost level of saturation of pore space or fractures by groundwater. "Seasonal high-water table" refers to a water table that rises and falls with the seasons due either to natural or man-made causes.

**WETLAND**

Those areas that are inundated or saturated by surface- or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, fens, and similar areas.

**WOODS**

Any land area of at least 0.25 acre with a natural or naturalized ground cover (excluding manicured turf grass) and that has an average density of two or more viable trees per 1,500 square feet with a DBH of six inches or greater and where such trees existed at any time within three (3) years of the time of land development application submission of the proposed project. The land area to be considered woods shall be measured from the outer driplines of the outer trees.

**Article III**

**Stormwater Management Standards**

**§ 94-301 General requirements.**

- A. Applicants proposing regulated activities in the Borough which are not exempt under § 94-106 shall submit a stormwater management site plan (SWM site plan) to the Borough for review and approval in accordance with Articles III and IV. SWM site plans approved by the Borough shall be on site throughout the duration of the regulated activity.
- B. The stormwater management and runoff control criteria and standards in this chapter shall apply to the total proposed regulated activity, even if it is to take place in stages. The measurement of

impervious surfaces shall include all of the impervious surfaces in the total proposed regulated activity even if the development is to take place in stages.

- C. No regulated activity within the Borough shall commence until:
- (1) The Borough issues approval of a SWM site plan, which demonstrates compliance with the requirements of this chapter; and
  - (2) The applicant has received a letter of adequacy or approval for the erosion and sediment control plan review by the Borough and the Conservation District (if required), and has received all other local, state and federal permit approvals required for the project involving the regulated activity.
- D. Neither submission of a SWM site plan under the provisions herein nor compliance with the provisions of this chapter shall relieve any person from responsibility for damage to any person or property otherwise imposed by law.
- E. The applicant shall design the site to minimize disturbances to land, site hydrology, and natural resources, and to maintain the natural hydrologic regime, drainage patterns and flow conditions. The applicant shall apply the procedures set forth in § 94-304 for the overall site design and for selection, location and design of features and BMPs to be used to comply with the requirements of this chapter.
- F. To the maximum extent practicable, postconstruction stormwater shall be discharged within the drainage area of the same stream or water body receiving the runoff prior to construction of the proposed regulated activity.
- G. For regulated activities with one acre or more of proposed earth disturbance, existing drainage peak rate discharges up to and including the one-hundred-year storm and the volume of runoff up to and including the two (2)-year storm onto or through adjacent property(ies) or downgradient property(ies), including diffuse drainage discharge, shall not be altered in any manner by regulated activities under this ordinance without written permission from, and, where applicable as determined by the Borough an easement and agreement with, the affected landowner(s) for conveyance of discharges onto or through their property(ies). Altered stormwater discharges shall be subject to any applicable discharge criteria specified in this chapter.
- H. Areas located outside of the site (i.e., areas outside of the regulated activity) that drain through a proposed site are not subject to water quality and volume control, infiltration, stream channel protection, or peak flow rate control requirements (as presented in §§ 94-305, 94-306, 94-307, and 94-308). Drainage facilities located on the site shall be designed to safely convey flows from outside of the site through the site.
- I. If site conditions preclude capture of runoff from limited portions of the disturbed area for achieving water quality volume control standards, stream channel protection standards, and the two-, five-, and ten-year storm event peak runoff rate reduction standards for new development required by this chapter, the applicant shall propose alternate methods to mitigate the bypass of the BMPs, subject to the approval of the Municipal Engineer. In no case shall resulting peak rate be greater than the predevelopment peak rate for the equivalent design storm.
- J. For all regulated activities, erosion, and sediment control BMPs shall be designed, implemented, operated, and maintained during the regulated activities (i.e., during construction) as required to meet the purposes and requirements of this chapter, to meet the erosion and sediment control requirements of the Borough, if applicable, and to meet all requirements under Title 25 of the Pennsylvania Code and the Clean Streams Law.
- K. For all regulated activities, permanent BMPs and conveyances shall be designed, implemented, operated, and maintained to meet the purposes and requirements of this chapter and to meet all requirements under Title 25 of the Pennsylvania Code, the Clean Streams Law, and the Stormwater Management Act.

- L. The design of all BMPs and conveyances shall incorporate sound engineering principles and practices in a manner that does not aggravate existing stormwater problems as identified by the Borough. The Borough reserves the right to disapprove any design that would result in construction in an area affected by existing stormwater problem(s) or continuation of an existing stormwater problem(s).
- M. Existing wetlands, either on the site or on an adjacent property, shall not be used to meet the minimum design requirements for stormwater management or stormwater runoff quality treatment. Stormwater discharges to existing wetlands shall not degrade the quality or hydrologic integrity of the wetland.
- N. Hotspot runoff controls. Specific structural or pollution prevention practices may be required, as determined to be necessary by the Municipal Engineer, to pretreat runoff from hotspots prior to infiltration. Following is a list of examples of hotspots:
  - (1) Vehicle salvage yards and recycling facilities;
  - (2) Vehicle fueling stations;
  - (3) Vehicle service and maintenance facilities;
  - (4) Vehicle and equipment cleaning facilities;
  - (5) Fleet storage areas (bus, truck, etc.);
  - (6) Industrial sites based on Standard Industrial Classification Codes;
  - (7) Marinas (service and maintenance areas);
  - (8) Outdoor liquid container storage;
  - (9) Outdoor loading/unloading facilities;
  - (10) Public works storage areas;
  - (11) Facilities that generate or store hazardous materials;
  - (12) Commercial container nursery;
  - (13) Contaminated sites/brownfields;
  - (14) Other land uses and activities as designated by the Borough.
- O. Contaminated and brownfield sites. Where BMPs may contribute to the migration of contaminants in groundwater, the water quality and runoff volume, stream channel protection, and peak rate control standards shall be met; however, at the Municipal Engineer's discretion, the minimum infiltration requirement may be reduced or eliminated commensurate with the contaminated area and the required water quality and runoff control measures may be increased to mitigate the reduced infiltration requirement for the contaminated area.
- P. Additional water quality requirements. The Borough may require additional stormwater control measures for stormwater discharges to special management areas including, but not limited to:
  - (1) Water bodies listed as "impaired" by PADEP.
  - (2) Any water body or watershed with an approved total maximum daily load (TMDL).
  - (3) Areas of known existing flooding problems.

- (4) Critical areas with sensitive resources (e.g., state-designated special protection waters, cold-water fisheries, carbonate geology or other groundwater recharge areas that may be highly vulnerable to contamination, drainage areas to water supply reservoirs, etc.).
- Q. Applicants shall utilize the Pennsylvania Stormwater Best Management Practices Manual (PA BMP Manual), as amended, or other sources acceptable to the Municipal Engineer, for testing and design standards for BMPs, and where there is a conflict with the provisions of this chapter, the most restrictive applies. If methods other than green infrastructure, LID, and CD methods are proposed to achieve the volume and rate controls required under this Ordinance, the SWM Site Plan must include a detailed justification demonstrating that the use of LID, green infrastructure, and CD are not practicable.
- R. For areas underlain by karst or carbonate geology that may be susceptible to the formation of sinkholes and other karst features, the location, type, and design of infiltration BMPs shall be based on a site evaluation conducted by a qualified licensed professional and based on the PA BMP Manual (as amended) or other design guidance acceptable to the Municipal Engineer.
- S. All regulated activities located within a special flood hazard area designated by the Federal Emergency Management Agency (FEMA) shall comply with Chapter 112 of the Borough Code, titled "Zoning," specifically Article XII, titled "FP Floodplain Conservation District," and shall be designed to maintain the flood-carrying capacity of the floodway such that the base flood elevations are not increased, either upstream or downstream. The natural conveyance characteristics of the site and the receiving floodplain shall be incorporated into the stormwater management practices proposed for the site.
- T. Disturbance of existing ground cover during construction of the proposed regulated activity is prohibited within 50 feet of top-of-bank of all perennial and intermittent waterways, water bodies (lakes, ponds, etc.) and wetlands, except for activities otherwise approved by state or local agencies (e.g., stream restoration projects, road crossings, subsurface utility projects, etc.). At the Municipal Engineer's discretion, and with Conservation District and PADEP approval where necessary, the nondisturbance buffer may be reduced to 25% of the setback, but never be less than 10 feet. If an existing buffer is legally prescribed (e.g., deed covenant, easement, etc.) and it exceeds the requirement of this chapter, the existing buffer shall be maintained.

**§ 94-302 Permit requirements by other governmental entities.**

The following permit or other regulatory requirements may apply to certain regulated activities and shall be met prior to (or as a condition of) final approval by the Borough of the SWM site plan and prior to commencement of any regulated activities, as applicable:

- A. All regulated activities subject to permit or regulatory requirements by PADEP under regulations at Title 25 Pennsylvania Code Chapter 102, or erosion and sediment control requirements of the Borough.
- B. Work within natural drainageways subject to permit by PADEP under Title 25 Pennsylvania Code Chapter 105.
- C. Any BMP or conveyance that would be located in or adjacent to surface waters of the commonwealth, including wetlands, subject to permit by PADEP under Title 25 Pennsylvania Code Chapter 105.
- D. Any BMP or conveyance that would be located on or discharge to a state highway right-of-way, or require access to or from a state highway and be subject to approval by PennDOT.
- E. Culverts, bridges, storm sewers, or any other facilities which must pass or convey flows from the tributary area and any facility which may constitute a dam subject to permit by PADEP under Title 25 Pennsylvania Code Chapter 105.

**§ 94-303 Erosion and sediment control.**

- A. No regulated activity within the Borough shall commence until:
- (1) The Borough receives documentation that the applicant has received:
    - (a) A "letter of adequacy" from the Conservation District or other approval from PADEP in compliance with Title 25 Chapter **102** of the Pennsylvania Code of an erosion and sediment control plan for construction activities for projects where the area of disturbance exceeds one (1) acre, where pond dredging is involved, or when the disturbance is associated with activities described under Title 25 Chapter 105 of the Pennsylvania Code permits, if applicable;
    - (b) A PADEP NPDES Permit for Stormwater Discharges Associated with Construction Activities as required under Title 25 Pennsylvania Code Chapter 92.a, if applicable;
    - (c) Evidence of any other permit(s) or approvals required for the regulated activities; and
  - (2) An erosion and sediment control plan has been approved by the Borough, if required.
- B. A copy of the erosion and sediment control plan and any required permit(s), as required by PADEP regulations, shall be available on the site at all times.
- C. Additional erosion and sediment control measures shall be applied where infiltration BMPs are proposed, at a minimum including those required in **§ 94-306M**.

**§ 94-304 Site design process.**

The applicant shall design the site to minimize the disturbances to land, site hydrology, and natural resources, and to maintain the natural hydrologic regime, drainage patterns and flow conditions. The applicant shall demonstrate in its SWM site plan (as required in **§ 94-402C**) that the design sequence, objectives and techniques described below were applied to the maximum extent practicable in the site design of the regulated activity while complying with all other requirements of this chapter. The site design shall:

- A. First, identify and delineate all existing natural resources and natural and man-made hydrologic features listed in **§ 94-402B(8)** that are located within the site, or receive discharge from, or may be impacted by the proposed regulated activity.
- B. Second, provide a prioritized listing of these resources and features to identify:
- (1) Those to be incorporated into the site design in a manner that provides protection from any disturbance or impact from the proposed regulated activity;
  - (2) Those to be protected from further disturbance or impact but for which the proposed regulated activity will provide improvement to existing conditions;
  - (3) Those that can be incorporated into and utilized as components of the overall site, or design in a manner that protects or improves their existing conditions while utilizing their hydrologic function within the limits of their available capacity (e.g., for infiltration, evapotranspiration, or reducing pollutant loads, runoff volume or peak discharge rates, etc.) to reduce the need for or size of constructed BMPs; and
  - (4) Those that may be considered for alteration, disturbance or removal.
- C. Third, develop the site design to achieve the following:
- (1) Recognize and incorporate the priorities identified in **§ 94-304B** as the basis for the proposed site layout, grading, construction, and permanent ground cover design;
  - (2) Minimize earth disturbance (both surface and subsurface);

- (3) Maximize protection of or improvement to natural resources and special management areas;
  - (4) Minimize the disturbance of natural site hydrology, in particular natural drainage features and patterns, discharge points and flow characteristics, natural infiltration patterns and characteristics, and natural channel and floodplain conveyance capacity;
  - (5) Incorporate natural hydrologic features and functions identified in § 94-304B into the site design to protect and utilize those features and their hydrologic functions to reduce the need for or size of constructed BMPs;
  - (6) Maximize infiltration and the use of natural site infiltration features, patterns and conditions, and evapotranspiration features;
  - (7) Apply selective grading design methods to provide final grading patterns or preserve existing topography in order to evenly distribute runoff and minimize concentrated flows;
  - (8) Minimize the cumulative area to be covered by impervious surfaces and:
    - (a) Minimize the size of individual impervious surfaces;
    - (b) Separate large impervious surfaces into smaller components;
    - (c) Disconnect runoff from one impervious surface to another; and
    - (d) Utilize porous materials in place of impervious wherever practicable;
  - (9) Minimize the volume and peak discharge rates of stormwater generated;
  - (10) Avoid or minimize stormwater runoff pollutant loads and receiving stream channel erosion;
  - (11) Locate infiltration and other BMPs:
    - (a) At or as near to the source of generation as possible; and
    - (b) At depths that are as shallow as possible;
  - (12) Prioritize the selection and design of BMPs as follows:
    - (a) Nonstructural and vegetation BMPs; then
    - (b) Structural (surface and subsurface) BMPs;
  - (13) For flow volumes requiring conveyance from the source of generation to a BMP for management, give preference to open-channel conveyance techniques that provide infiltration and water quality benefits, and landscaped-based management in common open space areas, where practicable; and
  - (14) Consider additional guidance for incorporating natural hydrology into the site and BMP designs, methods and techniques that support the objectives of § 94-304B and C. Appendix C presents additional discussion conservation design and low-impact development.
- D. The procedures set forth above shall be utilized to the maximum extent practicable for the overall site design and selection, location and design of features and BMPs to be used to comply with the requirements of §§ 94-305, 94-306, 94-307 and 94-308.

**§ 94-305 Water quality and runoff volume requirements.**

To control postconstruction stormwater impacts from regulated activities and meet state water quality requirements, BMPs shall be provided in the site design that replicate predevelopment stormwater infiltration and runoff conditions, such that postconstruction stormwater discharges do not degrade the physical, chemical, or biological characteristics of the receiving waters. The green infrastructure and Low

Impact Development (LID) practices provided in the PA BMP Manual, as well as the guidance on green infrastructure, LID and Conservation Design (CD) provided in Appendix B, shall be utilized for all regulated activities wherever possible. The applicant shall comply with the following water quality and runoff volume requirements for all regulated activities, including all new development and redevelopment activities:

- A. The postconstruction total runoff volume shall not exceed the predevelopment total runoff volume for all storms equal to or less than the two-year, twenty-four-hour duration precipitation (design storm). The water quality and runoff volume to be managed shall consist of any runoff volume generated by the proposed regulated activity over and above the predevelopment total runoff volume and shall be captured and permanently retained or infiltrated on the site. Permanent retention options may include, but are not limited to, reuse, evaporation, transpiration, and infiltration.
- B. For modeling purposes, the predevelopment ground cover conditions shall be determined using the corresponding ground cover assumptions presented in § 94-309D of this chapter.
- C. The design of the stormwater management facility outlet shall provide for protection from clogging and unwanted sedimentation.
- D. BMPs that moderate the temperature of stormwater shall be used to protect the temperature of receiving waters.
- E. Water quality improvement shall be achieved in conjunction with achieving the infiltration requirements of § 94-306. The infiltration volume required under § 94-306 may be included as a component of the water quality volume. If the calculated water quality and runoff volume is greater than the volume infiltrated, then the difference between the two volumes shall be managed for water quality and runoff volume control through other techniques or practices but shall not be discharged from the site.
- F. Runoff from the disturbed area shall be treated for water quality prior to entering existing waterways or water bodies. If a stormwater management practice does not provide water quality treatment, then water quality BMPs shall be utilized to provide pretreatment prior to the runoff entering the stormwater management practice.
- G. The Borough may require additional water quality and runoff control measures for stormwater discharging to special management areas such as those listed in § 94-301P.
- H. When the regulated activity contains or is divided by multiple drainage areas, the water quality and runoff volume shall be separately addressed for each drainage area.
- I. Weighted averaging of runoff coefficients shall not be used for manual computations or input data for water quality and runoff volume calculations.
- J. Areas located outside of the site (i.e., areas outside of the regulated activity) may be excluded from the calculation of the water quality and runoff volume requirements.
- K. Water quality and volume control practices shall be selected and designed to meet the criteria of § 94-304C that apply to water quality and volume control.
- L. Evapotranspiration may be quantified and credited towards meeting volume requirements according to the PADEP Post Construction Stormwater Management (PCSM) Spreadsheet and Instructions (December 2020) or the most recent guidance from PADEP.

**§ 94-306 Infiltration requirements.**

Providing for infiltration consistent with the natural hydrologic regime is required to compensate for the reduction in the recharge that occurs when the ground surface is disturbed or impervious surface is created or expanded. The applicant shall achieve the following infiltration requirements:

- A. For Regulated Activities involving both new development and redevelopment, infiltration should be designed to accommodate the entire water quality and runoff volume required in § 94-305. Infiltration BMPs should be consistent with the design and infiltration period guidelines included in the PA BMP Manual or other PA DEP design guidance. If the runoff volume required by Section 305 cannot be infiltrated, then alternative methods consistent with the PA BMP Manual (as amended) or other PA DEP guidance, such as the Managed Release Concept, may be used to manage this volume with approval from the Municipal Engineer.
- B. For regulated activities involving both new development and redevelopment, the volume of a minimum of one inch of runoff from all regulated impervious surfaces shall be infiltrated.
- C. If the requirements of § 94-306A or B cannot be physically accomplished, then the applicant shall be responsible for demonstrating with data or calculations to the satisfaction of the Municipal Engineer why this infiltration volume cannot be physically accomplished on the site (e.g., shallow depth to bedrock or limiting zone, open voids, steep slopes, etc.) and what alternative volume can be infiltrated
- D. Only if a minimum infiltration of the first 0.5 inch of runoff cannot be physically accomplished on the site, shall a waiver from § 94-306 be considered by the Borough, in accordance with Section 94-111
- E. If site conditions preclude capture of runoff from portions of the impervious surfaces, the infiltration volume for the remaining area shall be increased an equivalent amount to offset the loss.
- F. When a project contains or is divided by multiple watersheds, the infiltration volume shall be separately addressed for each watershed.
- G. Existing impervious surfaces located in areas outside of the site (i.e., outside of the regulated activity) may be excluded from the calculation of the required infiltration volume.
- H. A detailed soils evaluation of the site shall be conducted by a qualified professional and at a minimum shall address soil permeability, depth to bedrock, and subgrade stability. The general process for designing the infiltration BMP shall be conducted by a qualified licensed professional and shall be consistent with the PA BMP Manual (as amended) (or other guidance acceptable to the Municipal Engineer) and in general shall:
  - (1) Analyze hydrologic soil groups as well as natural and man-made features within the site to determine general areas of suitability for infiltration practices. In areas where development on fill material is under consideration, conduct geotechnical investigations of subgrade stability; infiltration may not be ruled out without conducting these tests.
  - (2) Provide field tests such as double-ring infiltrometer or other hydraulic conductivity tests (at the elevation of the proposed infiltration surface) to determine the appropriate hydraulic conductivity rate. Standard septic/sewage percolation tests are not acceptable for design purposes.
  - (3) Design the infiltration facility for the required retention (infiltration) volume based on field-determined infiltration capacity (and apply safety factor as per applicable design guidelines) at the elevation of the proposed infiltration surface.
  - (4) On-lot infiltration features are encouraged; however, it shall be demonstrated to the Municipal Engineer that the soils are conducive to infiltration on the identified lots.
- I. Infiltration BMPs shall be selected based on suitability of soils and site conditions and shall be constructed on soils that have the following characteristics:
  - (1) A minimum depth of 24 inches between the bottom of the BMP and the top of the limiting zone. Additional depth may be required in areas underlain by karst or carbonate geology (see § 94-306M).

- (2) An infiltration rate sufficient to accept the additional stormwater volume and drain completely as determined by field tests conducted by the applicant.
  - (3) The infiltration facility shall completely drain the retention (infiltration) volume within three days (72 hours) from the end of the design storm.
- J. All infiltration practices shall:
- (1) Be selected and designed to meet the criteria of § 94-304C that are applicable to infiltration;
  - (2) Be set back at least five feet from all property lines or right-of-way boundaries;
  - (3) Be set back at least 10 feet from all buildings and features with subgrade elements (e.g., basements, foundation walls, etc.), unless otherwise approved by the Municipal Engineer;
  - (4) For any infiltration practice that collects runoff from shared or multiple features and that is located within 25 feet of a building or feature with subgrade elements (e.g., basements, foundation walls, etc.), the bottom elevation shall be set below the elevation of the subgrade element.
- K. Infiltration facilities shall, to the maximum extent practicable, be located to avoid introducing contaminants to groundwater:
- (1) When a hotspot is located in the area draining to a proposed infiltration facility, an evaluation of the potential of groundwater contamination from the proposed infiltration facility shall be performed, including a hydrogeologic investigation (if necessary) by a qualified licensed professional to determine what, if any, pretreatment or additional design considerations are needed to protect groundwater quality.
  - (2) When located within a "wellhead protection area" of a public water supply well, infiltration practices shall be in conformance with the applicable approved source water protection assessment or source water protection plan.
  - (3) The applicant shall provide appropriate safeguards against groundwater contamination for land uses that may cause groundwater contamination should there be a mishap or spill.
- L. During site construction, all infiltration practice components shall be protected from compaction due to heavy equipment operation or storage of fill or construction material. Infiltration areas shall also be protected from sedimentation. Areas that are accidentally compacted or graded shall be remediated to restore soil composition and porosity. Adequate documentation to this effect shall be submitted to the Municipal Engineer for review. All areas designated for infiltration shall not receive runoff until the contributory drainage area has achieved final stabilization.
- M. Where sediment transport in the stormwater runoff is anticipated to reach the infiltration system, appropriate permanent measures to prevent or collect sediment shall be installed prior to discharge to the infiltration system.
- N. Where roof drains are designed to discharge to infiltration practices, they shall have appropriate measures to prevent clogging by unwanted debris (for example, silt, leaves and vegetation). Such measures shall include but are not limited to leaf traps, gutter guards and cleanouts.
- O. All infiltration practices shall have appropriate positive overflow controls.
- P. No sand, salt or other particulate matter may be applied to a porous surface material for winter ice conditions.
- Q. The following procedures and materials shall be required during the construction of all subsurface facilities:

- (1) Excavation for the infiltration facility shall be performed with equipment that will not compact the bottom of the seepage bed/trench or like facility.
- (2) The bottom of the bed and/or trench shall be scarified prior to the placement of aggregate.
- (3) Only clean aggregate with documented porosity, free of fines, shall be allowed.
- (4) The tops, bottoms and sides of all seepage beds, trenches, or like facilities shall be covered with drainage fabric. Fabric shall be nonwoven fabric acceptable to the Municipal Engineer.
- (5) Stormwater shall be distributed throughout the entire seepage bed/trench or like facility and provisions for the collection of debris shall be provided in all facilities.

**§ 94-307 Stream channel protection requirements.**

For regulated activities involving new development with one or more acres of earth disturbance, the applicant shall comply with the following stream channel protection requirements to minimize stream channel erosion and associated water quality impacts to the receiving waters:

- A. The peak flow rate of the postconstruction two-year, twenty-four-hour design storm shall be reduced to the predevelopment peak flow rate of the one-year, twenty-four-hour duration precipitation, using the SCS Type II distribution.
- B. To the maximum extent practicable, and unless otherwise approved by the Municipal Engineer, the postconstruction one-year, twenty-four-hour storm flow shall be detained for a minimum of 24 hours and a maximum not to exceed 72 hours from a point in time when the maximum volume of water from the one-year, twenty-four-hour storm is stored in a proposed BMP (i.e., when the maximum water surface elevation is achieved in the facility). Release of water can begin at the start of the storm (i.e., the invert of the orifice is at the invert of the proposed BMP).
- C. For modeling purposes, the predevelopment ground cover conditions shall be determined using the corresponding ground cover assumptions presented in § 94-309D of this chapter.
- D. The minimum orifice size in the outlet structure to the BMP shall be three inches in diameter unless otherwise approved by the Municipal Engineer, and a trash rack shall be installed to prevent clogging. For sites with small drainage areas contributing to the BMP that do not provide enough runoff volume to allow a twenty-four-hour attenuation with the three-inch orifice, the calculations shall be submitted showing this condition.
- E. When the calculated orifice size is below three inches, gravel filters (or other methods) are recommended to discharge low-flow rates subject to the Municipal Engineer's satisfaction. When filters are utilized, maintenance provisions shall be provided to ensure filters meet the design function.
- F. All proposed stormwater facilities shall make use of measures to extend the flow path and increase the travel time of flows in the facility.
- G. When a regulated activity contains or is divided by multiple drainage areas, the peak flow rate control shall be separately addressed for each drainage area.

**§ 94-308 Stormwater peak rate control requirements.**

The applicant shall comply with the following peak flow rate control requirements for all regulated activities including those that involve new development and redevelopment that are not located in the Chester Creek Watershed.

- A. Postconstruction peak flow rates from any regulated activity shall not exceed the predevelopment peak flow rates as shown for each of the design storms specified in Table 308.1.

**Table 308.1**

**Peak Rate Control Standards**

**(Peak Flow Rate of the Postconstruction Design Storm Shall be Reduced to the Peak Flow Rate of the Corresponding Predevelopment Design Storm Shown in the Table)**

Postconstruction Design Storm Frequency (24-Hour Duration)	New Development Regulated Activities	Predevelopment Design Storm	Redevelopment Regulated Activities
2-Year	1-Year	2-Year	2-Year
5-Year	2-Year	5-Year	5-Year
10-Year	2-Year	10-Year	10-Year
25-Year	25-Year	25-Year	25-Year
50-Year	50-Year	50-Year	50-Year
100-Year	100-Year	100-Year	100-Year

- B. For modeling purposes, the predevelopment ground cover conditions shall be determined using the corresponding ground cover assumptions presented in § 94-309D of this chapter.
- C. For regulated activities involving only redevelopment, no peak flow rate controls are required when and only if the total regulated impervious surface area is at least 20% less than the total existing impervious surface area to be disturbed by the regulated activity. In all cases where this requirement is not met, the redevelopment regulated activity shall achieve the peak flow rate controls presented in Table 308.1, using the redevelopment ground cover assumptions presented in § 94-309D. This design criterion for Redevelopment is only permitted with approval of Municipal Engineer. It shall result in no impact on downstream properties.
- D. Only the area of the proposed regulated activity shall be subject to the peak flow rate control standards of this chapter. Undisturbed areas for which the discharge point has not changed are not subject to the peak flow rate control standards.
- E. Areas located outside of the site (i.e., areas outside of the regulated activity) that drain through a proposed site are not subject to peak flow rate control requirements. Drainage facilities located on the site shall be designed to safely convey flows from outside of the site through the site.
- F. When a regulated activity contains or is divided by multiple drainage areas, the peak flow rate controls shall be separately addressed for each drainage area.
- G. The effect of structural and nonstructural stormwater management practices implemented as part of the overall site design may be taken into consideration when calculating total storage volume and peak flow rates.
- H. Regulated activities located within the Chester Creek Watershed shall achieve the applicable peak flow release rate control requirements presented in the approved PA Act 167 plan for that watershed

and as presented in Table 308.1 above, and as presented in the Chester Creek Watershed Release Rate Map in Appendix B of this chapter.

§ 94-309 **Calculation methodology.**

- A. Stormwater runoff from all regulated activity sites with a drainage area of greater than five acres shall be calculated using a generally accepted calculation technique(s) that is based on the NRCS Soil Cover Complex Method. Table 309.1 summarizes acceptable computation methods. The method selected for use shall be based on the individual limitations and suitability of each method for a particular site. The use of the Rational Method to estimate peak discharges for drainage areas greater than five acres shall be permitted only upon approval by the Municipal Engineer.

**Table 309.1**

**Acceptable Computation Methodologies for SWM Site Plan**

<b>Method</b>	<b>Developed By</b>	<b>Applicability</b>
TR-20 (or commercial computer package based on TR-20)	USDA NRCS	Applicable where use of full hydrology computer model is desirable or necessary.
TR-55 (or commercial computer package based on TR-55)	USDA NRCS	Applicable for land development plans where limitations described in TR-55 are met.
HEC-1/HEC-HMS	US Army Corps of Engineers	Applicable where use of a full hydrologic computer model is desirable or necessary.
Rational Method (or commercial computer package based on Rational Method)	Emil Kuichling (1889)	For sites up to five acres, or as approved by the Borough.
Other methods	Varies	Other computation methodologies approved by the Borough.

- B. All calculations using the Soil Cover Complex Method shall use the appropriate design rainfall depths for the various return period storms consistent with this chapter. Rainfall depths used shall be obtained from the latest version of the Precipitation-Frequency Atlas of the United States, National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Hydrometeorological Design Studies Center, Silver Spring, Maryland (NOAA Atlas 14) values consistent with a partial duration series. When stormwater calculations are performed for routing procedures or infiltration, water quality and runoff volume functions, the duration of rainfall shall be 24 hours.
- C. All calculations using the Rational Method shall use rainfall intensities consistent with appropriate times of concentration (duration) and storm events with rainfall intensities obtained from NOAA Atlas 14 partial duration series estimates, or the latest version of the PennDOT Drainage Manual (PDM Publication 584). Times of concentration shall be calculated based on the methodology recommended in the respective model used. Times of concentration for channel and pipe flow shall be computed using Manning's equation.
- D. The applicant shall utilize the following ground cover assumptions for all predevelopment water quality and runoff volume, infiltration volume and peak flow rate calculations:

- (1) For regulated activities involving new development, the following ground cover assumptions shall be used:
  - (a) For areas that are woods (as defined in Article II of this chapter), predevelopment calculations shall assume ground cover of "woods in good condition."
  - (b) For all other areas (including all impervious surfaces), predevelopment calculations shall assume ground cover of "meadow."
- (2) For regulated activities involving redevelopment, the following ground cover assumptions shall be used:
  - (a) For areas that are woods (as defined in Article II of this chapter), predevelopment calculations shall assume ground cover of "woods in good condition."
  - (b) For areas that are not woods or not impervious surfaces, predevelopment calculations shall assume ground cover of "meadow."
  - (c) For areas that are impervious surfaces, predevelopment calculations shall assume at least 40% of the existing impervious surface area to be disturbed as "meadow" ground cover.
- (3) The applicant shall determine which stormwater standards apply to the proposed regulated activity as follows:
  - (a) Stormwater standards for new development shall apply to all proposed regulated activities that involve only new development activities as defined in this chapter.
  - (b) Stormwater standards for redevelopment shall apply to all proposed regulated activities that involve only redevelopment activities as defined in this chapter.
  - (c) At the discretion of the Municipal Engineer, regulated activities that involve a combination of both new development and redevelopment activities, as defined in this chapter, may either:
    - [1] Apply the stormwater standards (redevelopment or new development) that are associated with the activity that involves the greatest amount of land area; or
    - [2] Apply the redevelopment and new development stormwater standards to the corresponding redevelopment and new development portions of the proposed regulated activity.
- E. Runoff curve numbers (CN) for both predevelopment and proposed (postconstruction) conditions to be used in the Soil Cover Complex Method shall be obtained from Table D-1 in Appendix D of this chapter.
- F. Runoff coefficients (C) for both predevelopment and proposed (postconstruction) conditions for use in the Rational Method shall be obtained from Table D-2 in Appendix D of this chapter.
- G. Weighted averaging of runoff coefficients shall not be used for manual computations or input data for water quality and runoff volume calculations.
- H. Hydraulic computations to determine the capacity of pipes, culverts, and storm sewers shall be consistent with methods and computations contained in the Federal Highway Administration Hydraulic Design Series Number 5 (Publication No. FHWA-NHI-01-020 HDS No. 5, as amended). Hydraulic computations to determine the capacity of open channels shall be consistent with methods and computations contained in the Federal Highway Administration Hydraulic Engineering Circular Number 15 (Publication No. FHWA-NHI-05-114 HEC 15, as amended). Values for Manning's roughness coefficient (n) shall be consistent with Table D-3 in Appendix D of the chapter.

I. Runoff calculations shall include the following assumptions:

- (1) Average antecedent moisture conditions (for the Soil Cover Complex Method only for example, TR-55, TR-20).
- (2) A Type II distribution storm (for the Soil Cover Complex Method only for example, TR-55, TR-20).

**§ 94-310 Other requirements.**

- A. Any BMP intended to hold standing water for four days or longer shall be designed to incorporate biologic controls consistent with the West Nile Guidance found in Appendix E, PADEP document 363-0300-001 "Design Criteria — Wetlands Replacement/Monitoring" (as amended), (or contact the Pennsylvania State Cooperative Wetland Center or the Penn State Cooperative Extension Office for design information.)
- B. Any stormwater basin required or regulated by this chapter designed to store runoff and requiring a berm or earthen embankment shall be designed to provide an emergency spillway to safely convey flow up to and including the one-hundred-year proposed conditions. The height of embankment shall provide a minimum one foot of freeboard above the maximum pool elevation computed when the facility functions for the one-hundred-year proposed conditions inflow. Should any BMP require a dam safety permit under Pa. Chapter 105 regulations, the facility shall be designed in accordance with and meet the regulations of Pa. Chapter 105 concerning dam safety. Pennsylvania Chapter 105 may require the safe conveyance of storms larger than one-hundred-year event.
- C. Any drainage conveyance facility and/or channel not governed by Pa. Chapter 105 regulations shall be designed to convey, without damage to the drainage facility or roadway, runoff from the twenty-five-year storm event. Larger storm events (fifty-year and one-hundred-year storms) shall also be safely conveyed in the direction of natural flow without creating additional damage to any drainage facilities, nearby structures, or roadways.
- D. Conveyance facilities to or exiting from stormwater management facilities (i.e., detention basins) shall be designed to convey the design flow to or from the facility.
- E. Roadway crossings or structures located within designated floodplain areas shall be able to convey runoff from a one-hundred-year design storm consistent with Federal Emergency Management Agency National Flood Insurance Program — Floodplain Management Requirements.
- F. Any stormwater management facility located within a PennDOT right-of-way shall comply with PennDOT minimum design standards and permit submission and approval requirements.
- G. Adequate erosion protection and energy dissipation shall be provided along all open channels and at all points of discharge. Design methods shall be consistent with the Federal Highway Administration Hydraulic Engineering Circular Number 11 (Publication No. FHWA-IP-89-016, as amended) and the PADEP Erosion and Sediment Pollution Control Program Manual (Publication No. 363-2134-008, as amended), or other design guidance acceptable to the Municipal Engineer.

**§ 94-311 Other conveyance and system design standards.**

- A. Stormwater pipes and inlets shall be designed in accordance with the PennDOT standard specifications. Where Type C inlets are located on grades, they shall have a maximum inlet capacity of 5.5 cubic feet per second. Where located at low points, this inlet capacity may be increased to eight cubic feet per second.
- B. Storm sewers shall have a minimum diameter of 15 inches and a minimum grade of 1/2 of 1%.
- C. Changes in alignment of storm sewers shall be by straight sections connected by inlets or manholes. Manholes and/or inlets shall not be more than 300 feet apart on sizes up to 24 inches and not more than 450 feet apart on greater sizes. At street intersections, inlets shall be placed in the tangent and not on the curved portion of the curbing.

- D. Storm sewer pipes shall be reinforced concrete pipe or high-density polyethylene pipe and provided in accordance with PennDOT standard specifications.
- E. Manhole frames and covers shall be good quality cast iron. Covers shall be marked "STORM."

**§94- 312. Riparian Buffers.**

- A. In order to protect and improve water quality, a Riparian Buffer shall be created and depicted on the plan and recorded as part of any subdivision or land development that encompasses a stream to aid in the establishment of a Riparian Buffer.
- B. Except as required by Chapter 102, the Riparian Buffer shall be measured to be the greater of the limit of the 100-year floodplain or a minimum of 50 feet from the top of the streambank (on each side).
- C. Minimum Management Requirements for Riparian Buffers.
  - 1. Existing native vegetation shall be protected and maintained within the Riparian Buffer.
  - 2. Whenever practicable, invasive vegetation shall be actively removed and the Riparian Buffer shall be planted with native trees, shrubs, and other vegetation to create a diverse native plant community appropriate to the intended ecological context of the site.
- D. The Riparian Buffer shall be enforceable by the municipality and shall run with the land and shall limit the use of the property located therein. The area of the property encumbered by the Riparian Buffer shall be privately owned and shall count toward the minimum lot area as required by Zoning, unless otherwise specified in the municipal Zoning Ordinance.
- E. Any permitted use within the Riparian Buffer shall be conducted in a manner that will maintain the extent of the existing 100-year floodplain, improve or maintain the stream stability, and preserve and protect the ecological function of the floodplain.
- F. The following conditions shall apply when public and/or private recreation trails are permitted within Riparian Buffers:
  - 1. Trails shall be for non-motorized use only.
  - 2. Trails shall be designed to have the least impact on native plant species and other sensitive environmental features.
- G. Septic drainfields and sewage disposal systems shall not be permitted within the Riparian Buffer and shall comply with setback requirements established under 25 Pa. Code Chapter 73.

**Article IV  
Stormwater Management (SWM) Site Plan Requirements**

**§ 94-401 General requirements.**

For any regulated activity, unless exempt per the provisions of § 94-106:

- A. Preparation and implementation of an approved SWM site plan is required.
- B. No regulated activity shall commence until the Borough issues written approval of a SWM site plan, which demonstrates compliance with the requirements of this chapter and, if required, a letter of adequacy has been issued by the Conservation District for an erosion and sediment control plan.
- C. The preliminary or final approval of subdivision and/or land development plans, and the issuance of any building or occupancy permit shall not proceed until the applicant has received written approval of a SWM site plan from the Borough.

- D. The SWM site plan approved by the Borough shall be on site throughout the duration of the regulated activity.

**§ 94-402 SWM site plan contents.**

The SWM site plan shall consist of a general description of the project including items described in § 94-304, calculations, maps, and plans. A note on the maps shall refer to the associated computations and erosion and sediment control plan by title and date. The cover sheet of the computations and erosion and sediment control plan shall refer to the associated maps by title and date. All SWM site plan materials shall be submitted to the Borough in a format that is clear, concise, legible, neat, and well organized; otherwise, the SWM site plan shall not be accepted for review and shall be returned to the applicant. The following items shall be included in the SWM site plan:

A. General.

- (1) A general description of the proposed project.
- (2) A listing of all regulatory approvals required for the proposed project and the status of the review and approval process for each. Final approval or adequacy letters must be submitted to the Borough prior to (or as a condition of) the Borough's issuing final approval of the SWM site plan. Proof of application or documentation of required permit(s) or approvals for the programs listed below shall be part of the SWM site plan, if applicable:
  - (a) NPDES Permit for Stormwater Discharges associated with Construction Activities;
  - (b) PADEP permits as needed:
    - [1] PADEP Joint Permit Application;
    - [2] Chapter 105 (Dam Safety and Waterway Management);
    - [3] Chapter 106 (Floodplain Management);
  - (c) PennDOT Highway Occupancy Permit;
  - (d) Erosion and sediment control plan letter of adequacy; and
  - (e) Any other permit under applicable state or federal regulations.
- (3) A statement, signed by the applicant, acknowledging that any revision to the approved SWM site plan shall be submitted to and approved by the Borough, and that a revised erosion and sediment control plan shall be submitted to, and approved by, the Conservation District or Borough (as applicable) for a determination of adequacy prior to construction of the revised features.
- (4) The following signature block signed and sealed by the qualified licensed professional responsible for the preparation of the SWM site plan:

"I (name), on this date (date of signature), hereby certify to the best of my knowledge that the SWM site plan meets all design standards and criteria of the Borough of West Chester Ordinance No. \_\_\_\_\_, Stormwater Management Ordinance." [Note: include signature, name, discipline of professional license, and license stamp or seal here]
- (5) The following signature block signed and sealed by the qualified licensed professional responsible for the preparation of the SWM site plan:

(5). "On behalf of the Borough of West Chester, [Municipal official or designee], on this date [Signature date], has reviewed and hereby certifies to the best of my knowledge that the SWM Site Plan meets all design standards and criteria of the Municipal Ordinance No. [number assigned to ordinance]."

- B. Maps or plan sheets. Map(s) or plan sheets of the site shall be submitted on minimum twenty-four-inch-by-thirty-six-inch sheets and shall be prepared in a form that meets the requirements for recording at the Chester County Office of the Recorder of Deeds and the requirements of the operation and maintenance (O&M) plan and O&M agreement (Article VII). If the SALDO has additional or more stringent criteria than this chapter, then the SALDO criteria shall also apply. Unless otherwise approved by the Municipal Engineer, the contents of the maps or plan sheets shall include, but not be limited to:
- (1) A location map, with a scale of one inch equals 2,000 feet or greater, showing the site location relative to highways, municipal boundaries, or other identifiable landmarks.
  - (2) The name of the project, tax parcel number(s), and the names, addresses and phone numbers of the owner of the property, the applicant, and firm preparing the plan.
  - (3) Signature and seal of the qualified licensed professional(s) responsible for preparation of the maps and plan sheets.
  - (4) The date of SWM site plan submission and revision dates, as applicable.
  - (5) A graphic and written scale of one inch equals no more than 50 feet.
  - (6) A North arrow.
  - (7) Legal property boundaries, including:
    - (a) The total project property boundary and size with distances marked to the nearest foot and bearings to the nearest degree.
    - (b) Boundaries, size and description of purpose of all existing easements and deed-restricted areas of the project property, with distances marked to the nearest foot and bearings to the nearest degree.
  - (8) Existing natural resources and natural or man-made hydrologic features that are located within the site or receiving discharge from, or that may otherwise be impacted by, the proposed regulated activity, including but not limited to:
    - (a) All existing natural resources, hydrologic features and drainage patterns including natural waterways, water bodies, wetlands, streams (intermittent and perennial), ponds, lakes, vernal pools, etc., natural infiltration areas and patterns, areas of significant natural evapotranspiration, and other water features and aquatic resources.
    - (b) Any existing man-made drainage features, BMPs, conveyances, facilities, open channels, swales, drainage patterns, or other flood, stormwater or drainage control features.
    - (c) For the site, discharge points and locations of concentrated flows and their drainage areas.
    - (d) For named waters, show names and their watershed boundaries within the site.
    - (e) Special management areas (as per § 94-301Q).
    - (f) For the water bodies, streams and wetlands identified in § 94-402B(8)(a), label or otherwise show the following attributes, if applicable:

- [1] The designated use as determined by PADEP (25 Pa. Code Chapter 93);
  - [2] Impairments listed on the PADEP "Integrated List" (as updated) and the listed source and cause of impairment;
  - [3] Name, date, and target pollutant(s) for any approved total maximum daily load (TMDL); and
  - [4] Drainages to water supply reservoirs.
- (g) Areas that are part of the Pennsylvania Natural Diversity Inventory (PNDI) and a list of potential impacts and clearances received (for regulated activities involving one acre or more proposed earth disturbance).
  - (h) Woods, vegetated riparian buffers and other areas of natural vegetation.
  - (i) Topography using contours (with elevations based on established bench marks) at intervals of two feet. In areas of slopes greater than 15%, five-foot contour intervals may be used. The datum used and the location, elevation and datum of any benchmarks used shall be shown.
  - (j) Areas classified by the Borough as steep slopes.
  - (k) Soil names and boundaries, general type of soils with hydrologic soil group noted, and in particular note areas most conducive to infiltration BMPs, such as Groups A and B, etc., estimated permeabilities in inches per hour, and location and other results of all soil tests and borings.
  - (l) If present, areas with underlying carbonate geologic units, existing sinkholes, subsidence or other karst features, and any associated groundwater recharge areas with increased vulnerability to contamination.
  - (m) Any contaminated surface or subsurface areas of the site.
  - (n) Water supply wells:
    - [1] Location of existing well(s) on the project property and delineation of the(ir) recharge area(s) (if known), or a fifty-foot diameter assumed recharge area;
    - [2] Location of existing well(s) within 50 feet beyond the boundary of the project property boundary (if public water supply is proposed for the regulated activity); and
  - (o) Current FEMA one-hundred-year floodplain boundaries, elevations, and floodway boundaries for any special flood hazard areas on or within 100 feet of the property.
  - (p) Boundaries of riparian buffer(s) as required by § 94-312.
  - (q) Boundaries of a fifty-foot construction nondisturbance buffer to protect streams (intermittent and perennial), wetlands and other water bodies during construction of the proposed regulated activity.
  - (9) Location of the proposed regulated activity, limits of earth disturbance (disturbed area), and BMPs and conveyances relative to the location of existing natural resources and hydrologic features and special management areas resulting from the site design process of § 94-304.
  - (10) Description of existing and proposed ground cover and land use including the type and total area.
  - (11) Existing and proposed man-made features including roads, paved areas, buildings, and other impervious and pervious surfaces on the project property (or an appropriate portion of the property as determined in consultation with the Municipal Engineer) and within the proposed disturbed area, and including the type and total area of the following:
    - (a) Existing impervious surfaces installed after December 18, 2013;

- (b) Existing impervious surfaces proposed to be replaced;
  - (c) Existing impervious surfaces to be permanently removed and replaced with pervious ground cover;
  - (d) New or additional impervious surfaces; and
  - (e) Percent of the site covered by impervious surfaces for both the existing and proposed postconstruction conditions.
- (12) The total extent of the upstream area draining through the site.
- (13) All BMPs, conveyances and other stormwater management facilities shall be located on the plan sheets, including design drawings, profile drawings, construction details, materials to be used, description of function, etc.
- (14) Complete delineation of the flow paths used for calculating the time of concentration for the predevelopment and postconstruction conditions shall be included.
- (15) The locations of all existing and proposed utilities, sanitary sewers, on-lot wastewater facilities (including subsurface tanks and leach fields), and water supply lines within the site and within 50 feet beyond the proposed limits of earth disturbance.
- (16) A grading plan, including all areas of proposed earth disturbance and the proposed regulated activity and delineating the boundary or limits of earth disturbance of the site. The total disturbed area of the site shall be noted in square feet and acres.
- (17) Proposed final grade elevations and contours at intervals of two feet. In areas of steep slopes (greater than 15%), five-foot contour intervals may be used.
- (18) For each proposed BMP and conveyance included in the SWM site plan (including any to be located on any property other than the property being developed by the applicant), the following shall be included on the SWM site plan map or plan sheets:
- (a) Identification of the person responsible for ongoing inspections, operation, repair, and maintenance of the BMP or conveyance after completion of construction.
  - (b) Delineation of the land area, structures, impervious surfaces, and conveyances draining to and from the BMP or conveyance.
  - (c) Easements, as per the requirements of Article VII, that shall include:
    - [1] Boundaries labeled with distances shown in feet and bearings to the nearest degree;
    - [2] Notes or other documentation, as needed, to grant the Borough the right of access to all BMPs and conveyances for the purposes of inspection and enforcement of the requirements of this chapter, and any applicable O&M plans and O&M agreements;
    - [3] Notes or other documentation, as needed, to grant the Borough the right of access to all roadways necessary to access all BMPs and conveyances, where roadways are not to be dedicated to the Borough;
    - [4] Notes or other documentation as needed to grant the owner of any BMP or conveyance the right of access for the purpose of inspection, operation, maintenance, and repair of the BMP or conveyance that is to be owned, operated and maintained by a person other than the Borough, and other than the owner of the property on which the BMP or conveyance is located;
    - [5] A minimum twenty-foot-wide perimeter (or other width as determined in consultation with the Municipal Engineer) around all BMPs and conveyances;

- [6] Sufficient vehicular ingress to and egress from a public right-of-way or roadway, as determined in consultation with the Municipal Engineer; and
  - [7] Accompanying notes or other documentation as needed, and in accordance with Article **VII**, describing the type, purpose and total area of easements, who the easement is granted to, and the rights, duties and obligations of the parties with respect to every BMP or conveyance.
  - (d) Boundaries of land areas (if any) for which deed restrictions are required for the purpose of protecting and prohibiting disturbance to a BMP or conveyance, indicating the area to which the restriction applies with distances shown in feet and bearings to the nearest degree, and a written description of the type, purpose and nature of the restriction.
  - (e) Other items that may be needed to comply with all other requirements of Article **VII**.
- C. A written description of the following information shall be included in the SWM site plan:
- (1) Existing features, conditions, natural resources, hydrologic features, and special management areas [as listed in § **94-402B(8)**];
  - (2) How the site design achieves the requirements of § **94-304**, and, if applicable, where they could not be achieved and why;
  - (3) The overall stormwater management design concept for the project and how the site design achieves the requirements of §§ **94-301** through **94-311** of Article **III**;
  - (4) Proposed features and conditions, proposed erosion and sediment control features, proposed BMPs, conveyances, and any other stormwater facilities;
  - (5) A description of the effect of the project (in terms of flow alteration and runoff volumes, water quality and peak flows, etc.) on existing natural resources, hydrologic features and special management areas, adjacent and downgradient properties, and any existing municipal or other stormwater conveyance system(s), that may be affected by or receive runoff from the regulated activity (whether located within or outside of the area of the regulated activity), and specifics of how erosion, water quality and flow impacts will be avoided or otherwise mitigated;
  - (6) Proposed nonpoint source pollution controls and justification and confirmation that the proposed project will not result in any increased pollutant loadings to any existing stream or stream impairment identified by PADEP, or to any receiving water body;
  - (7) Expected project time schedule; and
  - (8) Description of construction stages or project phases, if so proposed.
  - (9) A detailed justification must be included in the SWM Site Plan if BMPs other than green infrastructure methods, LID practices, or CD are proposed to achieve the volume, rate, and water quality controls under this Ordinance.
- D. A detailed site evaluation conducted by a qualified licensed professional for projects proposed in areas of carbonate geology or karst topography, and other environmentally sensitive areas, such as contaminated sites and brownfields, as described in § **94-301O** and **R** of this chapter.
- E. Stormwater runoff design computations and documentation, such as hydrologic, hydraulic, and structural computations, assumptions, BMP loading ratios, etc., consistent with the guidelines and criteria presented in the PA BMP Manual (as amended) or other guidance acceptable to the Municipal Engineer, and used in the design of the BMPs, conveyances and other features proposed to be utilized for stormwater management, or as otherwise necessary to demonstrate that the requirements of this chapter have been met, specifically including the requirements in §§ **94-301** and **94-304** through **94-309**.

- F. Inspections, operation and maintenance requirements. The following documents shall be prepared and submitted to the Borough for review and approval as part of the SWM site plan, in accordance with the requirements of Article VII, for each BMP and conveyance included in the SWM site plan (including any to be located on any property other than the property being developed by the applicant):
- (1) An O&M plan;
  - (2) An O&M agreement;
  - (3) Any easement agreements that are needed to ensure access, inspection, maintenance, operation, repair and permanent protection of any permanent BMPs and conveyances associated with the regulated activity;
  - (4) Any written deed, deed amendment or equivalent document (if needed) to be recorded against a subject property, as shown on the SWM site plan maps or plan sheets, or recorded plan sheets for the purpose of protecting and prohibiting disturbance to a BMP or conveyance; and
  - (5) Written approval, easement agreements, or other documentation for discharges to adjacent or downgradient properties when required to comply with § 94-301G and Article VII of this chapter.
- G. An erosion and sediment control plan, where applicable, as prepared for and submitted to the Conservation District and/or Borough. A letter of adequacy from the Conservation District, if applicable, must be submitted to the Borough prior to (or as a condition of) the Borough's final approval of the SWM site plan.
- H. A highway occupancy permit from the Pennsylvania Department of Transportation (PennDOT) District Office must be submitted to the Borough prior to (or as a condition of) the Borough's final approval of the SWM site plan when utilization of a PennDOT storm drainage system is proposed.

**§ 94-403 SWM site plan submission.**

A complete SWM site plan that complies with all applicable provisions of § 94-402 shall be submitted to the Borough for review and approval, as follows:

- A. The SWM site plan shall be coordinated with the applicable state and federal permit process and the municipal SALDO review process. All permit approvals or letters of adequacy not yet received by the applicant at the time of submittal of the SWM site plan to the Borough must be submitted to the Borough prior to (or as a condition of) the Borough's final approval of the SWM site plan.
- B. For projects that require SALDO approval, the SWM site plan shall be submitted by the applicant as part of the preliminary plan submission where applicable for the regulated activity.
- C. For regulated activities that do not require SALDO approval, the SWM site plan shall be submitted by the applicant with the building permit or zoning permit application.
- D. Two copies of the SWM site plan shall be submitted by the applicant for review.
- E. The corresponding review fee shall be submitted to the Borough simultaneously with the SWM site plan, per the Borough's fee schedule.
- F. Any submissions to the Borough that are found to be incomplete shall not be accepted for review and shall be returned to the applicant within thirty (30) days with a notification in writing of the specific manner in which the submission is incomplete.
- G. If requested by the Borough, financial security, per the requirements of § 94-110, shall be submitted to the Borough prior to approval of the SWM site plan or as part of the financial security required for a subdivision or land development per the requirements in the SALDO.

§ 94-404 SWM site plan review.

- A. The SWM site plan shall be submitted to the Borough for review by the Municipal Engineer for consistency with this chapter and the respective PA Act 167 Stormwater Management Plan(s). The Municipal Engineer will review the SWM site plan for any subdivision or land development for compliance with this chapter and the municipal SALDO provisions not otherwise superseded by this chapter.
- B. If applicable, the applicant shall have received a "letter of adequacy" from the Conservation District or other PADEP approval for the proposed regulated activity prior to (or as a condition of) final approval by the Borough.
- C. The Municipal Engineer will notify the applicant and the Borough, in writing, within forty-five (45) calendar days, whether the SWM site plan is consistent with the requirements of this chapter. If the SWM site plan involves a subdivision and land development plan, the notification shall occur within the time period allowed by the MPC (as amended). If a longer notification period is provided by other statute, regulation, or ordinance, the applicant will be so notified by the Borough.
  - (1) If the Municipal Engineer determines that the SWM site plan is consistent with this chapter, the Municipal Engineer shall forward a letter of consistency to the Borough, who shall then forward a copy to the applicant.
  - (2) The Borough may approve the SWM site plan with conditions reasonably defined to make the SWM site plan compliant with the terms of this chapter, and, if so, shall provide the conditions for approval in writing.
  - (3) If the Municipal Engineer determines that the SWM site plan is inconsistent or noncompliant with this chapter, the Municipal Engineer will forward a letter to the Borough, with a copy to the applicant citing the reason(s) and specific chapter sections for the inconsistency or noncompliance. Inconsistency or noncompliance may be due to inadequate information to make a reasonable judgment as to compliance with this chapter. Any SWM site plans that are inconsistent or noncompliant may be revised by the applicant and resubmitted in accordance with § 94-406 when consistent with this chapter. Resubmission will commence a new municipal review and notification time period.
- D. The Borough will not grant final approval to any proposed subdivision, land development, or regulated activity specified in this chapter if the SWM site plan has been found to be inconsistent with this chapter.
- E. All required permits from PADEP shall be obtained and submitted to the Borough prior to (or as a condition of) final approval of any proposed subdivision, land development, or other regulated activity by the Borough.
- F. No building permits for any regulated activity will be approved by the Borough if the SWM site plan has been found to be inconsistent with this chapter, as determined by the Municipal Engineer. All required permits from PADEP shall be obtained prior to issuance of a building permit.
- G. The Borough's approval of a SWM site plan shall be valid for a period not to exceed five years commencing on the date that the Borough approved the SWM site plan. If stormwater management facilities included in the approved SWM site plan have not been constructed, or if constructed, as-built plans of these facilities have not been approved within this five-year time period, then the applicant may seek reinstatement of approval of the expired SWM site plan. If the Borough determines that the expired SWM site plan is consistent and compliant with current regulations and requirements, then the expired SWM site plan will be reinstated; otherwise, it will be rejected. The applicant will be prohibited from conducting any regulated activity until a reinstated or newly approved SWM site plan is obtained in accordance with § 94-406 of this chapter.
- H. All or portions of the final approved SWM site plan shall be recorded (as "record plans") as part of the final subdivision or land development plan or as an attachment to the O&M agreement.

- I. Upon completion of construction, the applicant shall be responsible for completing final as-built plans of all BMPs, conveyances, or other stormwater management facilities included in the approved SWM site plan as per the requirements of § 94-502 of this chapter.
- J. For any SWM Site Plan that proposes to use any BMPs other than green infrastructure, LID practices, or CD to achieve the volume and rate controls required under this Ordinance, the Municipality will not approve the SWM Site Plan unless it determines that green infrastructure, LID practices, and CD are not practicable.

**§ 94-405 Revision of SWM site plans.**

- A. A submitted SWM site plan under review by the Borough shall be revised and resubmitted for any of the following reasons. The revised SWM site plan shall be resubmitted in accordance with § 94-403 and subject to review as specified in § 94-404 of this chapter.
  - (1) A change in stormwater management BMPs, conveyances, facilities or techniques;
  - (2) Relocation or redesign of stormwater management BMPs, conveyances, or facilities; or
  - (3) Soil or other site conditions are not as stated on the SWM site plan as determined by the Municipal Engineer, and the new conditions necessitate design changes.
- B. A revision to an approved SWM site plan shall be submitted to the Borough, accompanied by the applicable municipal review fee.

**§ 94-406 Resubmission of inconsistent or noncompliant SWM site plans.**

Any SWM site plan deemed inconsistent or noncompliant may be revised and resubmitted with the revisions addressing the Municipal Engineer's concerns documented in writing. The submission shall be addressed to the Borough in accordance with § 94-403 of this chapter, distributed accordingly, and be subject to review as specified in § 94-404 of this chapter. The applicable municipal review fee shall accompany a resubmission of a SWM site plan previously determined to be inconsistent or noncompliant.

**Article V**

**Performance and Inspection of Regulated Activities; Final As-Built Plans**

**§ 94-501 Performance and inspection of regulated activities.**

- A. All regulated activities shall be conducted, operated and maintained in accordance with the requirements set forth in Articles III, VII, and VIII of this chapter. When a SWM site plan is required by this chapter, all regulated activities shall be performed in accordance with the requirements of the final approved SWM site plan.
- B. The Municipal Engineer or other municipal designee shall be provided access to the site to inspect all phases of the erosion and sediment control measures and installation of the permanent BMPs and conveyances at such times as deemed appropriate by the Municipal Engineer or other municipal designee.
- C. Periodic inspections may be made by the Municipal Engineer or other designee during construction. A set of design plans approved by the Borough shall be on file and available for viewing at the site throughout the duration of the construction activity.
- D. Inspections, including but not limited to a final inspection, of all constructed BMPs, conveyances, or other stormwater facilities, and related improvements may be conducted by the Municipal Engineer or other designee to confirm compliance with this chapter and with the final approved SWM site plan prior to the issuance of any occupancy permit, use permit, or other form of final approval of the project by the Borough.
- E. If an NPDES Permit for Stormwater Discharges Associated with Construction Activities was required for the Regulated Activity, a Notice of Termination (NOT) approval must be obtained upon completion of construction prior to final approval of the project by the Municipality.

- F. Upon completion of construction, every permanent stormwater BMP, conveyance or other stormwater facility constructed or used as part of the regulated activity shall be operated, maintained and inspected by the landowner, or other designated person, in accordance with the O&M plan and O&M agreement approved by the Borough.
- G. The Borough or its designee may periodically inspect any permanent stormwater BMP, conveyance or facility for compliance with this chapter, an approved O&M plan, or an approved O&M agreement, per the provisions of Article IX. The Borough may inspect at any time it has reason to believe a violation exists. The Borough may pursue enforcement for violations consistent with the provisions of Article IX.

**§ 94-502 Final as-built plans.**

- A. The applicant shall provide to the Borough final as-built plans (signed and sealed by a qualified licensed professional) of all BMPs, conveyances, other stormwater facilities, and related improvements shown in the final approved SWM site plan.
- B. The final as-built plans shall include the following for all BMPs, conveyances, other stormwater facilities and related improvements:
  - (1) The location, elevations, dimensions, and as-built conditions of all BMPs, conveyances, other stormwater facilities, and related improvements including topographic contours and all typical details for storm drainage and conveyance systems, stormwater management facilities and impervious surfaces (existing, proposed, or constructed) included in the approved SWM site plan. The latitude and longitude coordinates for all permanent SWM BMPs must also be submitted at the central location of the BMPs; and
  - (2) Explanation of any discrepancies or variations from the final approved SWM site plan, other related approved construction plans, calculations and specifications (and approved revisions thereto).
- C. The final as-built plans shall include a certification of completion signed and sealed by a qualified licensed professional verifying that all permanent BMPs and conveyances have been constructed according to the final approved SWM site plan and related approved construction plans, calculations and specifications.
- D. All areas of the regulated activity draining to BMPs must be stabilized prior to submittal of the as-built plans.
- E. After receipt of the as-built plans by the Borough, the Borough or its designee may review the as-built plans for consistency with this chapter, the final approved SWM site plan, other related approved construction plans, and subsequent approved revisions thereto, as well as actual conditions at the site, and the Borough may conduct a final inspection, as per § 94-501D.
- F. The as-built plans must be received, reviewed and determined to be acceptable by the Borough prior to:
  - (1) Close out of the drainage permit or other close out of the project by the Borough;
  - (2) Release of the financial security or other performance guarantee; and
  - (3) Dedication of the stormwater facilities to the Borough, or conveyance to a homeowners' association, or other person responsible for operation, maintenance and repair.
- G. Final occupancy permit(s) or use permit or other final approval to use or operate the constructed improvement may not be issued by the Borough until the final as-built plans have been accepted unless sufficient financial security has been posted with the Borough to guarantee completion of the final as-built plans.

- H. Upon final acceptance of the final as-built plans by the Borough, the applicant shall review and, if required by the Borough, revise and re-record the O&M plan and the O&M agreement to reflect the final as-built conditions and information for each permanent BMP or conveyance, in accordance with the requirements of Article VII.
- I. All or portions of the final as-built plans shall be recorded if required by the Borough.

**Article VI  
Fees and Expenses**

**§ 94-601 Site plan review and inspection fees established.**

Fees have been established by the Borough in the fee resolution which is adopted from time to time by Borough Council to defray plan review and construction inspection costs incurred by the Borough. All fees listed in § 94-602A shall be paid by the applicant at the time of SWM site plan submission or as otherwise directed by the Borough.

**§ 94-602 Expenses covered by fees.**

- A. The fees required of the applicant by this chapter shall at a minimum cover:
  - (1) Administrative costs;
  - (2) The review of the SWM site plan by the Borough, the Municipal Engineer and other municipal consultants;
  - (3) Coordination and meetings with the applicant;
  - (4) The inspection of erosion and sediment control measures, BMPs, conveyances and other related improvements during construction;
  - (5) Review of project communications, reports, and additional supporting information;
  - (6) Other site inspections;
  - (7) The final inspection upon completion of the BMPs, conveyances, and other stormwater management facilities and related improvements presented in the SWM site plan; and
  - (8) Review of final as-built plan submission and revised calculations, and inspections as needed.
- B. The applicant shall also reimburse all expenses incurred by the Borough for any additional work or municipal consultant fees required to enforce any permit provisions regulated by this chapter, correct violations, and ensure proper completion of remedial actions.

**Article VII  
Operation and Maintenance (O&M) Responsibilities and Easements**

**§ 94-701 General requirements for protection, operation and maintenance of stormwater BMPs and conveyances.**

The following shall apply to all regulated activities in accordance with the requirements of the subsequent sections of this Article VII.

- A. Continuing operations and maintenance responsibilities of all permanent BMPs, conveyances, or other stormwater management facilities shall be reviewed and approved by the Borough along with the SWM site plan. The Borough may require an offer of a dedication of such facilities as part of the requirements for approval of the SWM site plan. Such a requirement is not an indication that the Borough will accept the facilities. The Borough reserves the right to accept or reject the operations and maintenance responsibility for any portion of or all of the BMPs, conveyances or other stormwater controls and facilities.

- B. An operation and maintenance (O&M) plan shall be submitted to the Borough for review and approval for all existing and proposed permanent BMPs and man-made conveyances or other stormwater facilities identified in the SWM site plan. Multiple BMPs or conveyances may be addressed by a combined O&M plan where all such facilities are similar in O&M requirements and ownership.
- C. The O&M plan(s) and O&M agreement(s) shall name the person identified in the SWM site plan who shall be the owner of and be responsible for ongoing inspections, operation, repair, and maintenance of each BMP or conveyance following completion of construction.
- D. For any BMP or man-made conveyance (including any to be located on any property other than the property being developed by the applicant) to be owned by a person other than the Borough:
  - (1) An O&M agreement shall be submitted to the Borough for review and approval; and
  - (2) The O&M plan shall be attached to, incorporated within, and recorded as a public record along with a fully executed O&M agreement, all of which shall be recorded as a restrictive covenant that runs with the land and shall be binding upon the landowner and any heirs, administrators, successors in interest or assigns of the landowner.
- E. The following shall be provided for all BMPs and conveyances (including any to be located on any property other than the property being developed by the applicant) by an O&M or other agreement or by otherwise establishing covenants, easements, deed restrictions, or by dedication to the Borough:
  - (1) Permanent protection of the BMP or conveyance from disturbance or alteration;
  - (2) Right of entry and access for the Borough for inspection and enforcement of this chapter (including § 94-903G) and any applicable O&M plan or O&M agreement; and
  - (3) Right of entry and access for the person owning the BMP or conveyance and responsible for fulfilling the O&M requirements when that person is not the Borough and is different from the owner of the property on which the BMP or conveyance is located (such as may be applicable for § 94-301G of this chapter).
- F. All O&M and other agreements, covenants, easements and deed restrictions shall:
  - (1) Be submitted to the Borough for review and approval;
  - (2) Be recorded as a public record, upon approval, against each parcel(s) which is part of the SWM site plan or otherwise contains any BMP or conveyance comprising part of the regulated activity which is the subject of an O&M agreement; and
  - (3) Run with the land and be binding upon the landowner, its heirs, administrators, successors in interest, and assigns.
- G. The materials, documents and content required by this Article VII may be prepared in conjunction with and incorporated with similar materials, documents and content required for other permit or approval applications, such as those required by PADEP for the postconstruction stormwater management plan.

**§ 94-702 Operation and maintenance plans.**

The following items shall be included in the O&M plan, unless otherwise approved by the Municipal Engineer:

- A. A plan sheet(s) or map(s) showing each BMP and man-made conveyance and which shall include, but not be limited to:

- (1) Property(ies) identification (owner name and address; and property address and/or lot and/or tax parcel number, etc.), property boundaries and tax parcel number of the land parcel on which the BMP or conveyance is located.
  - (2) Name, address, phone number, date prepared, signature and seal of the licensed professional responsible for preparation of the plan sheet or map.
  - (3) Clear identification of the location, dimensions, and function of each BMP or conveyance covered by the O&M plan.
  - (4) The location of each BMP and conveyance relative to roadways, property boundaries, or other identifiable landmarks and existing natural drainage features such as streams, lakes, ponds, or other bodies of water within the immediate vicinity of, or receiving discharge from, the BMP or conveyance.
  - (5) Delineation of the land area, structures, impervious surfaces and conveyances draining to and from the BMP.
  - (6) Representative elevations and/or topographic contours at intervals of two feet, or other as acceptable to the Municipal Engineer.
  - (7) Other features including FEMA floodplain and floodway boundaries, sinkholes, etc., located within the immediate proximity of each BMP and conveyance.
  - (8) Locations of areas of vegetation to be managed or preserved that function as a BMP or conveyance.
  - (9) The locations of all surface and subsurface utilities, on-lot wastewater facilities, sanitary sewers, and water lines within 20 feet of each BMP or conveyance.
  - (10) The following as it pertains to any easements, covenants and deed restrictions established for each applicable BMP or conveyance:
    - (a) Boundaries delineated with bearings and distances shown that encompass the BMP or conveyance and that includes a twenty-foot perimeter area surrounding these features and sufficient vehicular ingress to and egress from a public right-of-way and roadway;
    - (b) Labels specifying the type and purpose of the easement, covenant, or deed restriction and who it benefits; and
    - (c) Labels with reference to any corresponding easement agreement, covenant, deed restriction or other document to be recorded.
  - (11) The plan sheet or map shall be prepared at sufficient scale for municipal review, and ultimately for the use by the person responsible for operation and maintenance, and shall also be prepared at a legible scale that meets the requirements for recordation along with (and as an attachment to) the O&M agreement and O&M plan at the Chester County Office of the Recorder of Deeds.
- B. The following information shall be included in the O&M plan and written in a manner consistent with the knowledge and understanding of the person who will be responsible for the maintenance activities:
- (1) The name and address of the following:
    - (a) Property(ies) on which each BMP or conveyance is located;
    - (b) Owner of the property;
    - (c) Owner of each stormwater BMP or conveyance who is responsible for implementation of the O&M plan;

- (d) Person responsible for maintaining adequate liability insurance and payment of taxes; and
- (e) Person preparing the O&M plan.
- (2) A description of each BMP and conveyance and how the BMPs and conveyances are intended to function.
- (3) A description of actions necessary to operate, inspect, and maintain each BMP or conveyance, including but not limited to:
  - (a) Lawn care, vegetation maintenance, landscaping and planting;
  - (b) Clean out of accumulated debris and sediment (including from grates, trash racks, inlets, etc.); and
  - (c) Other anticipated periodic maintenance and repair.
- (4) The following statement shall be included:

"The landowner acknowledges that, per the provisions of the Borough's Stormwater Management Ordinance, it is unlawful to modify, remove, fill, landscape, alter or impair the effectiveness of, or place any structure, other vegetation, yard waste, brush cuttings, or other waste or debris into any permanent stormwater management BMP or conveyance described in this O&M plan or to allow the BMP or conveyance to exist in a condition which does not conform to this O&M plan, without written approval from the Borough."

- (5) Inspection and maintenance schedules.
- (6) Explanation of the purpose and limitations of any easements, covenants, or deed restrictions associated with any BMP or conveyance that are to be recorded against the property.
- C. A statement that no BMP or man-made conveyance may be used by the owner or others for any purpose other than its intended stormwater control function, or, if approved by the Municipal Engineer, a statement of specific allowable uses of the BMP (i.e., recreational benefits that may be associated with certain BMPs owned by a homeowners' association, or allowable uses by an individual residential landowner).
- D. A statement that establishes a reasonable time frame for remedy of deficiencies found by the owner during his or her inspections.
- E. Language needed to fulfill the requirements of § 94-705B, C and D of this chapter.

**§ 94-703 Operation and maintenance agreements.**

- A. An O&M agreement shall be required for any BMP or man-made conveyance to be owned by a person other than the Borough, and the agreement shall:
  - (1) Be between the owner of the BMP or conveyance and the Borough, and shall be substantially the same as the O&M agreement in Appendix F;
  - (2) Incorporate the approved O&M plan(s) for all BMPs or conveyances to be covered by the O&M agreement;
  - (3) Set forth the rights, duties and obligations of the owner of the BMP or conveyance and the Borough, and be consistent with the approved O&M plan(s);
  - (4) Be recorded as a deed restriction or restrictive covenant that runs with the land and shall be binding upon the landowner, its heirs, administrators, successors in interest, and assigns;
  - (5) Be submitted to the Borough for review prior to approval of the SWM site plan;

- (6) Upon approval by the Borough, be signed by the designated owner of the BMP or conveyance and submitted for signature by the Borough; and
  - (7) When fully executed, be recorded by the landowner at the Chester County Office of the Recorder of Deeds following municipal approval of the O&M plan and prior to the start of construction.
- B. Other items or conditions may be required by the Borough to be included in the O&M agreement where determined necessary by the Borough to guarantee the satisfactory operation and maintenance of all permanent BMPs and conveyances.
  - C. After approval of the final as-built plans per the requirements of Article V, the applicant shall review and, if necessary and if required by the Borough, revise and re-record the O&M plan and O&M agreement to reflect the final as-built conditions of each BMP and conveyance if different from the information included in the original recorded documents.

**§ 94-704 Easements and deed restrictions.**

- A. Easements shall be established in connection with any regulated activity for all permanent BMPs and conveyances that will not be dedicated to or otherwise owned by the Borough (including any to be located on any property other than the property being developed by the applicant) and shall:
  - (1) Include all land area occupied by each BMP or conveyance;
  - (2) Include a twenty-foot-wide perimeter (or other width as determined in consultation with the Municipal Engineer) surrounding the feature(s);
  - (3) Provide sufficient vehicular ingress and egress from a public right-of-way and roadway;
  - (4) Permanently protect every BMP and conveyance from disturbance or alteration where not otherwise protected by a recorded O&M agreement, covenant, deed restriction or other means;
  - (5) Grant the Borough the right, but not the duty, to access every BMP and conveyance from a public right-of-way or public roadway to conduct periodic inspections and to undertake other actions that may be necessary to enforce the requirements of this chapter, or of any applicable O&M plan or O&M agreement; where roadways will not be dedicated to the Borough, the Borough shall be granted access to the private roadways as necessary to access every BMP and conveyance;
  - (6) Grant the owner of each BMP and conveyance the right to access, inspect, operate, maintain, and repair the BMP or conveyance when the feature is to be owned, operated and maintained by a person other than the Borough and other than the owner of the parcel on which it is located;
  - (7) Be shown, with bearings and distances noted, on the SWM site plan map/plan sheets, O&M plan map/plan sheets, final as-built plans, and be signed and sealed by a qualified licensed professional;
  - (8) Include language legally sufficient to ensure that the easement shall run with the land and bind the landowner granting the easement, its heirs, administrators, successors in interest and assigns, into perpetuity; and
  - (9) Be recorded at the Chester County Office of the Recorder of Deeds following municipal approval and prior to the start of construction.
- B. For any BMP or conveyance to be owned by a person other than the Borough or the landowner owning the parcel upon which a BMP or conveyance is located, an easement agreement shall be prepared and executed between the landowner and the owner of the BMP or conveyance which shall:
  - (1) Describe the ownership interests of all parties to the easement agreement, including the ownership of the BMP or conveyance;

- (2) Include a written legal (metes and bounds) description of the easement area, with reference to a recorded plan sheet showing the legal boundaries of the easement area (or an accompanying plan sheet/map), signed and sealed by a qualified licensed professional;
  - (3) Grant an easement from the landowner to the owner of each BMP and conveyance, establishing the right and obligation to occupy, access, inspect, operate, maintain, and repair the BMP or conveyance;
  - (4) Include a description of the purpose of the easement and the responsibilities of the parties involved;
  - (5) Incorporate by reference, or be recorded with, the corresponding O&M plan and O&M agreement;
  - (6) Restrict the landowner's use of the easement area of the parcel on which the BMP or conveyance is located, consistent with the rights granted to the owner of the BMP or conveyance;
  - (7) Be submitted to the Borough for review and approval prior to approval of the SWM site plan;
  - (8) Upon approval by the Borough, be signed by the owner of the BMP(s) or conveyance(s) and the landowner and submitted for signature by the Borough;
  - (9) Include language legally sufficient to ensure that the easement will run with the land affected by the easement and that the easement agreement is binding upon the parties to the easement agreement, their heirs, administrators, successors in interest and assigns, into perpetuity;
  - (10) Contain additional provisions or information as required by the Borough; and
  - (11) When fully executed, be recorded by the landowner at the Chester County Office of the Recorder of Deeds against all parcels affected by the terms of the easement agreement prior to the release of financial security.
- C. For any BMP or conveyance which is designed to receive runoff from another parcel or parcels and which is owned by the landowner of the parcel upon which the BMP or conveyance is located, in addition to any easement or easement agreement required pursuant to § 94-704A or B, an easement agreement shall be prepared and executed between the landowner of the parcel or parcels draining to the BMP or conveyance and the owner of the BMP or conveyance. This easement agreement shall:
- (1) Describe the ownership interests of all parties to the easement agreement, including the ownership of all affected parcels and of the BMP or conveyance;
  - (2) Provide for the grant of a drainage easement from the owner of the BMP or conveyance to the landowner of the parcel(s) draining to the BMP, which shall extend from the shared parcel boundary(ies) to the receiving BMP and shall include the connecting flow path(s) or conveyance;
  - (3) Include a written legal (metes and bounds) description of the easement area, with reference to a recorded plan sheet showing the legal boundaries of the easement area (or an accompanying plan sheet/map), signed and sealed by a licensed professional;
  - (4) Incorporate by reference or be recorded with the corresponding O&M plan and O&M agreement;
  - (5) State that the purpose of the easement agreement is to ensure the continuous right of the discharging parcel to discharge onto the parcel containing the BMP and into the BMP or conveyance;
  - (6) Restrict the BMP or conveyance owner's use of the easement area of the parcel upon which the BMP or conveyance is located, consistent with the purpose of the easement granted;
  - (7) Establish the duty and responsibility of the landowner of the parcel or parcels draining to the BMP or conveyance to maintain the existing drainages on the discharging parcel or parcels as designed and constructed to discharge to the receiving BMP;

- (8) Include language legally sufficient to ensure that the easement will run with the land and will bind all parties to the easement agreement, their heirs, administrators, successors in interest and assigns, into perpetuity;
  - (9) Be submitted to the Borough for review and approval prior to approval of the SWM site plan;
  - (10) Contain all additional provisions or information as the Borough may require upon review; and
  - (11) Be executed by the parties to the easement agreement and recorded at the Chester County Recorder of Deeds Office against the draining parcel(s) and the parcel upon which the BMP or conveyance is located prior to the release of the financial security.
- D. For any area(s) shown on the SWM site plan maps/plan sheets or as-built plan sheets as requiring, or area(s) that is otherwise determined to require, deed restriction(s) for the purpose of protecting and prohibiting disturbance to a BMP or conveyance, such deed restrictions will be incorporated into a written deed, restrictive covenant, or equivalent document. The deed or other document shall:
- (1) Include a clear and understandable description of the purpose, terms and conditions of the restricted use;
  - (2) Include the written legal description (metes and bounds description) of the area to which the restrictions apply that is consistent with the boundary shown on the O&M plan sheets and SWM site plan maps/plan sheets;
  - (3) Make reference to any corresponding O&M plan(s) and O&M agreement(s);
  - (4) Include language legally sufficient to ensure that the terms of the restriction run with the land and shall be binding upon the landowner, its heirs, administrators, successors in interest, and assigns;
  - (5) Be submitted to the Borough for review and approval prior to approval of the SWM site plan;
  - (6) Upon approval by the Borough, be signed by the landowner and owner of the BMP or conveyance and submitted to the Borough; and
  - (7) Be fully executed and recorded at the Chester County Office of the Recorder of Deeds prior to the release of the financial security.

**§ 94-705 Other postconstruction responsibilities.**

- A. The provisions of § 94-804 of this chapter shall apply to any permanent BMP or conveyance that is constructed as part of an approved SWM site plan or covered by an approved O&M plan.
- B. The person responsible for the operation and maintenance of a BMP or conveyance shall make records of the installation and of all maintenance and repairs, and shall retain the records for at least 10 years. These records shall be submitted to the Borough.
- C. Upon final inspection, the Borough shall inform the person responsible for the operation and maintenance whether the submission of periodic (annual or other frequency) inspection and maintenance reports will be required.
- D. The owner of each BMP and conveyance shall keep on file with the Borough the name, address, and telephone number of the person responsible for maintenance activities and implementation of the O&M plan. In the event of a change, new information shall be submitted by the BMP or conveyance owner to the Borough within 30 working days of the change.

**§94-706. Municipal Stormwater Control and BMP Operation and Maintenance Fund and Inspection and BMP Operations and Maintenance Requirements**

A. The municipality shall inspect SWM BMPs, facilities and/or structures installed under this Ordinance according to the following frequencies, at a minimum, to ensure the BMPs, facilities and /or structures continue to function as intended. Persons installing stormwater controls or BMPs shall be required to reimburse the Borough for all costs of inspections in accordance with the fee schedule adopted by the Borough Council that is in effect when the inspections are conducted.

The inspections shall be conducted at the following minimum frequencies:

- a) Annually for the first 5 years.
- b) Once every 3 years thereafter.

c) During or immediately after the cessation of a 25-year or greater storm, as determined by the Municipal Engineer.

2. The above referenced inspections shall be conducted during or immediately following precipitation events or in dry weather conditions if the BMP design parameters include dewatering within a specified period of time. A written inspection report shall be created to document each inspection. The inspection report shall contain the date and time of the inspection, the individual(s) who completed the inspection, the location of the BMP, Stormwater Management Facility or structure inspected, observations on performance, and recommendations for improving performance, if applicable.

**Article VIII  
Prohibitions**

**§ 94-801 Prohibited discharges.**

- A. Any drain or conveyance, whether on the surface or subsurface, that allows any nonstormwater discharge including sewage, process wastewater, and wash water to enter the Borough's separate storm sewer system, riparian buffers, wetlands or other waters of the commonwealth is prohibited.
- B. No person shall allow, or cause to allow, discharges into the Borough's separate storm sewer system or the waters of the commonwealth that are not composed entirely of stormwater, except:
  - (1) As provided in § 94-801C below; and
  - (2) Discharges allowed under a state or federal permit.
- C. The following discharges are authorized unless they are determined by the Borough to be significant contributors to pollution to the Borough's separate storm sewer system or to the waters of the commonwealth:
  - (1) Discharges from fire-fighting activities;
  - (2) Potable water sources including waterline and fire hydrant flushings, if such discharges do not contain detectable concentrations of Total Residual Chlorine (TRC);
  - (3) Non-contaminated irrigation drainage water;
  - (4) Non-contaminated HVAC condensation and water from geothermal systems;
  - (5) Springs;
  - (6) Water from crawl space pumps;

- (7) Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used;
- (8) Diverted stream flows;
- (9) Flows from riparian habitats and wetlands;
- (10) Uncontaminated water from foundations or from footing drains;
- (11) Lawn watering;
- (12) Uncontaminated groundwater;
- (13) Water from individual residential car washing;
- (14) Routine external building washdown (which does not use detergents or other compounds); and
- (15) Non-contaminated hydrostatic test water discharges, if such discharges do not contain detectable concentrations of TRC
- (16) Washdown of trash receptacles;

D. In the event that the Borough determines that any of the discharges identified in § 94-801C significantly contribute pollutants to the Borough's separate storm sewer system or to the waters of the commonwealth, or is notified of such significant contribution of pollution by PADEP, the Borough will notify the responsible person to cease the discharge.

E. Upon notice provided by the Borough under § 94-801D, the discharger shall, within a reasonable time period, as determined by the Borough consistent with the degree of pollution caused by the discharge, cease the discharge.

F. Nothing in this section shall affect a discharger's responsibilities under state law.

**§ 94-802 Prohibited connections.**

The following connections are prohibited, except as provided in § 94-801C above:

- A. Any drain or conveyance, whether on the surface or subsurface, that allows any nonstormwater discharge, including sewage, process wastewater, and wash water, to enter a separate storm sewer system, and any connections to the separate storm sewer system from indoor drains and sinks. Any drain or Conveyance that delivers non-stormwater discharges directly into wetlands, riparian buffers, or other waters of the Commonwealth is prohibited.
- B. Any drain or conveyance connected from a commercial or industrial land use to a separate storm sewer system, which has not been documented in plans, maps, or equivalent records and approved by the Borough.

**§ 94-803 Roof drains and sump pumps.**

A. Roof drains and sump pump discharges shall not be connected to sanitary sewers.

B. Roof drain, sump pump, foundation and footing drain discharges:

- (1) To the maximum extent practicable, shall discharge to infiltration or vegetative BMPs, or to vegetated or other areas with adequate capacity;
- (2) May be connected to streets, storm sewers, or roadside ditches only if determined necessary or acceptable by the Municipal Engineer; and
- (3) Shall be considered in stormwater management calculations to demonstrate that conveyance and receiving facilities have adequate capacity.

**§ 94-804 Alteration of BMPs.**

- A. No person shall modify, remove, fill, landscape, alter, or impair the effectiveness of any stormwater BMPs, conveyances, storm water management facilities, areas or structures unless the activity is part of an approved maintenance program, without the written approval of the Borough.
- B. No person shall place any structure, fill, landscaping, additional vegetation, yard waste, brush cuttings, or other waste or debris into a BMP or conveyance, or within a stormwater easement, that would limit or alter the functioning of the stormwater BMP or conveyance, without the written approval of the Borough.

Article IX

**Enforcement; Violations and Penalties**

**§ 94-901 Public nuisance.**

- A. Any regulated activity conducted in the violation of any provision of this chapter is hereby deemed a public nuisance.
- B. Each day that a violation continues shall constitute a separate violation.
- C. A separate violation will be found to exist for each section of this chapter found to have been violated.
- D. To the extent that the Borough does not enforce any provision of this chapter, such action or inaction shall not constitute a waiver by the Borough of its rights of future enforcement hereunder.

**§ 94-902 Right of entry.**

- A. Upon presentation of proper credentials, duly authorized officers or agents of the Borough may enter at reasonable times upon any property within the Borough to inspect the implementation, condition, or operation and maintenance of all erosion and sediment controls and permanent stormwater BMPs, conveyances, or other stormwater management facilities both during and after completion of a regulated activity, or for compliance with any requirement of this chapter.
- B. Persons working on behalf of the Borough shall have the right to temporarily locate on or in any BMP, conveyance or other stormwater management facility in the Borough such devices as are necessary to conduct monitoring and/or sampling of the discharges from such BMP or conveyance, or other stormwater facilities.
- C. Failure of the landowner or representative to grant access to the Borough after proper notification, verbal or written, is a violation of this chapter.

**§ 94-903 Enforcement.**

- A. The Borough Code Enforcement Department, Municipal Engineer or other designee is hereby authorized and directed to enforce all of the provisions of this chapter. The Borough Council may delegate enforcement duties, including the initial determination of chapter violation and service of notice, if notice is given, to such other officers or agents as the Borough shall deem qualified for that purpose.
- B. It shall be the responsibility of the landowner of the real property on which any regulated activity is proposed to occur, is occurring, or has occurred to comply with the applicable terms and conditions of this chapter.
- C. All municipal inspections for compliance with the approved SWM site plan shall be the responsibility of the Borough or its designee.
- D. During any stage of the work of any regulated activity, if the Municipal Engineer or other designee determines that the erosion and sediment control measures, permanent BMPs, conveyances or other stormwater facilities are not being installed or maintained in accordance with the approved SWM site plan, the Borough may suspend or revoke any existing permits or other approvals until the

deficiencies are corrected or until a revised SWM site plan is submitted and approved, if and as determined to be necessary by the Municipal Engineer or other designee.

- E. In the event that the Code Enforcement Department, Municipal Engineer or other designee finds that a person has violated a provision of this chapter, or fails to conform to the requirements of any permit or approval issued by the Borough, or any O&M plan or O&M agreement approved by the Borough, the Borough may order compliance by written notice of the violation to the landowner.
- F. Such notice may, without limitation, require the following remedies:
  - (1) Performance of monitoring, analyses, and reporting;
  - (2) Elimination of prohibited connections or discharges;
  - (3) Cessation of any violating discharges, practices, or operations;
  - (4) Abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
  - (5) Payment of a fine to cover administrative and remediation costs and/or forfeiture of financial security;
  - (6) Implementation of stormwater controls, BMPs, and conveyances; and
  - (7) Operation, maintenance or repair of BMPs, conveyances or other stormwater facilities.
- G. Such notice shall set forth the nature of the violation(s), citing to specific sections of this chapter which have not been met, and establish a time limit for commencement of correction and completion of correction of the violation(s). The notice shall provide for a right of the landowner's appeal to the Court of Common Pleas in accordance with § 94-906 of this chapter. Said notice shall further advise that, if applicable, should the violator fail to take the required action within the established deadline, possible sanctions, clearly described, may be imposed, or the work may be done by the Borough or designee, and the expense thereof shall be charged to the violator.
- H. Failure to comply within the time specified in such notice shall also subject such person to the penalty provisions of this chapter. All such penalties shall be deemed cumulative and shall not prevent the Borough from pursuing any and all other remedies available in law or equity.

**§ 94-904 Suspension and revocation of permits and approvals.**

- A. Any building, land development, or other permit or approval issued by the Borough may be suspended or revoked by the Borough for:
  - (1) Noncompliance with or failure to implement any provision of the permit or approved SWM site plan or O&M agreement;
  - (2) A violation of any provision of this chapter or any other law or regulation applicable to the regulated activity;
  - (3) The creation of any condition or the commission of any act during the regulated activity that constitutes or creates a hazard or nuisance, or endangers the life, health, safety, or property of others; or
  - (4) Failure to correct a violation within the allowed time period allowed per notice given by the Borough.
- B. Prior to revocation or suspension of a permit, unless there is immediate danger or threat of such danger to life, public health or property, at the request of the applicant, the Borough Council shall schedule a hearing on the violation and proposed revocation or suspension, pursuant to public notice.

The expense of a hearing shall be the applicant's responsibility.

- C. A suspended permit or approval may be reinstated by the Borough when:
- (1) The Municipal Engineer or other designee has inspected and approved the corrections to the BMPs, conveyances or other stormwater management facilities, or the elimination of the hazard or nuisance; and
  - (2) The Borough is satisfied that the violation has been corrected.
- D. A permit or approval that has been revoked by the Borough cannot be reinstated. The applicant may apply for a new permit or approval in accordance with this chapter.

**§ 94-905 Violations and penalties.**

- A. Any person who violates or permits the violation of any provision of this chapter shall, upon conviction thereof in a summary proceeding brought before a District Justice under the Pennsylvania Rules of Criminal Procedure, be guilty of a summary offense and shall be subject to the payment of a fine of not less than \$100 and not more than \$1,000, plus the costs of prosecution. In default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a term of not more than 30 days. Each section of this chapter violated shall constitute a separate offense, and each day or portion thereof in which a violation of this chapter is found to exist shall constitute a separate offense, each of which violations shall be punishable by a separate fine imposed by the District Justice of not less than \$100 and not more than \$500, plus the costs of prosecution or, upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a term of not more than 30 days. All fines and penalties collected for the violation of this chapter shall be paid to the Borough Treasurer.
- B. In addition, the Borough may, through its solicitor, institute injunctive, mandamus, or any other appropriate action or proceeding at law or in equity for the enforcement of this chapter. Any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus, or other legal or equitable forms of remedy or relief. Such relief may include costs, fees, and charges, including the Borough's attorney's fees (charged at the hourly rate approved by the governing body of the Borough) and costs, as may be permitted by law.
- C. When it is necessary to make an inspection to enforce the provisions of this chapter, the Borough's Code Official and Municipal Engineer shall be authorized to enter the property at reasonable times to inspect or perform the duties imposed by this chapter provided that if the property is occupied, that credentials be presented to the occupant and entry requested. If such property is unoccupied, the Code Official shall first make a reasonable effort to locate the owner or other person having charge or control of the property and request entry. If entry is refused, the Code Official shall have recourse to the remedies provided by law to secure entry. If the Borough incurs expenses associated with correcting any violation of this chapter, such expenses shall be charged to the property owner responsible for the violation.

**§ 94-906 Appeals.**

Any person aggrieved by any decision or determination of the Borough relevant to the provisions of this chapter may file an appeal in the Court of Common Pleas pursuant to the Local Agency Law within 30 days of the Borough's decision or determination.

**§ 94-907 Effective date.**

This chapter shall become effective upon enactment as provided by law.



**ORDINANCE APPENDIX A**

**SIMPLIFIED APPROACH TO  
STORMWATER MANAGEMENT  
FOR SMALL PROJECTS**

**Appendix A**  
**Simplified Approach to Stormwater  
Management for Small Projects**

**Appendix A.1 –  
Applicability, Submittal and Approval Requirements**

**Appendix A.2 –  
*“Simplified Approach to Stormwater Management for Small  
Projects – Handbook” (Revised September 3, 2021)***

**Appendix A.1**  
**Applicability, Submittal and Approval**  
**Requirements**

**Borough of West Chester**  
**Chester County, Pennsylvania**

## **Applicability:**

- Small projects with 500 to 1,000 square feet of Regulated Impervious Surfaces (as defined in the Municipality's Stormwater Management Ordinance) and with less than 5,000 square feet of proposed Earth Disturbance (as defined in the Municipality's Ordinance) may apply the "Simplified Approach to Stormwater Management for Small Projects" (Simplified Approach).
- Only projects that meet the above size thresholds as specified in the Municipality's Stormwater Management Ordinance may use this Simplified Approach and are then not required to submit a fully engineered Stormwater Management Site Plan to the Municipality. However, these projects are still required to address water quality and infiltration requirements as outlined in the Simplified Approach "Handbook". This Handbook is intended to aid applicants in addressing these requirements through the installation of a properly sized underground infiltration trench.
- Any project with more than 1,000 square feet of Regulated Impervious Surface or more than 5,000 square feet of proposed Earth Disturbance can NOT apply this Simplified Approach.
- The Applicant should first review the planned project with the Municipal Engineer prior to initiating the Simplified Approach to confirm the following:
  - That the proposed project is not otherwise exempt from the stormwater management control and the engineered Stormwater Management Site Plan requirements of the Municipality's Stormwater Management Ordinance;
  - That the proposed project is eligible to use this Simplified Approach;
  - Which components of the proposed project must be included in the calculation of "impervious surfaces (areas)"; and
  - Whether any local conditions are known to the Municipal Engineer that would preclude the use of any of the techniques included in this Simplified Approach.

## **Submittal and Approval Requirements:**

Use of the Simplified Approach requires:

- The applicant to submit the following to the Municipality for review and approval prior to beginning construction per the Simplified Approach Handbook:
  - Simplified Approach – Stormwater Management Application
  - Simplified Approach – Stormwater Management Checklist
  - Simplified Approach Stormwater Management Site Plan (i.e., sketch plan)
  - A completed, signed, and notarized "Simplified Operation, Maintenance and Inspection Plan and Agreement".
- The applicant is to record the "Simplified Approach – Stormwater Best Management Practices Operation, Maintenance and Inspection Plan and Agreement" at the Chester County Office of the Recorder of Deeds after signature by the Municipality.
- A final inspection conducted by the Municipality after completion of construction.

**Appendix A.2**

**Simplified Approach to Stormwater Management  
for Small Projects – Handbook**

# **Simplified Approach to Stormwater Management for Small Projects**

## **Handbook**

Prepared by:  
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Updated January 12, 2022

Further revised by:  
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for:  
*Borough of West Chester*  
as part of the  
County-wide Act 167 Stormwater Management Plan for Chester County, PA

Revised Date: *September 21, 2022*

**All revisions made by Pennoni Associates Inc. were completed without consultation with CEG and were completed at the sole discretion of Pennoni Associates Inc.**

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## **1.0 Introduction**

Pennsylvania's Storm Water Management Act (PA Act 167) was enacted in 1978 in response to the impacts of the accelerated stormwater runoff resulting from land development in the state. PA Act 167 requires counties to prepare and adopt watershed-based stormwater management plans. Municipalities are also required to adopt and implement ordinances to regulate development consistent with these plans. The purpose of these regulations is to protect public health, safety and general welfare, property values, and water quality and quantity by implementing drainage and Stormwater Management practices, criteria, and provisions for land development, construction, and Earth Disturbance Activities.

PA Act 167 gave Pennsylvania Municipalities the power to regulate activities affecting flooding, streambank erosion, stormwater runoff, and surface and groundwater quality and quantity. The Municipality's Stormwater Management Ordinance was prepared to comply with the provisions included in PA Act 167. This Ordinance also includes provisions allowing this Simplified Approach to Stormwater Management to be used for small projects.

This Handbook has been developed to allow homeowners or applicants for small projects to comply with stormwater management requirements of the Stormwater Management Ordinance of the Municipality, including sizing, designing, locating, and installing on-lot measures, referred to herein as "Best Management Practices" (BMPs). Only projects that meet the size thresholds specified in the Municipality's Stormwater Management Ordinance may use this Simplified Approach and are then not required to submit a formal fully engineered Stormwater Management Site plan to the Municipality. However, these projects are still required to address certain requirements, such as stormwater quality, infiltration, rate, and volume management goals as outlined in this Simplified Approach Handbook. This Handbook is intended to aid applicants in addressing these requirements through the installation of a properly sized underground infiltration trench.

The purpose of requiring effective stormwater management from small projects is to help reduce stormwater runoff in the community, to maintain groundwater recharge, to prevent degradation of surface and groundwater quality, and to otherwise protect water resources and for public safety.

## **2.0 Project Eligibility for the Simplified Approach**

To be eligible for the Simplified Approach, projects must meet the threshold, roof area, and BMP type requirements described below. It is recommended that prior to submission of an application utilizing the Simplified Approach, a meeting should be scheduled with the Municipal Engineer to confirm eligibility and review the application process. It shall be noted that the plan approval shall not be considered at this meeting.

### Threshold

Small projects with 500 to 1,000 square feet of Regulated Impervious Surface (as defined in the Municipality's Stormwater Management Ordinance) and less than 5,000 square feet of proposed

Earth Disturbance (as defined in the Municipality's Stormwater Management Ordinance) may apply the Simplified Approach. Regulated Impervious Surface includes Proposed Impervious Surface as part of a current proposed project and all existing Impervious Surfaces installed after December 18, 2013.

Only projects that meet the above size thresholds as specified may use this Simplified Approach and are then not required to submit a formal Stormwater Management Site Plan to the Municipality. However, these projects are still required to address water quality and infiltration requirements as outlined in this Appendix A.

Any project with more than 1,000 square feet of Regulated Impervious Surface or more than 5,000 square feet of proposed Earth Disturbance **cannot** apply this Simplified Approach.

Starting December 18, 2013 projects and Impervious Surfaces are measured cumulatively. If an applicant completes a project this year that qualifies for the Simplified Approach, but then proposes to complete a second project next year, and the total Impervious Surface for the two projects exceeds the applicable threshold for the Simplified Approach, a fully engineered Stormwater Management Plan for the entirety of the two projects will be required.

#### Roof Area

For a project to be considered for utilizing the Simplified Approach, sufficient roof area must be available, either existing or proposed, so that the roof area being conveyed to the stormwater BMP (underground infiltration trench) is of equivalent or greater area than the Regulated Impervious Surface proposed, including existing Impervious Surface(s) installed after December 18, 2013. Impervious Surface is defined in Section 94-202. Plans proposing capturing and conveyance of overland flow will not be considered. Sizing of the bed shall be in accordance with Sheet 3B of the Simplified Approach Stormwater Management Plan Packet (Section 5.0 below) and shall be based upon the actual roof area being conveyed to the bed, not the Regulated Impervious Surface.

#### BMP Type

The only stormwater BMP allowable under the Simplified Approach is the stormwater underground infiltration trench referenced in the Simplified Approach Stormwater Management Plan Application Packet. Refer to Section 5.0 below for the application packet and Section 6.0 for Example Simplified Approach Stormwater Management Site Plans. BMPs other than specifically referenced above shall require engineered plans prepared in accordance with the provisions of the stormwater ordinance.

### **3.0 Simplified Approach Design Procedure**

All Regulated Impervious Surfaces, which include Proposed Impervious Surfaces and existing Impervious Surfaces constructed after December 18, 2013 (as defined by Section 94-202) must be included in the determination of the amount of Proposed Impervious Surfaces and the size of proposed underground infiltration trench needed to control stormwater. Proposed Impervious Surfaces on an individual residential lot may include, but are not limited to: roof area, pavement, sidewalks, driveways, patios, porches, parking areas, decks, or pools. Refer to the definitions provided in Section 201 of the Ordinance and contact the Municipal Engineer to confirm what

features of the proposed project must be included in the calculation of Regulated Impervious Surface area.

Sufficient roof area shall be available and diverted via downspout(s) to the proposed infiltration trench(es). The downspouts shall have appropriate measures to prevent clogging by unwanted debris (for example, silt, leaves and vegetation). Such measures shall include but are not limited to leaf traps, gutter guards, and cleanouts. Alternative designs, or alternative stormwater structures, shall be reviewed by the Municipal Engineer and shall be subject to the full Municipal Stormwater Ordinance.

Below are the steps that must be undertaken to meet the Ordinance requirements. The size and description of the proposed construction as well as important aspects related to the design of the BMP(s) must be documented in the Simplified Approach - Stormwater Management Worksheet. All individuals planning on using the Simplified Approach are encouraged to review the planned project with the Municipal Engineer prior to initiating the Simplified Approach to confirm the following, as the Municipal Engineer will be responsible for determining eligibility to use the Simplified Approach:

- That the proposed project is not otherwise exempt from the stormwater management control and fully engineered Stormwater Management Site Plan requirements of the Municipality's Stormwater Management Ordinance;
- That the proposed project size is within the range eligible to use this Simplified Approach;
- That sufficient roof area is available to manage and is equal to or greater than the Regulated Impervious Surface;
- Which components of the proposed project must be included in the calculation of "Impervious Surfaces"; and
- Whether any local conditions are known to the Municipal Engineer that would preclude the use of any of the techniques included in this Simplified Approach.

**STEP 1 – PREPARE THE SIMPLIFIED APPROACH STORMWATER MANAGEMENT SITE PLAN THAT INCLUDES:**

1. Name and address of the owner of the property.
2. Name and address of the individual preparing the plan (if different).
3. Date of plan preparation.
4. North arrow.
5. Location of all existing features within 50 feet of the property, including (if present):
  - Buildings;
  - Driveways;
  - Roads;
  - Easements;

- Septic Systems;
  - Streams;
  - Wetlands;
  - Floodplains; and
  - Existing Stormwater Facilities.
6. Show water supply wells within 50 feet of the proposed facility or add a note that no wells are present within 50 feet of the proposed facility.
  7. Location and approximate size of the roof area to be captured and diverted to the proposed BMP.
  8. Location and approximate size in square feet of proposed:
    - a. Structures;
    - b. Driveways; and
    - c. Other Impervious Surfaces.
  9. Location, orientation, and dimensions of the proposed underground infiltration trench(es). Length, width, and depth must be included on the plan.
  10. Distance from the proposed underground infiltration trench(es) to any existing surface water features, such as: streams, lakes, ponds, wetlands, or other natural waterbodies (must be greater than 50 feet from surface water features or outside of an existing legally prescribed buffer (i.e., deed, covenants, easement, etc.), whichever is greater).
  11. Distance from the proposed underground infiltration trench(es) to any existing septic system, public sewer line, or service lateral (must be greater than 50 feet unless otherwise approved by Municipal Engineer).
  12. Distance from the proposed underground infiltration trench(es) to any existing wells or water service lines (must be greater than 50 feet unless otherwise approved by Municipal Engineer).
  13. Distance from the proposed underground infiltration trench(es) to nearest property line (must be > 10 feet).
  14. Distance from the proposed underground infiltration trench(es) to all buildings and features with subgrade elements (e.g., basements, foundation walls, etc.) must be > 10 feet.
  15. Show distance from at least two existing fixed features to the proposed underground infiltration trench(es). Fixed features include, but are not limited to, corners of existing buildings, driveways, septic system cleanout pipes, and mailboxes.
  16. PA ONE CALL (8-1-1 OR 1-800-242-1776) Identification Number received by calling the PA One Call system.

**STEP 2 – DETERMINE PROPOSED IMPERVIOUS SURFACES:**

1. Determine the total area of all Proposed Impervious Surfaces that will need to drain to one or more infiltration trench(es).
2. Determine the total area of Earth Disturbance needed to complete the project and install the infiltration trench(es).
3. Determine locations where the infiltration trench(es) need to be placed so runoff from all the Proposed Impervious Surfaces can be captured.

**Example:**

Garage Roof (Front)	33 feet by 25 feet	=	825 square feet
Driveway	10 feet by 26 feet	=	260 square feet
-----			-----
Total Proposed Impervious Surface		=	1,085 square feet
Total proposed Earth Disturbance area		=	2,500 square feet (estimated)

**STEP 3 – DETERMINE SIZE OF THE UNDERGROUND INFILTRATION TRENCH:**

1. Select the appropriate value of Proposed Impervious Surface in the first column of the table below.
2. Select the width of the trench(es) to be utilized to determine the required length of the trench(es).
3. When appropriate, and when approved by the Municipal Engineer prior to submission, minimum trench length can be achieved through the use of more than one trench.

Note: Trench(es) to be constructed to dimensions indicated below. Modifications of the dimensions are not permitted if utilizing the Simplified Approach. This table is based on an overall trench depth of at least four feet, containing a minimum cover of one foot of soil cover, and three feet of stone with filter fabric, installed in accordance with the diagram included with the Simplified Approach Stormwater Management Plan Application Packet. Infiltration testing is not required when using the Simplified Approach.

**Table 1.2 – Underground Infiltration Trench Sizing Table for <1,000 ft<sup>2</sup> of Regulated Impervious Surface**

Regulated Impervious Surface (square feet)	4-foot wide Trench	5-foot wide Trench	6-foot wide Trench	7-foot wide Trench	8-foot wide Trench
	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)
451-500	23.00	18.25	15.25	13.25	11.50
501-550	25.25	20.25	16.75	14.50	12.75
551-600	27.50	22.00	18.25	15.75	13.75
601-650	29.75	23.75	20.00	17.00	15.00
651-700	32.00	25.75	21.50	18.25	16.00
701-750	34.25	27.50	23.00	19.75	17.25
751-800	36.50	29.25	24.50	21.00	18.25
801-850	39.00	31.25	26.00	22.25	19.50
851-900	41.25	33.00	27.50	23.50	20.75

**Table 1.2 – Underground Infiltration Trench Sizing Table for <1,000 ft<sup>2</sup> of Regulated Impervious Surface**

Regulated Impervious Surface (square feet)	4-foot wide Trench	5-foot wide Trench	6-foot wide Trench	7-foot wide Trench	8-foot wide Trench
	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)
901-950	43.50	34.75	29.00	25.00	21.75
951-999	45.75	36.50	30.50	26.25	23.00

**STEP 4 – SUBMISSION TO MUNICIPALITY:**

1. Prepare the Simplified Approach Stormwater Management Site Plan, which consists of 4 sheets:
  - a. **Simplified Site Plan (1 of 4)**
  - b. **Infiltration Trench Detail (2 of 4)**
  - c. **Infiltration Trench Notes (3B)**
  - d. **Infiltration Trench Operation & Maintenance Notes (4 of 4)**
2. Complete the **Simplified Approach – Stormwater Management Worksheet**.
3. Complete the **Simplified Approach – Stormwater Management Checklist** to ensure all required information is completed.
4. Submit the completed forms and plan to the Municipality for review and approval prior to beginning construction.
5. After the Municipality has approved the submission, a signed Operation and Maintenance Agreement will be provided to the applicant.
6. Record the Agreement at the County’s Office of Recorder of Deeds.
7. Construction can begin only after the Municipality has issued its approval of the proposed project to the applicant and the Agreement has been recorded.
8. Notify the Municipality five business days prior to the start of any construction and schedule any needed inspections.
9. If the applicant is using a contractor to construct the project, the approved application including the worksheet and plan must be shared with the contractor to ensure the underground infiltration trench(es) are properly installed.

Note: Property owners building underground infiltration trenches per the Simplified Approach will need to record an Operation and Maintenance Agreement (O&M Agreement) at the Chester County Recorder of Deeds. The O&M Agreement is prepared by municipal staff (or the municipal staff may require that the applicant or its consulting engineer prepare the O&M Agreement subject to review by the municipal staff or the Municipal Engineer) using the template shown in Appendix F. An O&M Agreement is needed to ensure access, inspection, maintenance, operation, repair, and permanent protection for these stormwater management facilities.

## **4.0 Frequently Asked Questions**

Frequently Asked Questions (FAQs) regarding the Simplified Approach and Stormwater Management are located below.

### **4.1 What is Stormwater Management?**

Stormwater Management is the practice of managing surface water runoff from precipitation events. Stormwater Management is a way to reduce the impacts of decreasing infiltration that results from altering the land from natural conditions. The goal of stormwater management is to reduce the volume of stormwater runoff through practices that capture, infiltrate, detain, or evaporate stormwater. These practices help to improve water quality, restore groundwater recharge, and improve stream habitat. Examples of residential Stormwater Management are rain gardens, rain barrels, porous pavers, drywells, and infiltration trenches.

### **4.2 Why do I have to do Stormwater Management for my small project?**

The new Municipal regulations, derived from Federal and State mandates, require that all property owners be responsible for managing stormwater runoff from Impervious Surfaces. All projects requiring a Zoning or Building Permit will be reviewed by the Municipality for stormwater considerations.

### **4.3 How does the Municipality determine if a stormwater permit is required?**

Starting in December 18, 2013 projects and Impervious Surfaces were measured cumulatively. If the project, or combination of projects since December 18, 2013 will result in 1,000 square feet of total Regulated Impervious Surface, including Proposed Impervious Surface(s) and existing Impervious Surface(s) installed after the above referenced date, or disturbs 5,000 square feet, a stormwater permit and fully engineered Stormwater Management Plan will be required. Impervious Surface is defined in Section 94-202.

### **4.4 Is the square footage of the BMP included in the Earth Disturbance calculation?**

Yes. All distributed soils are to be included in the calculation for Earth Disturbance.

### **4.5 What if I am removing and replacing existing Impervious Surface, such as a driveway or shed?**

The net change in the land cover is what will be considered for the permit. The replacement in the exact footprint replacement of an existing one- or two-family dwelling unit or existing Impervious Surface such as patios, driveways, garages, sidewalks, decks, or pools that are accessory to an existing one- or two-family dwelling unit in the exact footprint of the existing Impervious Surface are exempt from the requirements of this ordinance as further set forth in Section 94-106.C(9).

### **4.6 Intentionally Omitted.**

**4.7 What is the penalty if I do not apply for or follow the application process or maintenance obligations?**

The Municipality has legal enforcement action defined in the Municipality's Code which may include the right to deny occupancy permits and assess fines as needed for enforcement.

**4.8 What is the cost of the permit?**

Permit fees are governed by the Municipality's approved fee schedule. Application and review fees are due and payable with the application for a Stormwater Management permit.

**4.9 Are professional engineering services necessary to meet these requirements?**

This Appendix has been developed to assist the landowner in meeting the water quality and groundwater recharge goals of the Stormwater Management Ordinance. If the guidelines are followed, the landowner may not be required to utilize professional engineering services to comply with these water quality and groundwater recharge goals.

**4.10 What needs to be submitted to the Municipality?**

Even though an engineered Stormwater Management Plan is not required for individual lot owners opting for the Simplified Approach, a brief description of the proposed underground infiltration trench, including types of material to be used, total Impervious Surfaces and volume calculations, and a Simplified Approach Stormwater Management Site Plan shall be submitted to the Municipality prior to construction. The following information shall be submitted to the Municipality: (1) Simplified Approach – Stormwater Management Worksheet; and (2) Simplified Approach Stormwater Management Site Plan, which consists of 4 sheets.

**4.11 What is an underground infiltration trench?**

An underground infiltration trench is a rock-filled trench with no outlet that receives stormwater runoff. Runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. Infiltration trenches perform well for removal of fine sediment and associated pollutants. Infiltration testing is recommended to ensure soil is capable of infiltrating stormwater. Underground infiltration trenches shall incorporate or make provisions for the following elements:

- Shall be constructed after all Earth Disturbance associated with the project or site is stabilized to avoid clogging.
- Perforated pipe is to be set level.
- The width is limited to between four feet to eight feet with a fixed stone depth of three feet.
- Trench(es) shall be wrapped in nonwoven geotextile (top, bottom, and sides).
- There shall be a positive overflow that allows stormwater that cannot be stored or infiltrated to be discharged into a nearby vegetated area (clean-out or pop-up emitter).
- It is recommended that there be a two-foot clearance above the regularly occurring seasonal high-water table and have a minimum depth to bedrock of two feet.

- The underground infiltration trench shall be at least 10 feet from buildings, 10 feet from property lines, 50 feet from individual water supply wells, and 100 feet from community or Municipal water supply wells. If no well is present within 50 feet of the underground infiltration trench, a note stating such must be put on the plan.
- The underground infiltration trench shall be at least 50 feet from any septic system absorption area and 50 feet from community or Municipal Sewer lines and laterals, or as otherwise approved by the Municipal Engineer or Municipal Authority Engineer.
- The underground infiltration trench shall not be located near hotspots which are areas where land use or activities generate highly contaminated runoff, with concentrations of pollutants that are higher than those that are typically found in stormwater.
- The underground infiltration trench shall be located a minimum of 10 feet from subsurface structures such as building foundations and basements so that it does not threaten their structural integrity.
- Infiltration areas must be protected from compaction by heavy equipment during and after construction. The ratio of the collected area to the footprint of the facility shall be as small as possible with a ratio of less than 5:1 preferred.
- Where roof drains are designed to discharge to the underground infiltration trench(es), the roof drains shall have appropriate measures to prevent clogging by unwanted debris (for example, silt, leaves and vegetation). Such measures may include but are not limited to leaf traps, gutter guards, or cleanouts.

#### **4.12 How is an underground infiltration trench constructed?**

Refer to the standard construction sequence for an underground infiltration trench as required by the Simplified Approach.

1. Contact PA ONE CALL 8-1-1 or 1-800-242-1776.
2. Protect infiltration areas from compaction by heavy equipment during and after construction.
3. Silt sock or silt fence should be installed upslope of the proposed infiltration trench and downslope of all proposed Earth Disturbance and shown on the Plan.
4. Construction of the underground infiltration trench shall only be started after all Earth Disturbance associated with the project or site is stabilized to avoid clogging.
5. Excavate the underground infiltration trench to a minimum depth of four feet. The excavated trench bottom must have uniform, level, uncompacted subgrade free from rocks and debris. Scarify the bottom of the trench, so not to compact the subgrade.
6. Place nonwoven geotextile along all the sides of the trench. Where separate pieces of geotextile meet, they shall overlap by a minimum of 18 inches. Fold back and secure excess geotextile during stone placement.
7. Place clean stone (such as: 2B, three-quarter-inch clean stone, or AASHTO #57) in the trench.
8. Install the continuously perforated pipe and cleanouts within the trench.
9. If a downspout will be connected to the system, install the piping from the downspout to the perforated trench piping. Install appropriate measures to prevent clogging by unwanted debris such as leaf traps, gutter guards, and cleanouts.

10. Backfill with clean stone to establish an overall stone depth of three feet. Fold and secure the nonwoven geotextile over the top of underground infiltration trench with an eighteen-inch overlap.
11. Place a minimum of 12 inches of topsoil over geotextile. Grading shall direct surface runoff toward the center of the trench (The Municipality will consider surface materials on a project-by-project basis).
12. Stabilize the topsoil with seed and straw mulch.

#### **4.13 What are the maintenance requirements for an underground infiltration trench?**

Vegetation along the surface of an underground infiltration trench shall be maintained in good condition, and any bare spots shall be revegetated as soon as possible. Vehicles may not be parked or driven on any underground infiltration trench, and care shall be taken to avoid excessive compaction by mowers. Any debris such as leaves blocking flow from reaching an underground infiltration trench shall be routinely moved.

#### **4.14 What if my roof area is larger than the Regulated Impervious Surface I am proposing?**

In order to utilize the Simplified Approach, the applicant must size the proposed infiltration trench for the amount of roof area directed into it, even if it is larger than the amount of Regulated Impervious Surface being proposed. This additional roof area may be “credited” toward future Proposed Impervious Surface. If the applicant were to propose additional Impervious Surface in the future and the total Regulated Impervious Surface is still less than the roof area that the infiltration trench was sized for, additional stormwater management requirements may not be applicable if all other requirements of the Ordinance are met.

### **5.0 Simplified Approach Stormwater Management Plan Application Packet**

The pages below include the following required elements of a Simplified Approach Stormwater Management Plan Application Packet:

- Simplified Approach – Stormwater Management Worksheet
- Simplified Approach – Stormwater Management Checklist
- Simplified Site Plan (1 of 4)
- Infiltration Trench Detail (2 of 4)
- Infiltration Trench Notes (3B)
- Infiltration Trench Operation and Maintenance Notes (4 of 4)  
O&M Agreement Template

**Simplified Approach – Stormwater Management Worksheet**

Name of Property Owner:		Date:
Name of Applicant [If different than owner(s)]:		
Contact Phone #:	Email Address:	
Address of Project:		
Description of Project:		
Distance from Earth Disturbance to nearest surface water feature (stream, pond, wetland, etc.): <input type="checkbox"/> 50 feet or less <input type="checkbox"/> More than 50 feet		
<b>REGULATED IMPERVIOUS SURFACES*</b>		
Description of Proposed Impervious Surface	Dimensions [length X width]	Area (square feet)
Total Proposed Impervious Surface* (square feet): (If this is less than 500 feet <sup>2</sup> , Stormwater Management is not required; if this is more than 2,500 feet <sup>2</sup> , the Simplified Approach may not be used)		
Cumulative Total Impervious Surface Since December 18, 2013 (square) feet):		
Total Proposed Earth Disturbance Area (square feet):		
<b>PROPOSED UNDERGROUND INFILTRATION TRENCH SIZING</b>		
Proposed Impervious Area to Trench (square feet)	Proposed Dimensions	
1		
2		
Does the project involve new roof area? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, the downspout must be connected to the proposed Underground Infiltration Trench and must have measures to prevent clogging by unwanted debris. Indicate the measure proposed: <input type="checkbox"/> Leaf trap <input type="checkbox"/> Gutter guards <input type="checkbox"/> Cleanout <input type="checkbox"/> Other: _____		

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_

### Simplified Approach – Stormwater Management Checklist

Complete the checklist below to verify all required information is shown on the plan:

Yes	No	Not Applicable	Required Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Name and address of the owner of the property.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Name and address of individual preparing the plan (if different).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Date of plan preparation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	North arrow.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of all existing features within 50 feet of the property, including (if present): <ul style="list-style-type: none"> <li>• Buildings;</li> <li>• Driveways;</li> <li>• Roads;</li> <li>• Water Lines/Wells (or a note that no wells are present within 50 feet of the proposed facility);</li> <li>• Septic Systems/Sewer Mains and Laterals;</li> <li>• Streams, Wetlands, and Floodplains</li> <li>• Existing Stormwater Facilities; and</li> <li>• Easements.</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and approximate size in square feet of existing roof area to be captured and diverted to the BMP.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and approximate size in square feet of proposed: <ul style="list-style-type: none"> <li>• Structures;</li> <li>• Driveways; and</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location, orientation, and dimensions of the proposed Underground Infiltration Trench(es). Length and width must be included on the plan.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Distance from the proposed Underground Infiltration Trench(es) to any existing surface water features, such as: streams, lakes, ponds, wetlands, or other natural waterbodies. Must be > 50 feet from surface water features or outside of an existing legally described buffer (i.e., deed, covenants, easement, etc.) whichever is greater. Contact the Municipality if this is not possible.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Distance from the proposed Underground Infiltration Trench(es) to any existing septic system, public sewer line, or lateral.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Distance from the proposed Underground Infiltration Trench(es) to any existing wells or waterlines.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Distance from the proposed Underground Infiltration Trench(es) to any existing wells or waterlines.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show distance from at least two existing fixed features (e.g., house, shed, driveway) to the proposed Underground Infiltration Trench(es).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PA One Call Serial Number (Dial 8-1-1 or 1-800-242-1776) to receive.

NORTH ARROW

DATE



*Underground Service Alert*  
Call: TOLL FREE  
1-800-242-1776  
**THREE WORKING DAYS  
BEFORE YOU DIG**

**PROPERTY OWNER**

NAME:  
ADDRESS:

**PLAN PREPARER**

NAME:  
ADDRESS:

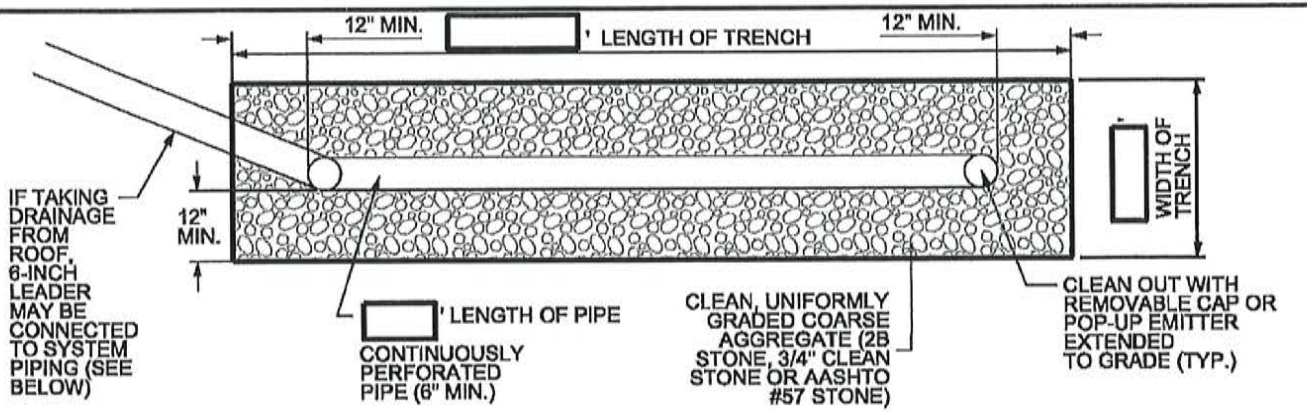
FOR USE BY MUNICIPAL ENGINEER

CHESTER COUNTY PENNSYLVANIA

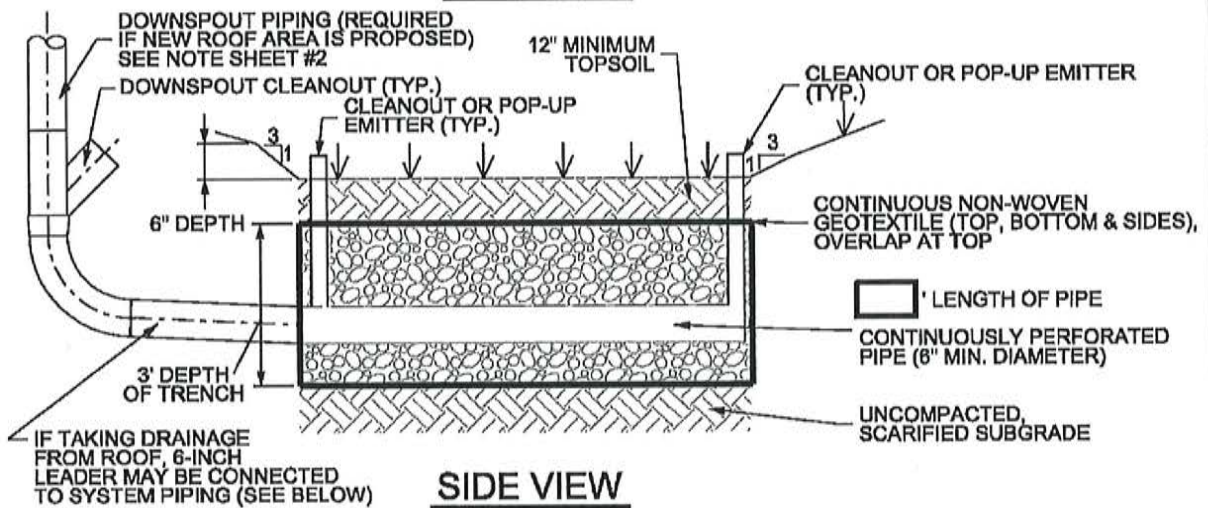
SHEET NO. 1

**SIMPLIFIED  
SITE PLAN**

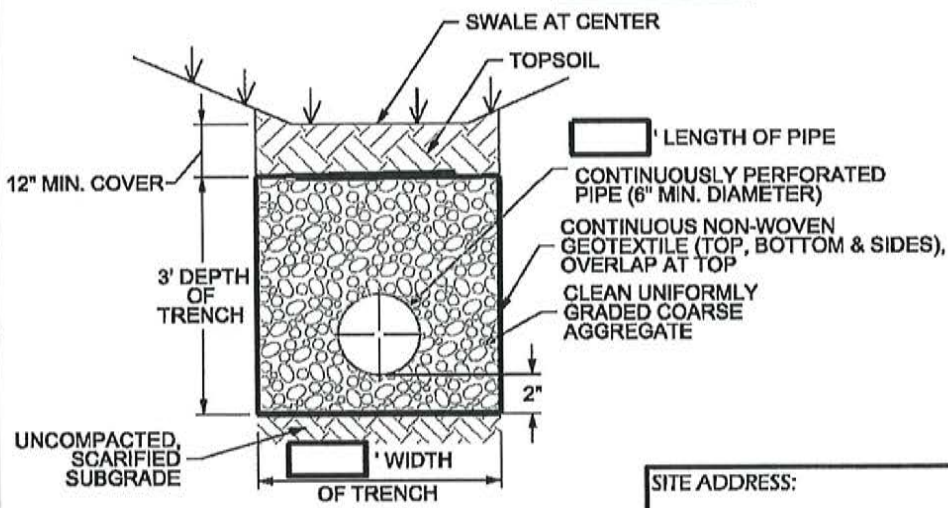
1 OF 4



**TOP VIEW**



**SIDE VIEW**



**CROSS-SECTION VIEW**

SITE ADDRESS:

DATE:



**CEG**  
**CEDARVILLE**

CHESTER COUNTY PENNSYLVANIA

**INFILTRATION  
TRENCH DETAIL**

SHEET NO. 2

SCALE:  
NOT TO SCALE

159 East High Street, Suite #500 | Pottstown, PA 19464  
610.705.4500 (Office) | 610.705.4900 (Fax)

2 OF 4

## NOTES

§ 345-306.M: DURING SITE CONSTRUCTION, ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.

§ 345-306.N: WHERE SEDIMENT TRANSPORT IN THE STORMWATER RUNOFF IS ANTICIPATED TO REACH THE INFILTRATION SYSTEM, APPROPRIATE PERMANENT MEASURES TO PREVENT OR COLLECT SEDIMENT SHALL BE INSTALLED PRIOR TO DISCHARGE TO THE INFILTRATION SYSTEM.

§ 345-306.O: WHERE ROOF DRAINS ARE DESIGNED TO DISCHARGE TO INFILTRATION PRACTICES, THEY SHALL HAVE APPROPRIATE MEASURES TO PREVENT CLOGGING BY UNWANTED DEBRIS (FOR EXAMPLE, SILT, LEAVES AND VEGETATION). SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO LEAF TRAPS, GUTTER GUARDS AND CLEANOUTS.

§ 345-306.R: THE FOLLOWING PROCEDURES AND MATERIALS SHALL BE REQUIRED DURING THE CONSTRUCTION OF ALL INFILTRATION TRENCHES:

- (1) EXCAVATION FOR THE INFILTRATION TRENCH SHALL BE PERFORMED WITH EQUIPMENT THAT WILL NOT COMPACT THE BOTTOM OF THE INFILTRATION TRENCH.
- (2) THE BOTTOM OF THE INFILTRATION TRENCH SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE.
- (3) ONLY CLEAN AGGREGATE WITH DOCUMENTED POROSITY, FREE OF FINES, SHALL BE ALLOWED.
- (4) THE TOPS AND SIDES OF ALL INFILTRATION TRENCH SHALL BE COVERED WITH DRAINAGE FABRIC. FABRIC SHALL BE NONWOVEN FABRIC ACCEPTABLE TO THE TOWNSHIP ENGINEER.
- (5) STORMWATER SHALL BE DISTRIBUTED THROUGHOUT THE ENTIRE SEEPAGE BED/TRENCH OR LIKE FACILITY AND PROVISIONS FOR THE COLLECTION OF DEBRIS SHALL BE PROVIDED IN ALL FACILITIES.
- (6) PA ONECALL IS REQUIRED BEFORE ANY CONSTRUCTION ACTIVITIES COMMENCE.

### TRENCH LENGTH ( < 1000 SQUARE FEET OF REGULATED IMPERVIOUS SURFACE)

Impervious Surface (sf)	4' Wide Trench	5' Wide Trench	6' Wide Trench	7' Wide Trench	8' Wide Trench
	Length of Trench (ft)	Length of Trench (ft)	Length of Trench (ft)	Length of Trench (ft)	Length of Trench (ft)
451-500	23.00	18.25	15.25	13.25	11.50
501-550	25.25	20.25	16.75	14.50	12.75
551-600	27.50	22.00	18.25	15.75	13.75
601-650	29.75	23.75	20.00	17.00	15.00
651-700	32.00	25.75	21.50	18.25	16.00
701-750	34.25	27.50	23.00	19.75	17.25
751-800	36.50	29.25	24.50	21.00	18.25
801-850	39.00	31.25	26.00	22.25	19.50
851-900	41.25	33.00	27.50	23.50	20.75
901-950	43.50	34.75	29.00	25.00	21.75
951-1000	45.75	36.50	30.50	26.25	23.00

\* DIMENSIONS IN THIS TABLE HAVE BEEN DETERMINED FOR MANAGING THE DIFFERENCE BETWEEN THE PRE-DEVELOPMENT AND POST-DEVELOPMENT, 2-YEAR FREQUENCY, 24-HOUR DURATION RAINFALL RUNOFF VOLUME

\* TRENCH SHOULD BE SIZED BASED ON SQUARE FEET OF ROOF AREA DIRECTED TO THE PROPOSED TRENCH, WHICH MAY NOT EQUAL THE REGULATED IMPERVIOUS SURFACE PROPOSED.

SITE ADDRESS:

DATE:



CEG

CEDARVILLE

CHESTER COUNTY PENNSYLVANIA

SHEET NO. 3B

SCALE:  
NOT TO SCALE

159 East High Street, Suite #500 | Pottstown, PA 19464  
610.705.4500 (Office) | 610.705.4900 (Fax)

INFILTRATION  
TRENCH NOTES

3B OF 4

# STORMWATER FACILITIES OPERATIONS AND MAINTENANCE PLAN

THE HOMEOWNER WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF ALL STORMWATER AND BMP FACILITIES. THE FACILITIES WILL INCLUDE THE INFILTRATION TRENCH ON THE PROPERTY AS WELL AS ANY YARD OR ROOF DRAINS, PIPING, POP-UP EMITTERS OR CLEAN-OUTS SHOWN ON THIS PLAN.

MAINTENANCE AND OPERATION WILL BE AS FOLLOWS:

1. THE INFILTRATION TRENCH AND CONVEYANCES DESCRIBED IN THIS PLAN SHALL BE INSPECTED ANNUALLY OR AS NEEDED FOLLOWING SIGNIFICANT PRECIPITATION EVENTS TO ASCERTAIN IF ANY SEDIMENT IS ENTERING THE FACILITIES. THE INFILTRATION TRENCH AND CONVEYANCES DESCRIBED IN THIS PLAN SHALL BE CLEANED IF NECESSARY. CLEANING WILL CONSIST OF REMOVING THE ACCUMULATED SILT, DEBRIS, OR SEDIMENT.
2. THE OVERLYING VEGETATION ON THE INFILTRATION TRENCH SHALL BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS RE-VEGETATED AS SOON AS POSSIBLE.
3. VEHICULAR ACCESS ON THE INFILTRATION TRENCH SHOULD BE PROHIBITED, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
4. REPAIR ALL DAMAGED PIPING, CLEAN-OUTS, AND POP-UP EMITTERS PROMPTLY TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM. SPECIAL CARE SHOULD BE TAKEN TO AVOID DAMAGING EXPOSED ELEMENTS WITH MOWERS AND/OR STRING TRIMMERS.
5. GRASSES OVER THE INFILTRATION TRENCH SHALL BE MOWED AT LEAST TWICE EACH YEAR. TREES AND SHRUBS SHOULD NOT BE PERMITTED TO GROW ABOVE THE INFILTRATION TRENCH.

SITE ADDRESS:

DATE:



**CEG**  
CEDARVILLE

CHESTER COUNTY PENNSYLVANIA

**INFILTRATION TRENCH  
OPERATION &  
MAINTENANCE NOTES**

SHEET NO. 4


SCALE:  
NOT TO SCALE

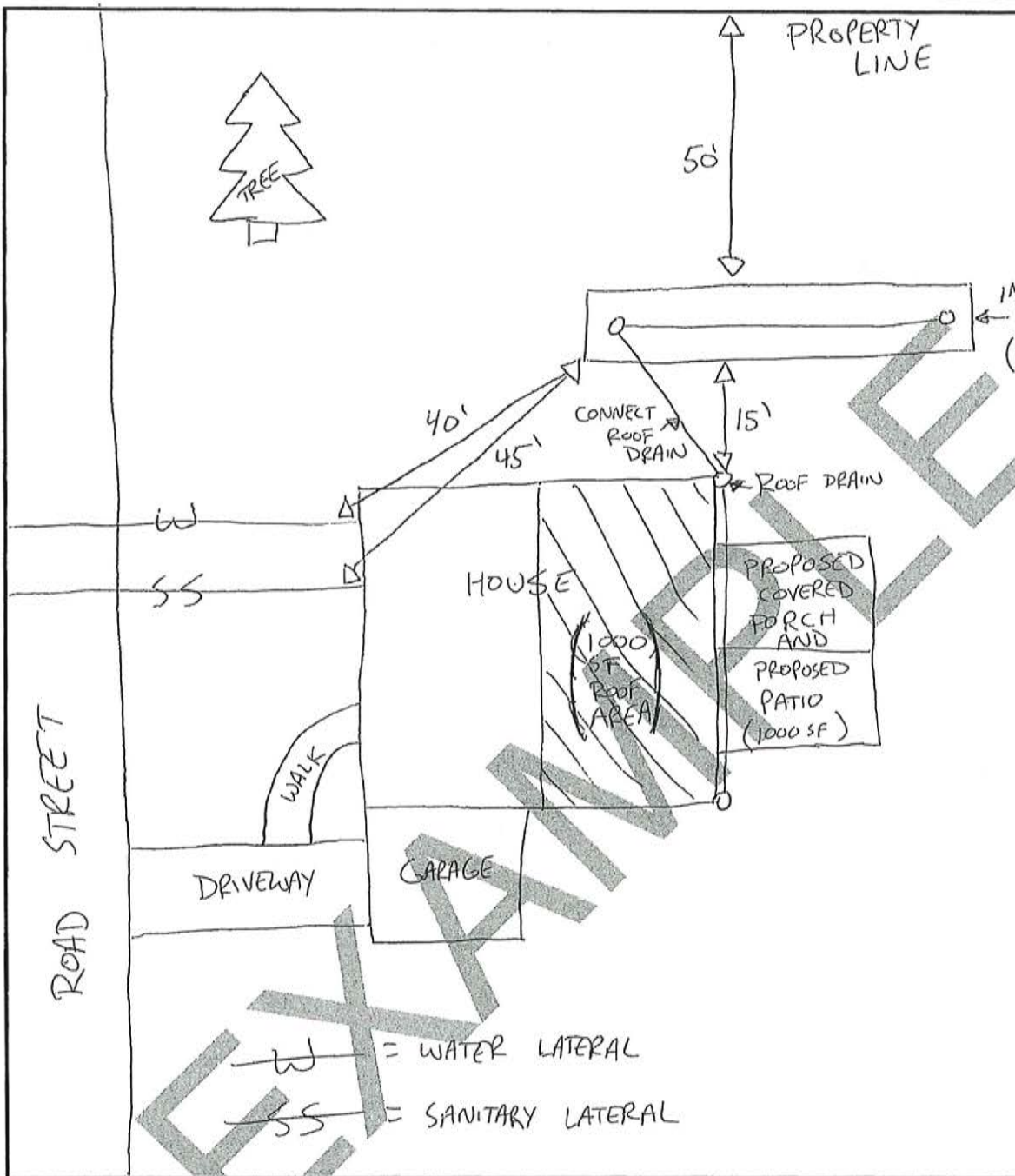
159 East High Street, Suite #500 | Pottstown, PA 19464  
610.705.4500 (Office) | 610.705.4900 (Fax)

4 OF 4

## **6.0 Example Simplified Approach Stormwater Management Site Plans**

The pages below include an example Simplified Approach Stormwater Management Site Plan (Sheets No. 1 – 4).

NORTH ARROW  
  
 DATE  
 7/8/21



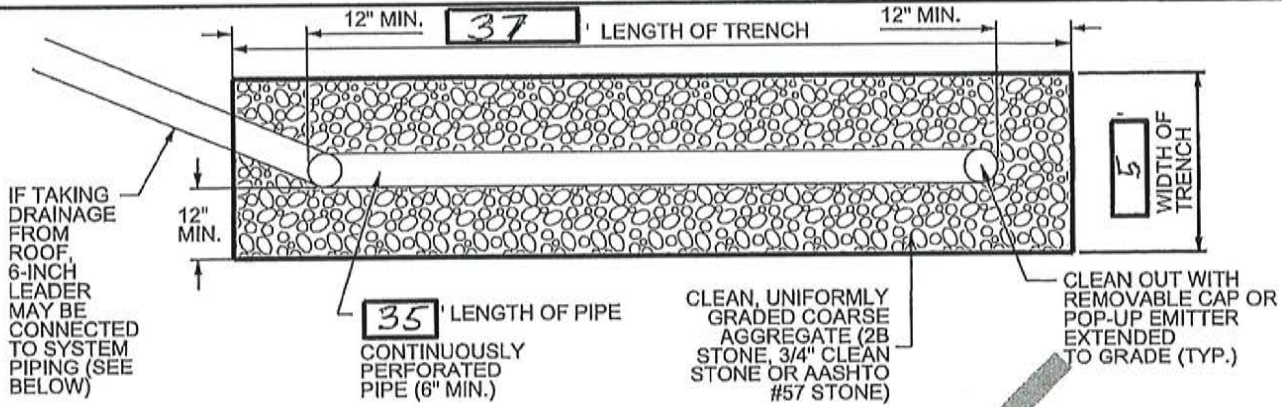
W = WATER LATERAL  
 SS = SANITARY LATERAL



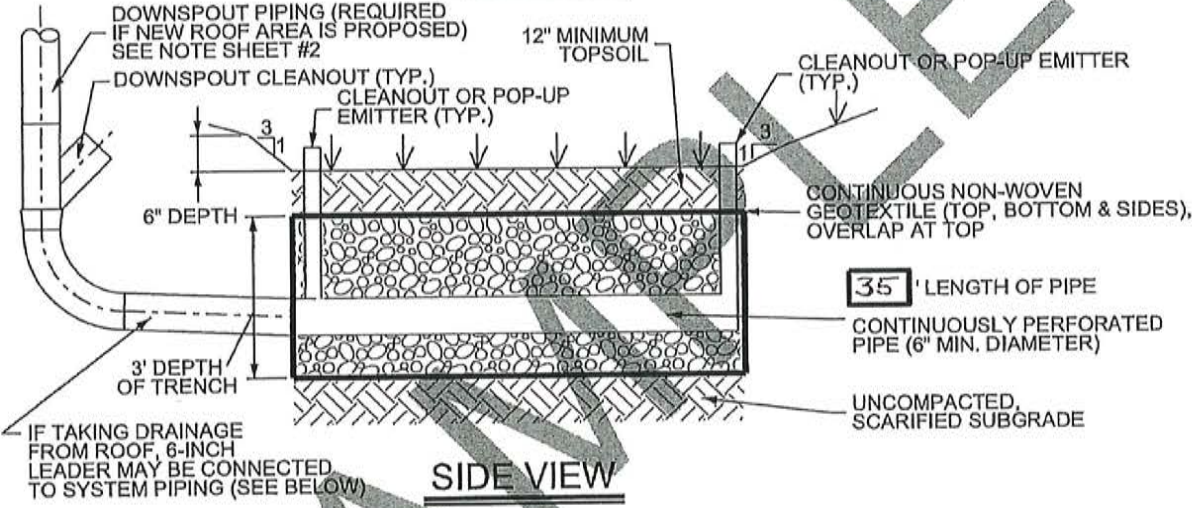
Underground Service Alert  
 Call: TOLL FREE  
 1-800-242-1776  
 THREE WORKING DAYS  
 BEFORE YOU DIG

PROPERTY OWNER  
 NAME: JOHN SMITH  
 ADDRESS: 123 ROAD STREET, TOWNSHIP PA 07734  
 PLAN PREPARER  
 NAME: SAME AS ABOVE  
 ADDRESS: SAME AS ABOVE

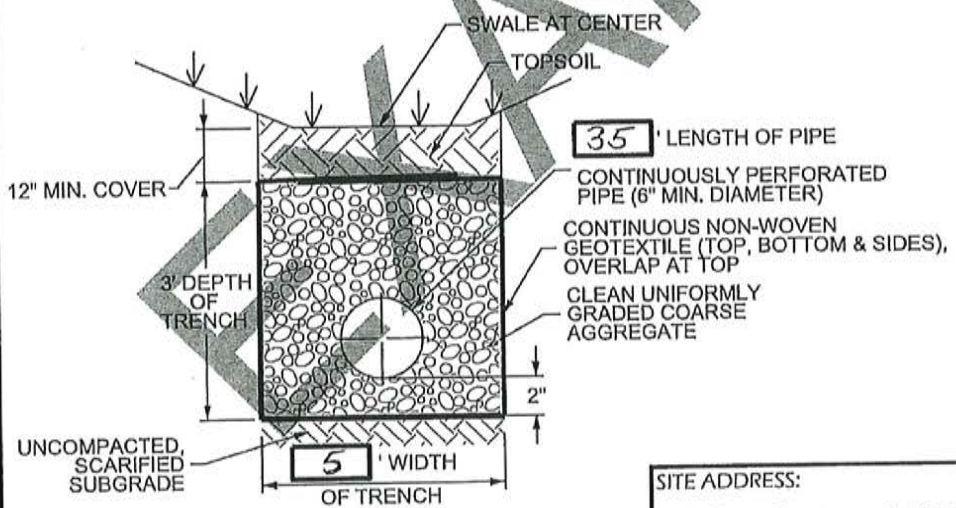
FOR USE BY MUNICIPAL ENGINEER	CHESTER COUNTY PENNSYLVANIA	SHEET NO. <u>1</u>
	SIMPLIFIED SITE PLAN	
		<u>1 OF 4</u>



**TOP VIEW**



**SIDE VIEW**



**CROSS-SECTION VIEW**

SITE ADDRESS:  
123 ROAD STREET, TOWN PA 07734

DATE:  
7/8/21

SCALE:  
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CHESTER COUNTY PENNSYLVANIA

**INFILTRATION  
TRENCH DETAIL**

SHEET NO. 2

2 OF 4

## NOTES

§ 345-306.M: DURING SITE CONSTRUCTION, ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.

§ 345-306.N: WHERE SEDIMENT TRANSPORT IN THE STORMWATER RUNOFF IS ANTICIPATED TO REACH THE INFILTRATION SYSTEM, APPROPRIATE PERMANENT MEASURES TO PREVENT OR COLLECT SEDIMENT SHALL BE INSTALLED PRIOR TO DISCHARGE TO THE INFILTRATION SYSTEM.

§ 345-306.O: WHERE ROOF DRAINS ARE DESIGNED TO DISCHARGE TO INFILTRATION PRACTICES, THEY SHALL HAVE APPROPRIATE MEASURES TO PREVENT CLOGGING BY UNWANTED DEBRIS (FOR EXAMPLE, SILT, LEAVES AND VEGETATION). SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO LEAF TRAPS, GUTTER GUARDS AND CLEANOUTS.

§ 345-306.R: THE FOLLOWING PROCEDURES AND MATERIALS SHALL BE REQUIRED DURING THE CONSTRUCTION OF ALL INFILTRATION TRENCHES:

- (1) EXCAVATION FOR THE INFILTRATION TRENCH SHALL BE PERFORMED WITH EQUIPMENT THAT WILL NOT COMPACT THE BOTTOM OF THE INFILTRATION TRENCH.
- (2) THE BOTTOM OF THE INFILTRATION TRENCH SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE.
- (3) ONLY CLEAN AGGREGATE WITH DOCUMENTED POROSITY, FREE OF FINES, SHALL BE ALLOWED.
- (4) THE TOPS AND SIDES OF ALL INFILTRATION TRENCH SHALL BE COVERED WITH DRAINAGE FABRIC. FABRIC SHALL BE NONWOVEN FABRIC ACCEPTABLE TO THE TOWNSHIP ENGINEER.
- (5) STORMWATER SHALL BE DISTRIBUTED THROUGHOUT THE ENTIRE SEEPAGE BED/TRENCH OR LIKE FACILITY AND PROVISIONS FOR THE COLLECTION OF DEBRIS SHALL BE PROVIDED IN ALL FACILITIES.
- (6) PA ONECALL IS REQUIRED BEFORE ANY CONSTRUCTION ACTIVITIES COMMENCE.

### TRENCH LENGTH ( < 1000 SQUARE FEET OF REGULATED IMPERVIOUS SURFACE)

Impervious Surface	4' Wide Trench Length of Trench (ft)	5' Wide Trench Length of Trench (ft)	6' Wide Trench Length of Trench (ft)	7' Wide Trench Length of Trench (ft)	8' Wide Trench Length of Trench (ft)
451-500	8.75	7.00	6.00	5.00	4.50
501-550	9.75	7.75	6.50	5.50	5.00
551-600	10.50	8.50	7.00	6.00	5.25
601-650	11.50	9.25	7.75	6.50	5.75
651-700	12.25	9.75	8.25	7.00	6.25
701-750	13.25	10.50	8.75	7.50	6.75
751-800	14.00	11.25	9.50	8.00	7.00
801-850	15.00	12.00	10.00	8.50	7.50
851-900	15.75	12.50	10.50	9.00	8.00
901-950	16.50	13.25	11.00	9.50	8.50
951-1000	17.50	14.00	11.75	10.00	8.75

\* DIMENSIONS IN THIS TABLE HAVE BEEN DETERMINED FOR MANAGING THE 1-INCH RAINFALL RUNOFF VOLUME.

\* TRENCH SHOULD BE SIZED BASED ON SQUARE FEET OF ROOF AREA DIRECTED TO THE PROPOSED TRENCH, WHICH MAY NOT EQUAL THE REGULATED IMPERVIOUS SURFACE PROPOSED.

SITE ADDRESS:

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DATE:

7/8/21



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CHESTER COUNTY

PENNSYLVANIA

INFILTRATION  
TRENCH NOTES

SHEET NO. 3A

3A OF 4

SCALE:

NOT TO SCALE

## NOTES

§ 345-306.M: DURING SITE CONSTRUCTION, ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.

§ 345-306.N: WHERE SEDIMENT TRANSPORT IN THE STORMWATER RUNOFF IS ANTICIPATED TO REACH THE INFILTRATION SYSTEM, APPROPRIATE PERMANENT MEASURES TO PREVENT OR COLLECT SEDIMENT SHALL BE INSTALLED PRIOR TO DISCHARGE TO THE INFILTRATION SYSTEM.

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### TRENCH LENGTH (< 1000 SQUARE FEET OF REGULATED IMPERVIOUS SURFACE)

Impervious Surface (sf)	4' Wide Trench Length of Trench (ft)	5' Wide Trench Length of Trench (ft)	6' Wide Trench Length of Trench (ft)	7' Wide Trench Length of Trench (ft)	8' Wide Trench Length of Trench (ft)
451-500	23.00	18.25	15.25	13.25	11.50
501-550	25.25	20.25	16.75	14.50	12.75
551-600	27.50	22.00	18.25	15.75	13.75
601-650	29.75	23.75	20.00	17.00	15.00
651-700	32.00	25.75	21.50	18.25	16.00
701-750	34.25	27.50	23.00	19.75	17.25
751-800	36.50	29.25	24.50	21.00	18.25
801-850	39.00	31.25	26.00	22.25	19.50
851-900	41.25	33.00	27.50	23.50	20.75
901-950	43.50	34.75	29.00	25.00	21.75
951-1000	45.75	36.50	30.50	26.25	23.00

\* DIMENSIONS IN THIS TABLE HAVE BEEN DETERMINED FOR MANAGING THE DIFFERENCE BETWEEN THE PRE-DEVELOPMENT AND POST-DEVELOPMENT, 2-YEAR FREQUENCY, 24-HOUR DURATION RAINFALL RUNOFF VOLUME

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SITE ADDRESS:

123 ROAD STREET, TOWN PA 07734

DATE:

7/8/21



**CEG**  
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CHESTER COUNTY

PENNSYLVANIA

INFILTRATION  
TRENCH NOTES

SHEET NO. 3B

3B OF 4

SCALE:

NOT TO SCALE

## NOTES

§ 345-306.M: DURING SITE CONSTRUCTION, ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.

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- (6) PA ONECALL IS REQUIRED BEFORE ANY CONSTRUCTION ACTIVITIES COMMENCE.

### TRENCH LENGTH (1000-2000 SQUARE FEET OF REGULATED IMPERVIOUS SURFACE)

Impervious Surface (sf)	4' Wide Trench Length of Trench (ft)	5' Wide Trench Length of Trench (ft)	6' Wide Trench Length of Trench (ft)	7' Wide Trench Length of Trench (ft)	8' Wide Trench Length of Trench (ft)
1000	46.75	36.50	30.50	26.25	23.00
1001-1050	46.75	37.50	31.25	26.75	23.50
1051-1100	48.00	38.50	32.00	27.50	24.00
1101-1150	49.25	39.25	32.75	28.25	24.75
1151-1200	50.25	40.25	33.50	28.75	25.25
1201-1250	54.75	44.00	36.50	31.50	27.50
1251-1300	59.50	47.50	39.75	34.00	29.75
1301-1350	61.75	49.25	41.25	35.25	31.00
1351-1400	64.00	51.25	42.75	36.50	32.00
1401-1450	66.25	53.00	44.25	38.00	33.25
1451-1500	68.50	54.75	45.75	39.25	34.25
1501-1550	70.75	56.75	47.25	40.50	35.50
1551-1600	73.00	58.50	48.75	41.75	36.50
1601-1650	75.25	60.25	50.25	43.00	37.75
1651-1700	77.75	62.25	51.75	44.50	39.00
1701-1750	80.00	64.00	53.25	45.75	40.00
1751-1800	82.25	65.75	54.75	47.00	41.25
1801-1850	84.50	67.50	56.25	48.25	42.25
1851-1900	86.75	69.50	58.00	49.75	43.50
1901-1950	89.00	71.25	59.50	51.00	44.50
1951-1999	91.25	73.00	61.00	52.75	45.75

\* DIMENSIONS IN THIS TABLE HAVE BEEN DETERMINED FOR MANAGING THE DIFFERENCE BETWEEN THE PRE-DEVELOPMENT AND POST-DEVELOPMENT, 2-YEAR FREQUENCY, 24-HOUR DURATION RAINFALL RUNOFF VOLUME

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SITE ADDRESS:

123 ROAD STREET, TOWN PA 07734

DATE:

7/8/21



**CEG**  
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CHESTER COUNTY

PENNSYLVANIA

INFILTRATION  
TRENCH NOTES

SHEET NO. 3C

3C OF 4

SCALE:

NOT TO SCALE

# STORMWATER FACILITIES OPERATIONS AND MAINTENANCE PLAN

THE HOMEOWNER WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF ALL STORMWATER AND BMP FACILITIES. THE FACILITIES WILL INCLUDE THE INFILTRATION TRENCH ON THE PROPERTY AS WELL AS ANY YARD OR ROOF DRAINS, PIPING, POP-UP EMITTERS OR CLEAN-OUTS SHOWN ON THIS PLAN.

MAINTENANCE AND OPERATION WILL BE AS FOLLOWS:

1. THE INFILTRATION TRENCH AND CONVEYANCES DESCRIBED IN THIS PLAN SHALL BE INSPECTED ANNUALLY OR AS NEEDED FOLLOWING SIGNIFICANT PRECIPITATION EVENTS TO ASCERTAIN IF ANY SEDIMENT IS ENTERING THE FACILITIES. THE INFILTRATION TRENCH AND CONVEYANCES DESCRIBED IN THIS PLAN SHALL BE CLEANED IF NECESSARY. CLEANING WILL CONSIST OF REMOVING THE ACCUMULATED SILT, DEBRIS, OR SEDIMENT.
2. THE OVERLYING VEGETATION ON THE INFILTRATION TRENCH SHALL BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS RE-VEGETATED AS SOON AS POSSIBLE.
3. VEHICULAR ACCESS ON THE INFILTRATION TRENCH SHOULD BE PROHIBITED, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
4. REPAIR ALL DAMAGED PIPING, CLEAN-OUTS, AND POP-UP EMITTERS PROMPTLY TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM. SPECIAL CARE SHOULD BE TAKEN TO AVOID DAMAGING EXPOSED ELEMENTS WITH MOWERS AND/OR STRING TRIMMERS.
5. GRASSES OVER THE INFILTRATION TRENCH SHALL BE MOWED AT LEAST TWICE EACH YEAR. TREES AND SHRUBS SHOULD NOT BE PERMITTED TO GROW ABOVE THE INFILTRATION TRENCH.

EXAMPLE

SITE ADDRESS:  
123 ROAD STREET, TOWN PA 07734

DATE:  
7/8/21



CHESTER COUNTY PENNSYLVANIA

SHEET NO. 4

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INFILTRATION TRENCH  
OPERATION &  
MAINTENANCE NOTES

4 OF 4

## LEGAL NOTICES

NOTICE IS GIVEN that the Board of Supervisors of West Bradford Township will conduct a public hearing as part of their regularly scheduled monthly Board meeting on Tuesday, September 13, 2022 at 7:00 p.m., prevailing time at the West Bradford Township Municipal Building, 1385 Campus Drive, Downingtown, Pennsylvania to consider and possibly adopt an Ordinance with the following title and summary: AN ORDINANCE OF THE TOWNSHIP OF WEST BRADFORD, CHESTER COUNTY, PENNSYLVANIA, AMENDING CHAPTER 258 OF THE WEST BRADFORD TOWNSHIP CODE, TITLED "MUNICIPAL CLAIMS AND LIENS", SPECIFICALLY SECTION 258-1, TITLED "FEES TO BE ADDED TO THE UNPAID CLAIM", IN ITS ENTIRETY; AND PROVIDING SEVERABILITY, REPEALER AND EFFECTIVE DATE PROVISIONS. A copy of the proposed Ordinance is available for public inspection and may be examined without charge or obtained for a charge not greater than the cost thereof at the Township administrative offices, 1385 Campus Drive, Downingtown, Pennsylvania Monday through Friday from 7:00 a.m. to 4:30 p.m. If any person who wishes to attend the hearing has a disability and/or requires an auxiliary aid, service or other accommodation to observe or participate in the hearing, he or she should contact the Township Secretary at least 24 hours in advance of the hearing at (610) 269-4174 to discuss how those needs may be accommodated. Justin Yaich, Manager West Bradford Township DLN 9/2; 1a

Appeared in: **Daily Local News** on Friday, 09/02/2022



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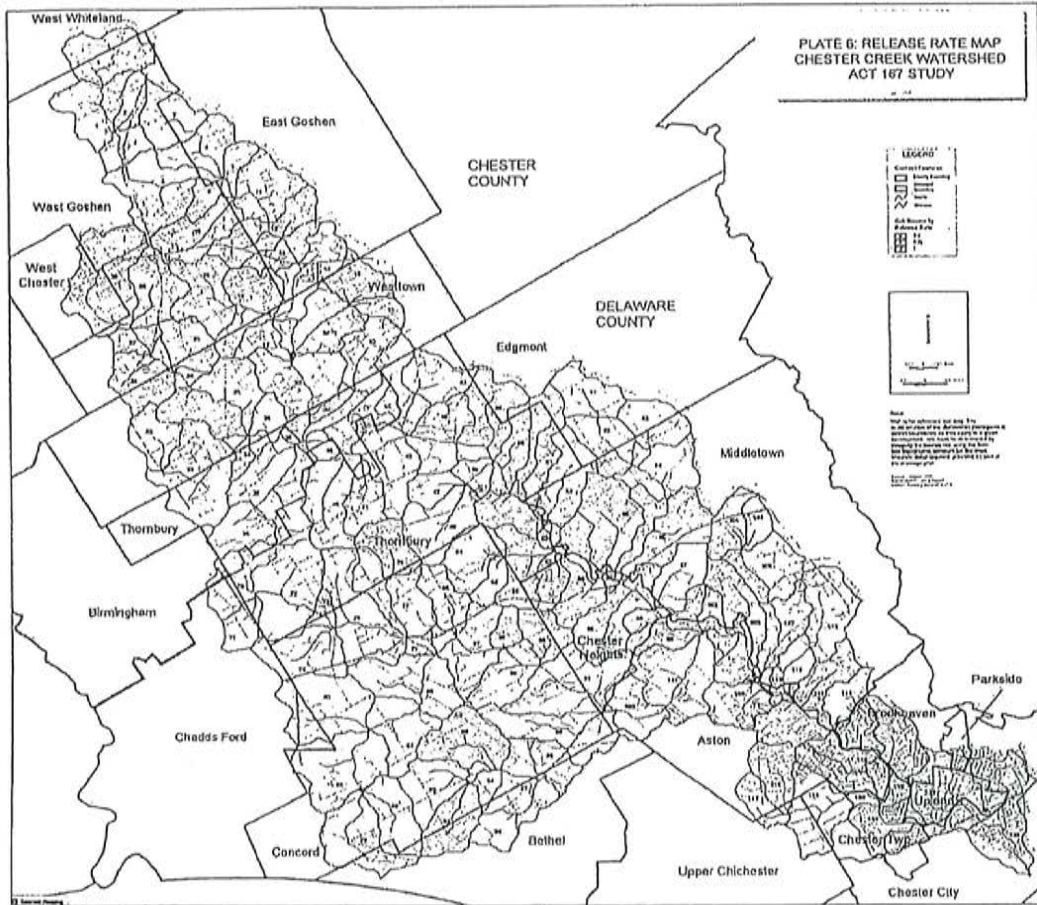
[E-mail to a friend](#)



STORMWATER MANAGEMENT

94 Attachment 2

Appendix B  
CHESTER CREEK WATERSHED  
RELEASE RATE MAP





**ORDINANCE APPENDIX C**

**SITE DESIGN PROCESS**

# NATURAL HYDROLOGY SITE DESIGN PROCESS

## INTRODUCTION

Section 304 identifies a natural hydrology site design process that strives to minimize disturbances to land, site hydrology, and natural resources, and maintain the natural hydrologic regime, drainage patterns and flow conditions of a site to the maximum extent practicable. This appendix is intended to build on that process by providing additional information for achieving site designs that best maintain pre-construction stormwater runoff conditions, protect site amenities, and preserve natural resources. This appendix describes the following components of the natural hydrology site design process:

- Design Principles and Techniques;
- Design Process;
- Design Practices; and
- References.

Some common drainage design approaches for land development radically alter natural hydrologic conditions by constructing collection and conveyance systems that are designed to remove runoff from a site as quickly as possible and capture it in a detention basin. This approach has often led to the degradation of water quality, reduced groundwater recharge, and increased volumes of runoff, as well as the expenditure of additional resources for detaining and managing increased volumes of concentrated runoff at some downstream location.

The natural hydrology site design process encourages land development site designs that minimize post-development runoff rates and volumes, and that minimize needs for artificial conveyance and storage facilities. This process strives to incorporate the desired land development into the natural hydrologic landscape in a manner that maintains and utilizes existing site hydrology features and functions to minimize generation of new stormwater. This avoids cumulative environmental impacts often associated with land development, and reducing the need for and size of constructed stormwater facilities. This approach minimizes the disturbance of land area, natural features and site hydrology; preserves significant concentrations of open space, woodlands, and corridors of environmentally sensitive features; and incorporates landscape-based BMPs and low impact development techniques to minimize the utilization of more intrusive structural stormwater facilities.

With this design process, the primary goals of a land development project can be achieved while minimizing the negative environmental impacts and avoiding management costs associated with unnecessary stormwater runoff. The fundamental principle of this design process is that site hydrology features are considered “up front” in the land development design process and are prioritized as integral aspects to be maintained and utilized within the site design, rather than being first sacrificed for space needed for traditional site layout or for construction of more intrusive stormwater facilities.

Natural hydrology site design is not a new approach but rather a holistic process that combines certain principles of Low Impact Development, Conservation Design, and Sustainable Design, and focuses on reducing unnecessary alterations to the natural patterns and functions of existing on-site hydrologic features. These natural hydrologic features tend to perform their “hydrologic function” (i.e., infiltration, evapotranspiration, flow attenuation, pollutant removal, etc.) very efficiently and sometimes have the hydrologic capacity to perform that function on increased runoff loadings from the built environment. However, care must be taken to adequately characterize the capacity of their hydrologic function and avoid overwhelming the feature with excessive runoff loadings, thus causing unintended impairments that are completely counter-productive to the purpose of natural hydrology site design.

Preserving natural hydrologic conditions requires careful site design considerations. Natural hydrology site design should serve as the foundation of the overall site design approach, and when applied in conjunction with the design professional’s overall land development goals and desired outcomes, can help shape the overall vision and conceptual layout of the land development project.

Site design practices include preserving natural drainage features, minimizing impervious surface area, reducing the hydraulic connectivity of impervious surfaces, and protecting natural depression storage. Applying this site design process helps maintain site hydrology and manage stormwater by: minimizing the generation of stormwater runoff (achieved by designing to the land, considering site drainage patterns and infiltration characteristics, reducing grading and compaction, and considering scale and placement of buildings); managing stormwater as close to the point of generation as possible (by disconnecting impervious surfaces and distributing storm flows to landscaped-based BMPs); providing open and vegetated channel conveyance (as needed to treat water quality, reduce velocity and infiltrate); and managing remaining conveyed stormwater in common open space (as needed to disperse low velocity storm flows, treat water quality, infiltrate, and release). A well-designed site will contain a mix of all those features.

## **DESIGN PRINCIPLES AND TECHNIQUES**

Natural hydrology site design involves identifying and prioritizing natural resources and natural and man-made hydrologic features, and incorporating such features into the overall site design to take advantage of their efficiencies of hydrologic performance, their cost efficiencies of reducing the need for or size of constructed stormwater facilities, and their aesthetic amenities. The five Design Principles to be achieved by this approach are as follows:

- Minimize land disturbance – both surface and subsurface.
- Minimize the cumulative area to be covered by impervious and compacted surfaces.
- Designing to the land, so that the layout of constructed and landscape features utilizes the natural topography and minimizes grading.
- Design the constructed stormwater management system to take advantage of the natural hydrologic landscape to achieve the required stormwater runoff control standards.
- Refine the site design and layout to optimize the cumulative benefits of the natural

hydrologic features, the constructed stormwater management system, and the land development components to achieve the minimum post-construction runoff volume, peak discharge rates and pollutant loads from the proposed land development site.

Techniques to be applied to achieve the design principles are presented in Table B.1.

## DESIGN PROCESS

The first step in applying natural hydrology site design is to identify, delineate and assess the functions of all existing natural resources and natural and man-made hydrologic features that: are located within the project site; will receive discharge from the project site; or, may be impacted by runoff or disturbance from the proposed land development project. This includes:

- Streams, waterways, springs, wetlands, vernal pools, and water bodies;
- Drainage patterns, conveyances and discharge points;
- Natural infiltration areas and patterns;
- Areas of natural vegetation that provide significant evapotranspiration, pollutant removal, bank stabilization, flow attenuation, or riparian buffer functions;
- Floodplains; and
- Other features that contribute to the overall hydrologic function and value of the site and its receiving streams.

Once this inventory and assessment are completed, these identified resources and features are then prioritized for their ability to provide hydrologic function and performance for managing runoff from the proposed site improvements. Specifically, they should be prioritized as follows:

- Those to be incorporated into the site design in a manner that provides for their protection from any disturbance or impact from the proposed land development;
- Those to be protected from further disturbance or impact and for which the proposed land development will provide improvement to existing conditions;
- Those that can be incorporated into and utilized as components of the overall site design in a manner that protects or improves their existing conditions while utilizing their hydrologic function (e.g., for infiltration, evapotranspiration, or reducing pollutant loads, runoff volume or peak discharge rates, etc.) to reduce the need for or size of constructed BMPs; and
- Those that may be considered for alteration, disturbance or removal.

These prioritizations are then applied as the basis on which to begin the site design lay-out, grading, construction, and permanent ground cover designs to achieve the five (5) Design Principles outlined above. The following section describes just a few of the many design practices, methods and techniques that are available to achieve the landowner's desired land development goals and the desired environmental efficiencies intended by natural hydrology site design.

**Table B.1 – Site Design Process Principles and Techniques**

Design Principles	Design Techniques
<p><b>Minimize land disturbance – both surface and subsurface.</b></p>	<ul style="list-style-type: none"> <li>• Maintain the natural soil structure and vegetative cover that are often critical components of maintaining the hydrologic functions of natural infiltration, bioretention, flow attenuation, evapotranspiration, and pollutant removal.</li> <li>• Protect, or improve, natural resources to reduce the needs for environmental mitigation, future environmental restoration, and cumulative flow and water quality impacts of unnecessary disturbances within the watershed system.</li> <li>• Minimize the disturbance of natural surface and groundwater drainage features and patterns, discharge points and flow characteristics, natural infiltration and evapotranspiration patterns and characteristics, natural stream channel stability, and floodplain conveyance, etc.</li> </ul>
<p><b>Minimize the cumulative area to be covered by impervious and compacted surfaces.</b></p>	<ul style="list-style-type: none"> <li>• Minimize the size of individual impervious surfaces.</li> <li>• Separate large impervious surfaces into smaller components.</li> <li>• Disconnect runoff from one impervious surface to another.</li> <li>• Avoid unnecessary impervious surfaces.</li> <li>• Utilize porous materials where suited in lieu of impervious materials.</li> </ul>
<p><b>Designing to the land, so that the layout of constructed and landscape features utilizes the natural topography and minimizes grading.</b></p>	<ul style="list-style-type: none"> <li>• Prioritize on-site hydrologic features (i.e., for protection, improvement, utilization, or alteration) and natural site drainage patterns and infiltration characteristics and consider them for the cornerstones of the conceptual site design.</li> <li>• Reduce grading and compaction by applying selective grading design methods to provide final grading patterns that preserve existing topography where it most benefits natural hydrologic functions and where needed; this results in graded areas that evenly distribute runoff and minimize concentrated runoff flows.</li> <li>• Consider the scale and placement of buildings and other infrastructure to minimize impact to natural hydrologic features.</li> <li>• Incorporate unique natural, scenic, and historic site features into the configuration of the development, and ensure flexibility in development design to meet community needs for complimentary and aesthetically pleasing development, such as can be achieved through Conservation Design and Sustainable Design approaches.</li> </ul>

Design Principles	Design Techniques
<p>Design the constructed stormwater management system to take advantage of the natural hydrologic landscape to achieve the required stormwater runoff control standards.</p>	<ul style="list-style-type: none"> <li>• Incorporate natural hydrologic features that have been selected for their available capacity and function into the overall system of site runoff controls.</li> <li>• Incorporate Low Impact Development (or similar) BMPs and distribute storm flows to: <ul style="list-style-type: none"> <li>○ Reduce runoff;</li> <li>○ Manage stormwater at or as close to the point of generation as possible;</li> <li>○ Disconnect discharges from streets and municipal storm sewer systems; and</li> <li>○ Select and design BMPs to give first priority to nonstructural and vegetation (landscape-based) BMPs, second priority to surface structural BMPs, third priority to subsurface structural BMPs, and design subsurface BMPs as shallow as possible.</li> </ul> </li> <li>• Provide open channel conveyance, as needed, to: <ul style="list-style-type: none"> <li>○ Treat water quality;</li> <li>○ Reduce runoff velocity; and</li> <li>○ Promote infiltration and evapotranspiration of runoff.</li> </ul> </li> <li>• Manage remaining conveyed stormwater from small storms in common open space areas to achieve multiple objectives: <ul style="list-style-type: none"> <li>○ Disperse storm flows and reduce velocity;</li> <li>○ Treat water quality; and</li> <li>○ Promote infiltrate and evapotranspiration of runoff.</li> </ul> </li> <li>• Provide for appropriate conveyance to retention or detention storage facilities as needed for flows from large storm events.</li> <li>• Maintain open space functions consistent with common area uses (passive recreation, on-site sewage management, scenic vistas, etc).</li> </ul>
<p>Refine the site design and layout to optimize the cumulative benefits of the natural hydrologic features, the constructed stormwater management system, and the land development components to achieve the minimum post-construction runoff volume, peak discharge rates and pollutant loads from the proposed land development site.</p>	<p>Apply site design techniques and practices as appropriate based on:</p> <ul style="list-style-type: none"> <li>• Conservation Design principles and practices.</li> <li>• Sustainable Design principles and practices.</li> <li>• Low Impact Development Design principles and practices.</li> </ul>

## DESIGN PRACTICES

Numerous practices and strategies can be considered where their aim is to sustain and utilize the benefits of existing site hydrology and minimize the generation of new stormwater runoff. Following are brief descriptions of various practices that can be used to achieve the principles of the natural hydrology site design process.

### Site Layout Practices

The following site layout practices are but a few of the methods by which the natural hydrology site design process described above can be implemented. Such practices are less functions of regimented codes and procedures than about understanding and recognizing the benefits and values that existing resources can contribute to the desired outcomes of the land development project. In some circumstances, communication among design engineers, land planning and environmental professionals, knowledgeable developers, community representatives, and regulatory authorities is also beneficial to combine their collective understanding and perspectives to create effective planning efforts.

***Preserving Natural Drainage Features.*** Protecting natural drainage features, particularly vegetated drainage swales and channels, is desirable because of their ability to infiltrate and attenuate flows and to filter pollutants. Unfortunately, some common land development practices encourage just the opposite pattern -- streets and adjacent storm sewers typically are located in the natural headwater valleys and swales, thereby replacing natural drainage functions with an impervious system. As a result, runoff and pollutants generated from impervious surfaces flow directly into storm sewers with no opportunity for attenuation, infiltration, or filtration. Designing developments to fit site topography retains much of the natural drainage function. In addition, designing with the land minimizes the amount of site grading, reduces the amount of compaction that can alter site infiltration characteristics, and can result in cost savings to the developer.

***Protecting Natural Depression Storage Areas.*** Depressional storage areas have no surface outlet, or drain very slowly following a storm event. They can be commonly seen as ponded areas in fields during the wet season or after large runoff events. Some development practices eliminate these depressions by filling or draining, thereby eliminating their ability to reduce surface runoff volumes and trap pollutants. The volume and release-rate characteristics of depressions should be protected in the design of the development site to assist in reducing runoff volumes and reducing runoff rates. Designing around the depression, or incorporating its storage as additional capacity in required detention facilities, treats this area as a site amenity rather than a detriment.

***Avoiding Introduction of Impervious Areas.*** Careful site planning should consider reducing impervious coverage to the maximum extent possible. Building footprints, sidewalks, driveways, and other features producing impervious surfaces should be evaluated to minimize impacts on runoff. In many instances, municipalities have the ability to reduce impervious cover by providing incentives or opportunities in their zoning and subdivision/ land development ordinances to reduce road width, reduce or modify cul-de-sac dimensions, reduce or modify curbing requirements, and reduce or modify sidewalk requirements.

***Disconnecting Impervious Surfaces.*** Impervious surfaces are significantly less of a problem if they are not directly connected to an impervious conveyance system (such as storm sewer). Two basic ways to reduce hydraulic connectivity are routing roof runoff over lawns and reducing the use of storm sewers. Site grading should promote increasing travel time of stormwater runoff from these sources, and should help reduce concentration of runoff to a single point within the project site.

***Routing Roof Runoff Over Lawns.*** Roof runoff can be easily routed over lawns in most site designs. The practice discourages direct connections of downspouts to “driveway-to-street-to-storm sewers” or parking lots. The practice also discourages sloping driveways and parking lots to the street. Crowning the driveway, to run off to the lawn, uses the lawn as a filter strip.

***Reducing Street Widths.*** Street widths can be reduced by either eliminating on-street parking and/or by reducing roadway widths. Designers should select the narrowest practical street width for the design conditions (speed, curvature, etc.). Narrower neighborhood streets should be considered and encouraged under select conditions. Reduced street widths also can lower maintenance needs and costs.

***Limiting Sidewalks to One Side of the Street.*** A sidewalk on one side of the street may suffice in low-traffic neighborhoods. The lost sidewalk could be replaced with bicycle/recreational trails that follow back-of-lot lines as an alternative to reduced sidewalks, where appropriate.

***Reducing Building Setbacks.*** Reducing building setbacks (from streets) reduces the size of impervious areas of driveways and entry walks and is most readily accomplished along low-traffic streets where traffic noise is not a problem.

***Constructing Compact Developments or Conservation Design:*** Low impact cluster or compact development can reduce the amount of impervious area for a given number of lots. Savings result from reduced street length, which also contributes to a reduction in development and long-term maintenance costs. Reduced site disturbance and preservation of open space help buffer sensitive natural areas and retain more of a site’s natural hydrology. Development can be designed so that areas of high infiltration soils are reserved as stormwater infiltration areas. Construction activity can be focused onto less-sensitive areas without affecting the gross density of development.

#### **Stormwater Best Management Practices**

Stormwater best management practices (BMPs) are intended to supplement natural hydrology site design techniques where needed. Structural in nature, such practices include bioretention facilities, rain gardens, swales and other engineered stormwater BMPs. Listed here are techniques intended to help manage stormwater predominantly at or near the source, rather than traditional techniques that largely release runoff over an extended period of time to adjacent properties and streams. This list, in no way exhaustive, gives examples of a few of the most common practices.

**Bioretention.** This type of BMP combines open space with stormwater treatment. Soil and plants, rather than sand filters, treat and store runoff. Infiltration and evapotranspiration are achieved, often coupled with an underdrain to collect water not infiltrated or used in the root zone.

**Rain Gardens.** Typically rain gardens are shallow depression areas containing a mix of water tolerant native plant species. The intent is to capture runoff for storage and use in the root zone of plants. Intended largely as a way of managing stormwater through evapotranspiration (ET), rain gardens often function as infiltration facilities as well.

**Reducing the Need for Storm Sewers.** Increasing the use of natural or vegetated drainage swales can reduce the need for extending storm sewers for draining streets, parking lots, and back yards, the potential for accelerating runoff from the development can be greatly reduced. The practice requires greater use of swales and may not be practical for some development sites, especially if there are concerns for areas that do not drain in a “reasonable” time. The practice requires educating local citizens, who may expect runoff to disappear shortly after a rainfall event.

**Using Permeable Paving Materials.** These materials include permeable interlocking concrete paving blocks or porous bituminous concrete, among others. Such materials should be considered as alternatives to conventional pavement surfaces, especially for low use surfaces such as driveways, overflow parking lots, and emergency access roads. Surfaces for which seal coats may be applied should refrain from using permeable paving materials.

## **SOURCES**

*Conservation Design for Stormwater Management*, Delaware Department of Natural Resources and Environmental Control and the Brandywine Conservancy, September 1997.

*Conservation Design: Techniques for Preserving Natural Hydrologic Functions*, White Paper prepared for New Castle County, Delaware Drainage Code, John M. Gaadt, AICP, September 2007.

*Growing Greener, Conservation by Design*, a program of the Natural Lands Trust, [www.natlands.org/](http://www.natlands.org/).

Guidance on MS4 Ordinance Provisions, Document Number 392-0300-003, by the Pennsylvania Department of Environmental Protection.

Low Impact Development Center, <http://www.lowimpactdevelopment.org/>.

PA Department of Environmental Protection, Best Management Practices Manual, 2006.



## ORDINANCE APPENDIX D

### RUNOFF COEFFICIENTS AND CURVE NUMBERS

**TABLE D-1. RUNOFF CURVE NUMBERS**

*Source:* Table 2-2a, Table 2-2b, and Table 2-2c from U. S. Department of Agriculture, Natural Resources Conservation Service, June 1986, Urban Hydrology for Small Watersheds, Technical Release No. 55 (TR-55), Second Edition.

**TABLE D-2. RATIONAL RUNOFF COEFFICIENTS**

*Source:* Table F.2 from Delaware County Planning Department, December 2011, Crum Creek Watershed Act 167 Stormwater Management Plan.

**TABLE D-3. MANNING'S 'n' VALUES**

*Source:* Table 3-1 from United States Army Corps of Engineers, January 2010, HEC-RAS River Analysis System, Hydraulic Reference Manual, Version 4.1.

NOTE :

IF YOU WISH TO MAKE ANY CHANGES TO ORDINANCE APPENDIX D , PLEASE CONTACT CHESTER COUNTY WATER RESOURCES AUTHORITY.

**TABLE D-1. RUNOFF CURVE NUMBERS**  
(3 pages)

*Source:* Table 2-2a, Table 2-2b, and Table 2-2c from U. S. Department of Agriculture, Natural Resources Conservation Service, June 1986, Urban Hydrology for Small Watersheds, Technical Release No. 55 (TR-55), Second Edition.

**Table 2-2a** Runoff curve numbers for urban areas <sup>1/</sup>

Cover description	Average percent impervious area <sup>2/</sup>	Curve numbers for hydrologic soil group			
		A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.) <sup>3/</sup> :					
Poor condition (grass cover < 50%) .....		68	79	86	89
Fair condition (grass cover 50% to 75%) .....		49	69	79	84
Good condition (grass cover > 75%) .....		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way) .....		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way) .....		98	98	98	98
Paved; open ditches (including right-of-way) .....		83	89	92	93
Gravel (including right-of-way) .....		76	85	89	91
Dirt (including right-of-way) .....		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) <sup>4/</sup> .....		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders) .....		96	96	96	96
Urban districts:					
Commercial and business .....	85	89	92	94	95
Industrial .....	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses) .....	65	77	85	90	92
1/4 acre .....	38	61	75	83	87
1/3 acre .....	30	57	72	81	86
1/2 acre .....	25	54	70	80	85
1 acre .....	20	51	68	79	84
2 acres .....	12	46	65	77	82
<i>Developing urban areas</i>					
Newly graded areas					
(pervious areas only, no vegetation) <sup>5/</sup> .....		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

<sup>1</sup> Average runoff condition, and  $I_a = 0.2S$ .<sup>2</sup> The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.<sup>3</sup> CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.<sup>4</sup> Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.<sup>5</sup> Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

**Table 2-2b** Runoff curve numbers for cultivated agricultural lands <sup>1</sup>

Cover type	Cover description Treatment <sup>2</sup>	Hydrologic condition <sup>3</sup>	Curve numbers for hydrologic soil group			
			A	B	C	D
Fallow	Bare soil	—	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
C&T+ CR	Poor	65	73	79	81	
	Good	61	70	77	80	
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
C&T+ CR	Poor	60	71	78	81	
	Good	58	69	77	80	
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

<sup>1</sup> Average runoff condition, and  $I_a=0.2S$ <sup>2</sup> Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.<sup>3</sup> Hydraulic condition is based on combination factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes, (d) percent of residue cover on the land surface (good  $\geq 20\%$ ), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

**Table 2-2c** Runoff curve numbers for other agricultural lands <sup>1/</sup>

Cover type	Cover description	Hydrologic condition	Curve numbers for hydrologic soil group			
			A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. <sup>2/</sup>		Poor	68	79	86	89
		Fair	49	69	79	84
		Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.		—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. <sup>3/</sup>		Poor	48	67	77	83
		Fair	35	56	70	77
		Good	30 <sup>4/</sup>	48	65	73
Woods—grass combination (orchard or tree farm). <sup>5/</sup>		Poor	57	73	82	86
		Fair	43	65	76	82
		Good	32	58	72	79
Woods. <sup>6/</sup>		Poor	45	66	77	83
		Fair	36	60	73	79
		Good	30 <sup>4/</sup>	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.		—	59	74	82	86

<sup>1/</sup> Average runoff condition, and  $I_a = 0.2S$ .

<sup>2/</sup> *Poor*: <50% ground cover or heavily grazed with no mulch.

*Fair*: 50 to 75% ground cover and not heavily grazed.

*Good*: > 75% ground cover and lightly or only occasionally grazed.

<sup>3/</sup> *Poor*: <50% ground cover.

*Fair*: 50 to 75% ground cover.

*Good*: >75% ground cover.

<sup>4/</sup> Actual curve number is less than 30; use CN = 30 for runoff computations.

<sup>5/</sup> CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

<sup>6/</sup> *Poor*: Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.

*Fair*: Woods are grazed but not burned, and some forest litter covers the soil.

*Good*: Woods are protected from grazing, and litter and brush adequately cover the soil.

**TABLE D:-2. RATIONAL RUNOFF COEFFICIENTS**  
(1 page)

*Source:* Table F.2 from Delaware County Planning Department, December 2011,  
*Crum Creek Watershed Act 167 Stormwater Management Plan.*



**TABLE D-3. MANNING'S 'n' VALUES**  
(3 pages)

*Source:* Table 3-1 from United States Army Corps of Engineers, January 2010,  
*HEC-RAS River Analysis System, Hydraulic Reference Manual*, Version 4.1.

Chapter 3—Basic Data Requirements

Table 3-1 Manning's 'n' Values

Type of Channel and Description	Minimum	Normal	Maximum
<b>A. Natural Streams</b>			
<b>1. Main Channels</b>			
a. Clean, straight, full, no rifts or deep pools			
b. Same as above, but more stones and weeds	0.025	0.030	0.033
c. Clean, winding, some pools and shoals	0.030	0.035	0.040
d. Same as above, but some weeds and stones	0.033	0.040	0.045
e. Same as above, lower stages, more ineffective slopes and sections	0.035	0.045	0.050
f. Same as "d" but more stones	0.040	0.048	0.055
g. Sluggish reaches, weedy, deep pools	0.045	0.050	0.060
h. Very weedy reaches, deep pools, or floodways with heavy stands of timber and brush	0.050	0.070	0.080
	0.070	0.100	0.150
<b>2. Flood Plains</b>			
a. Pasture no brush			
1. Short grass	0.025	0.030	0.035
2. High grass	0.030	0.035	0.050
b. Cultivated areas			
1. No crop	0.020	0.030	0.040
2. Mature row crops	0.025	0.035	0.045
3. Mature field crops	0.030	0.040	0.050
c. Brush			
1. Scattered brush, heavy weeds	0.035	0.050	0.070
2. Light brush and trees, in winter	0.035	0.050	0.060
3. Light brush and trees, in summer	0.040	0.060	0.080
4. Medium to dense brush, in winter	0.045	0.070	0.110
5. Medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. Cleared land with tree stumps, no sprouts	0.030	0.040	0.050
2. Same as above, but heavy sprouts	0.050	0.060	0.080
3. Heavy stand of timber, few down trees, little undergrowth, flow below branches	0.080	0.100	0.120
4. Same as above, but with flow into branches	0.100	0.120	0.160
5. Dense willows, summer, straight	0.110	0.150	0.200
<b>3. Mountain Streams, no vegetation in channel, banks usually steep, with trees and brush on banks submerged</b>			
a. Bottom: gravels, cobbles, and few boulders	0.030	0.040	0.050
b. Bottom: cobbles with large boulders	0.040	0.050	0.070

Table 3-1 (Continued) Manning's 'n' Values

Type of Channel and Description	Minimum	Normal	Maximum
<b>B. Lined or Built-Up Channels</b>			
<b>1. Concrete</b>			
a. Trowel finish	0.011	0.013	0.015
b. Float Finish	0.013	0.015	0.016
c. Finished, with gravel bottom	0.015	0.017	0.020
d. Unfinished	0.014	0.017	0.020
e. Gunite, good section	0.016	0.019	0.023
f. Gunite, wavy section	0.018	0.022	0.025
g. On good excavated rock	0.017	0.020	
h. On irregular excavated rock	0.022	0.027	
<b>2. Concrete bottom float finished with sides of:</b>			
a. Dressed stone in mortar	0.015	0.017	0.020
b. Random stone in mortar	0.017	0.020	0.024
c. Cement rubble masonry, plastered	0.016	0.020	0.024
d. Cement rubble masonry	0.020	0.025	0.030
e. Dry rubble on riprap	0.020	0.030	0.035
<b>3. Gravel bottom with sides of:</b>			
a. Formed concrete	0.017	0.020	0.025
b. Random stone in mortar	0.020	0.023	0.026
c. Dry rubble or riprap	0.023	0.033	0.036
<b>4. Brick</b>			
a. Glazed	0.011	0.013	0.015
b. In cement mortar	0.012	0.015	0.018
<b>5. Metal</b>			
a. Smooth steel surfaces	0.011	0.012	0.014
b. Corrugated metal	0.021	0.025	0.030
<b>6. Asphalt</b>			
a. Smooth	0.013	0.013	
b. Rough	0.016	0.016	
<b>7. Vegetal lining</b>			
	0.030		0.500

Table 3-1 (Continued) Manning's 'n' Values

Type of Channel and Description	Minimum	Normal	Maximum
<i>C. Excavated or Dredged Channels</i>			
<b>1. Earth, straight and uniform</b>			
a. Clean, recently completed	0.016	0.018	0.020
b. Clean, after weathering	0.018	0.022	0.025
c. Gravel, uniform section, clean	0.022	0.025	0.030
d. With short grass, few weeds	0.022	0.027	0.033
<b>2. Earth, winding and sluggish</b>			
a. No vegetation	0.023	0.025	0.030
b. Grass, some weeds	0.025	0.030	0.033
c. Dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
d. Earth bottom and rubble side	0.028	0.030	0.035
e. Stony bottom and weedy banks	0.025	0.035	0.040
f. Cobble bottom and clean sides	0.030	0.040	0.050
<b>3. Dragline-excavated or dredged</b>			
a. No vegetation	0.025	0.028	0.033
b. Light brush on banks	0.035	0.050	0.060
<b>4. Rock cuts</b>			
a. Smooth and uniform	0.025	0.035	0.040
b. Jagged and irregular	0.035	0.040	0.050
<b>5. Channels not maintained, weeds and brush</b>			
a. Clean bottom, brush on sides	0.040	0.050	0.080
b. Same as above, highest stage of flow	0.045	0.070	0.110
c. Dense weeds, high as flow depth	0.050	0.080	0.120
d. Dense brush, high stage	0.080	0.100	0.140

Other sources that include pictures of selected streams as a guide to n value determination are available (Fasken, 1963; Barnes, 1967; and Hicks and Mason, 1991). In general, these references provide color photos with tables of calibrated n values for a range of flows.

Although there are many factors that affect the selection of the n value for the channel, some of the most important factors are the type and size of materials that compose the bed and banks of a channel, and the shape of the channel. Cowan (1956) developed a procedure for estimating the effects of these factors to determine the value of Manning's n of a channel. In Cowan's procedure, the value of n is computed by the following equation:





## WEST NILE VIRUS GUIDANCE

(This source is from the Monroe County, PA Conservation District that researched the potential of West Nile Virus problems from BMPs due to a number of calls they were receiving)

### **Monroe County Conservation District Guidance: Stormwater Management and West Nile Virus**

**Source: Brodhead McMichaels Creeks Watershed Act 167 Stormwater Management Ordinance Final Draft 2/23/04**

The Monroe County Conservation District recognizes the need to address the problem of nonpoint source pollution impacts caused by runoff from impervious surfaces. The new stormwater policy being integrated into Act 167 stormwater management regulations by the PA Department of Environmental Protection (PADEP) will make nonpoint pollution controls an important component of all future plans and updates to existing plans. In addition, to meet post-construction anti-degradation standards under the state National Pollutant Discharge Elimination System (NPDES) permitting program, applicants will be required to employ Best Management Practices (BMPs) to address nonpoint pollution concerns.

Studies conducted throughout the United States have shown that wet basins and in particular constructed wetlands are effective in traditional stormwater management areas such as channel stability and flood control and are one of the most effective ways to remove stormwater pollutants (United States Environmental Protection Agency 1991, Center for Watershed Protection 2000). From Maryland to Oregon, studies have shown that as urbanization and impervious surfaces increase in a watershed, the streams in those watersheds become degraded (CWP 2000). Although there is debate over the threshold of impervious cover when degradation becomes apparent (some studies show as little as 6% while others show closer to 20%), there is agreement that impervious surfaces cause nonpoint pollution in urban and urbanizing watersheds and that degradation is ensured if stormwater BMPs are not implemented.

Although constructed wetlands and ponds are desirable from a water quality perspective, there may be concerns about the possibility of these stormwater management structures becoming breeding grounds for mosquitoes. The Conservation District feels that although it may be a valid concern, **municipalities should not adopt ordinance provisions prohibiting wet basins for stormwater management.**

### **Mosquitoes**

The questions surrounding mosquito production in wetlands and ponds have intensified in recent years by the outbreak of the mosquito-borne West Nile Virus. As is the case with all vector-borne maladies, the life cycle of West Nile Virus is complicated, traveling from mosquito to bird, back to mosquito, and then to other animals including humans. *Culex pipiens* was identified as the vector species in the first documented cases from New York in 1999. This species is still considered the primary transmitter of the disease across its range. Today there are some 60 species of mosquitoes that inhabit Pennsylvania. Along with *C. pipiens*, three other

species have been identified as vectors of West Nile Virus while four more have been identified as potential vectors.

The four known vectors in NE Pennsylvania are *Culex pipiens*, *C. restuans*, *C. salinarius*, and *Ochlerotatus japonicus*. All four of these species prefer, and almost exclusively use, artificial containers (old tires, rain gutters, birdbaths, etc.) as larval habitats. In the case of *C. pipiens*, the most notorious of the vector mosquitoes, the dirtier the water, the better they like it. The important factor is that these species do not thrive in functioning wetlands where competition for resources and predation by larger aquatic and terrestrial organisms is high.

The remaining four species, *Aedes vexans*, *Ochlerotatus Canadensis*, *O. triseriatus*, and *O. trivittatus*, are currently considered potential vectors due to laboratory tests (except the *O. trivittatus*, which did have one confirmed vector pool for West Nile Virus in PA during 2002). All four of these species prefer vernal habitats and ponded woodland areas following heavy summer rains. These species may be the greatest threat of disease transmission around stormwater basins that pond water for more than four days. This can be mitigated, however, by establishing ecologically functioning wetlands.

### **Stormwater Facilities**

If a stormwater wetland or pond is constructed properly and a diverse ecological community develops, mosquitoes should not become a problem. Wet basins and wetlands constructed as stormwater management facilities should be designed to attract a diverse wildlife community. If a wetland is planned, proper hydrologic soil conditions and the establishment of hydrophytic vegetation will promote the population of the wetland by amphibians and other mosquito predators. In natural wetlands, predatory insects and amphibians are effective at keeping mosquito populations in check during the larval stage of development while birds and bats prey on adult mosquitoes.

The design of a stormwater wetland must include the selection of hydrophytic plant species for their pollutant uptake capabilities and for not contributing to the potential for vector mosquito breeding. In particular, species of emergent vegetation with little submerged growth are preferable. By limiting the vegetation growing below the water surface, larvae lose protective cover, and there is less chance of anaerobic conditions occurring in the water.

Stormwater ponds can be designed for multiple purposes. When incorporated into an open space design, a pond can serve as a stormwater management facility and a community amenity. Aeration fountains and stocked fish should be added to keep larval mosquito populations in check.

Publications from the PA Department of Health and the Penn State Cooperative Extension concerning West Nile Virus identify aggressive public education about the risks posed by standing water in artificial containers (tires, trash cans, rain gutters, bird baths) as the most effective method to control vector mosquitoes.

## **Conclusion**

The Conservation District understands the pressure faced by municipalities when dealing with multifaceted issues such as stormwater management and encourages the incorporation of water quality management techniques into stormwater designs. As Monroe County continues to grow, conservation design, infiltration, and constructed wetlands and ponds should be among the preferred design options to reduce the impacts of increases in impervious surfaces. When designed and constructed appropriately, the runoff mitigation benefits to the community from these design options will far outweigh their potential to become breeding grounds for mosquitoes.



**ORDINANCE APPENDIX F**

**STORMWATER  
BEST MANAGEMENT PRACTICES  
AND CONVEYANCES  
OPERATION AND MAINTENANCE AGREEMENT**

REVISED  
Chester County Water Resources Authority  
June 2, 2022

Prepared By: <i>Buckley Brion McGuire &amp; Morris LLP</i> <i>118 West Market Street</i> <i>West Chester, PA 19382</i> <i>(610) 436-4400</i>  Return To: <i>Borough of West Chester</i> <i>401 East Gay Street</i> <i>West Chester, PA 19380</i> <i>(610) 692-7574</i>  UPI#: Property Street Address:	LEAVE BLANK For Recorder's Use Only
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**STORMWATER BEST MANAGEMENT PRACTICES (BMPs) AND  
 CONVEYANCES  
 OPERATION AND MAINTENANCE AGREEMENT**

**THIS AGREEMENT**, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between \_\_\_\_\_, (hereinafter the "Landowner"), and Borough of West Chester, Chester County, Pennsylvania, (hereinafter "Municipality");

**WITNESSETH**

**WHEREAS**, the Landowner is the owner of certain real property by virtue of a deed of Conveyance recorded in the land records of Chester County, Pennsylvania, at Deed Book \_\_\_\_\_ and Page \_\_\_\_\_, (hereinafter "Property"); and

**WHEREAS**, the Landowner is proceeding to build and develop the Property; and

**WHEREAS**, the Stormwater Best Management Practices (hereinafter BMP(s)) and Conveyances Operations and Maintenance Plan OR Simplified Approach Stormwater Management Site Plan \_\_\_\_\_ (title of approved plans), dated \_\_\_\_\_ approved by the Municipality (hereinafter referred to as the "Plan") for the Property, which is attached hereto as Appendix A and made part hereof, provides for management of stormwater within the confines of the Property through the use of BMP(s) and Conveyances; and

**WHEREAS**, the Municipality and the Landowner, for itself and its administrators, executors, successors, heirs, and assigns, agree that the health, safety, and welfare of the residents of the Municipality and the protection and maintenance of water quality require that stormwater BMP(s) and Conveyances be constructed and maintained on the Property; and

**WHEREAS**, for the purposes of this Agreement, the following definitions shall apply:

**BMP – “Best Management Practice”** – Activities, facilities, designs, measures, or procedures as specifically identified in the Plan, used to manage stormwater impacts from Regulated Activities to provide water quality treatment, infiltration, volume reduction, and/or peak rate control, to promote groundwater recharge, and to otherwise meet the purposes of the Municipality’s Stormwater Management Ordinance. Stormwater BMPs are commonly grouped into one (1) of two (2) broad categories or measures: “structural” or “nonstructural.” Nonstructural BMPs or measures refer to low impact development and conservation design practices used to minimize the contact of pollutants with stormwater runoff. These practices aim to limit the total volume of stormwater runoff and manage stormwater at its source by techniques such as protecting natural systems and incorporating existing landscape features. Nonstructural BMPs include, but are not limited to, the protection of sensitive and special value features such as wetlands and riparian areas, the preservation of open space while clustering and concentrating development, the reduction of impervious cover, and the disconnection of downspouts from storm sewers. Structural BMPs are those that consist of a constructed system that is designed and engineered to capture and treat stormwater runoff. Structural BMPs are those that consist of a physical system that is designed and engineered to capture and treat stormwater runoff. Structural BMPs include, but are not limited to, a wide variety of practices and devices from large-scale retention ponds and constructed wetlands to small-scale underground treatment systems, infiltration facilities, filter strips, bioretention, wet ponds, permeable paving, grassed swales, riparian buffers, sand filters, detention basins, and other manufactured devices designed to mitigate stormwater impacts. The BMPs identified in the Plan are permanent appurtenances to the Property; and

**Conveyance** – As specifically identified in the Plan, a manmade, existing or proposed facility, feature or channel used for the transportation or transmission of stormwater from one place to another, including pipes, drainage ditches, channels and swales (vegetated and other), gutters, stream channels, and like facilities or features. The Conveyances identified in the Plan are permanent appurtenances to the Property; and

**WHEREAS**, the Municipality requires, through the implementation of the Plan, that stormwater management BMPs and conveyances, as required by the Plan and the Municipality’s Stormwater Management Ordinance, be constructed and adequately inspected, operated and maintained by the Landowner or their designee.

**NOW, THEREFORE**, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto, intending to be legally bound hereby, agree as follows:

1. The foregoing recitals to this Agreement are incorporated as terms of this Agreement as if fully set forth in the body of this Agreement.
2. The Landowner shall construct the BMP(s) and Conveyance(s) in accordance with the final stormwater management site plans and specifications OR Simplified Approach Stormwater Management Site Plan as approved by the Municipality in the Plan.

3. Upon completion of construction, the Landowner shall be responsible for completing final As-Built Plans of all BMPs, Conveyances, or other stormwater management facilities included in the approved stormwater management site plan as per the requirements of the Stormwater Management Ordinance.

4. The Landowner shall inspect, operate and maintain the BMP(s) and Conveyance(s) as shown on the Plan in good working order acceptable to the Municipality and in accordance with the specific inspection and maintenance requirements in the approved Plan and the current version of the Pennsylvania Stormwater BMP Manual, as amended.

5. The Landowner hereby grants permission to the Municipality, its authorized agents and employees, to enter upon the Property from a public right-of-way or roadway, at reasonable times and upon presentation of proper identification, to inspect the BMP(s) and Conveyance(s) whenever it deems necessary for compliance with this Agreement, the Plan and the Municipality's Stormwater Management Ordinance. Whenever possible, the Municipality shall notify the Landowner prior to entering the Property.

6. The Municipality shall inspect the BMP(s) and Conveyance(s) to determine if they continue to function as intended.

7. The BMP(s) and Conveyance(s) shall be inspected according to the following frequencies, at a minimum:

- a. Annually for the first 5 years.
- b. Once every 3 years thereafter.
- c. During or immediately after the cessation of a 25-year or greater storm, as determined by the Municipal Engineer.

Written inspection reports shall be created to document each inspection. The inspection report shall contain the date and time of the inspection, the individual(s) who completed the inspection, the location of the BMP, facility or structure inspected, observations on performance, and recommendations for improving performance, if applicable. Inspection reports shall be submitted to the Municipality within 30 days following completion of the inspection.

Landowners must notify the Municipality of BMP(s) and Conveyance(s) that are no longer functioning as designed and must coordinate with the Municipality to determine a schedule to repair or retrofit these systems to restore designed functionality.

8. The Landowner acknowledges that, per the Municipality's Stormwater Ordinance, it is unlawful, without written approval of the Municipality, to:

- a. Modify, remove, fill, landscape, alter or impair the effectiveness of any BMP or Conveyance that is constructed as part of the approved Plan;
- b. Place any structure, fill, landscaping, additional vegetation, yard waste, brush cuttings, or other waste or debris into a BMP or Conveyance that would limit or alter the functioning of the BMP or Conveyance;

- c. Allow the BMP or Conveyance to exist in a condition which does not conform to the approved Plan or this Agreement; and
- d. Dispose of, discharge, place or otherwise allow pollutants including, but not limited to, deicers, pool additives, household chemicals, and automotive fluids to directly or indirectly enter any BMP or Conveyance.

9. In the event that the Landowner fails to operate and maintain the BMP(s) and Conveyance(s) as shown on the Plan in good working order acceptable to the Municipality, the Landowner shall be in violation of this Agreement, and the Landowner agrees that the Municipality or its representatives may, in addition to and not in derogation or diminution of any remedies available to it under the Stormwater Ordinance or other statutes, codes, rules or regulations, or this Agreement, enter upon the Property and take whatever action is deemed necessary to maintain said BMP(s) and Conveyance(s). It is expressly understood and agreed that the Municipality is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the Municipality.

10. In the event that the Municipality, pursuant to this Agreement, performs work of any nature or expends any funds in performance of said work for inspection, labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the Municipality for all expenses (direct and indirect) incurred within thirty (30) days of delivery of an invoice from the Municipality. Failure of the Landowner to make prompt payment to the Municipality may result in enforcement proceedings, which may include the filing of a lien against the Property, which filing is expressly authorized by the Landowner.

11. The intent and purpose of this Agreement is to ensure the proper maintenance of the on-site BMP(s) and Conveyance(s) by the Landowner; provided, however, that this Agreement shall not be deemed to create or affect any additional liability on any party for damage alleged to result from or be caused by stormwater runoff.

12. The Landowner, for itself and its executors, administrators, assigns, heirs, and other successors in interest, hereby releases and shall release the Municipality's employees, its agents and designated representatives from all damages, accidents, casualties, occurrences, or claims which might arise or be asserted against said employees, agents or representatives arising out of the construction, presence, existence, or maintenance of the BMP(s) and Conveyance(s) either by the Landowner or Municipality. In the event that a claim is asserted or threatened against the Municipality, its employees, agents or designated representatives, the Municipality shall notify the Landowner, and the Landowner shall defend, at his own expense, any claim, suit, action or proceeding, or any threatened claim, suit, action or proceeding against the Municipality, or, at the request of the Municipality, pay the cost, including attorneys' fees, of defense of the same undertaken on behalf of the Municipality. If any judgment or claims against the Municipality's employees, agents or designated representatives shall be allowed, the Landowner shall pay all damages, judgments or claims and any costs and expenses incurred by the Municipality, including attorneys' fees, regarding said damages, judgments or claims.

13. The Municipality may enforce this Agreement in accordance with its Stormwater Ordinance, at law or in equity, against the Landowner for breach of this Agreement. Remedies may include fines, penalties, damages or such equitable relief as the parties may agree upon or as may

be determined by a Court of competent jurisdiction. Recovery by the Municipality shall include its reasonable attorneys' fees and costs incurred in seeking relief under this Agreement.

14. Failure or delay in enforcing any provision of this Agreement shall not constitute a waiver by the Municipality of its rights of enforcement hereunder.

15. The Landowner shall inform future buyers of the Property about the function of, operation, inspection and maintenance requirements of the BMP(s) prior to the purchase of the Property by said future buyer, and upon purchase of the Property the future buyer assumes all responsibilities as Landowner and must comply with all components of this Agreement.

16. This Agreement shall inure to the benefit of and be binding upon the Municipality and the Landowner, as well as their heirs, administrators, executors, assigns and successors in interest.

This Agreement shall be recorded at the Office of the Recorder of Deeds of Chester County, Pennsylvania, and shall constitute a covenant running with the Property, in perpetuity.

WITNESS the following signatures and seals:

ATTEST:

(SEAL)

BOROUGH OF WEST CHESTER

\_\_\_\_\_  
Secretary

BY: \_\_\_\_\_

WITNESS:

LANDOWNER

\_\_\_\_\_

BY: \_\_\_\_\_





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# AGENDA

## Public Works Committee

rev 2.0: 7-12-2021

Date: July 13, 2021 @ 6:00 PM

**Committee Members:** Don Braceland (Chair)  
Bernie Flynn  
Lisa Dorsey

**Department Heads:** Al Vennettilli, Director of Public Works  
Sean Mitchell, Wastewater Superintendent Goose Creek  
Michael Findley, Wastewater Superintendent Taylor Run  
Keith Kurowski, Director of Parks & Recreation

**Borough Manager:** Michael A. Perrone, C.B.O. – Borough Manager

### Attachment Information:

Visit [www.west-chester.com](http://www.west-chester.com) for easy access to all attachments. Please see the table on the front page to view all Committee agendas and attachments.

1. Call to Order
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda
3. Consider accepting hourly rates for Shade Tree Maintenance from Elite Tree Care for the remainder of 2021 and 2022. **(See PW attachment)**
4. Consider awarding the Taylor Run WWTP Tertiary Filtration System Project Bids for civil/mechanical and electrical for a combined low bid of \$1,484,500.00. **(See WW attachment)**
  - a. JEV Construction LLC of Clinton, NJ submitted the low bid of \$1,388,600.00 for civil/mechanical work.
  - b. Eastern Environmental Contractors, Inc. of Green Lane, PA submitted the low bid of \$95,900.00 for electrical work.
5. Approve the resolution for authorizing the filing of a grant application for wastewater system upgrade capital program funds with the Chester County Department of Community Development – Community Revitalization Program. **(See WW attachment)**
6. Approve Keystone Alliance to perform a Sewer Tap Fee Study for \$4,500.00. **(See WW attachment)**
7. Discuss leasing options for replacing 2007 Street Sweeper.
8. Discuss charging a fee for bulk trash pick-up.

This meeting is being audio recorded for the public record.

9. Presentation of Preliminary 2022 Public Works Operations Budget
10. Presentation of Preliminary 2022 Parks & Recreation Operations Budget
11. **Presentation of Preliminary 2022 Stream Protection Operations Budget**
12. Discuss Larvicide Program.
13. Approve June 2021 meeting minutes.
14. Adjourn

PW= Public Works

WW=Waste Water

PR= Parks and Recreation

This meeting is being audio recorded for the public record.

## Public Works Committee

Date: **July 13, 2021, 6:00 PM**

Committee Members Present: Don Braceland (Chair)  
Bernie Flynn  
Lisa Dorsey

Department Heads Present:  
Al Vennetilli, Director Public Works  
Keith Kurowski, Director of Parks and Recreation  
Sean Mitchell, Goose Creek Wastewater Superintendent  
Will Williams, Sustainability Director

Borough Manager: Michael A. Perrone, C.B.O.

Assistant Borough Manager: Sean Metrick

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1. Call to Order - meeting was called to order at 6:02 PM
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda.
  - No Comments
3. **Consider accepting hourly rates for Shade Tree Maintenance from Elite Tree Care for the remainder of 2021 and 2022. (See PW attachment)**
  - **Al Vennetilli, Public Works Director, explained the previous contract was mutually terminated with Knight Brothers. A bid went out on PennBid for tree maintenance for the remainder of 2021 and for 2022. Elite Tree Care was the lowest bidder. Their references were checked, and they are well qualified.**
    - **Sent to worksession with a vote of 3-0**
4. Consider awarding the Taylor Run WWTP Tertiary Filtration System Project Bids for civil/mechanical and electrical for a combined low bid of \$1,484,500.00. **(See WW attachment)**
  - a. JEV Construction LLC of Clinton, NJ submitted the low bid of \$1,388,600.00 for civil/mechanical work.
  - b. Eastern Environmental Contractors, Inc. of Green Lane, PA submitted the low-bid of \$95,900.00 for electrical work.
    - Sean Mitchell, Wastewater Superintendent, explained this project is per the DEP mandates. The project reduces aluminum and phosphate. The bids were coordinated by the wastewater plant engineers and all references were checked.
      - **Sent to worksession with a vote of 3-0**

This meeting is being audio recorded for the public record.

5. Approve the resolution for authorizing the filing of a grant application for wastewater system upgrade capital program funds with the Chester County Department of Community Development – Community Revitalization Program. **(See WW attachment)**
  - Sean Mitchell explained the grant is from the Chester County Community Revitalization Program to help off-set the cost of the wastewater system upgrades.
    - **Sent to worksession with a vote of 3-0**
  
6. Approve Keystone Alliance to perform a Sewer Tap Fee Study for \$4,500.00. **(See WW attachment)**
  - Sean Mitchell explained that the contractors connecting to the Borough's sewer system pay a tap in fee. This rate has been \$2,332/edu since 2004. This rate needs to be reviewed and increased. Ms. Dorsey asked how often the fees should be reviewed. Mr. Mitchell said every 6 years. Mr. Perrone stated it was overlooked that they have not been reviewed for a few years.
    - **Sent to worksession with a vote of 3-0**
  
7. **Discuss leasing options for replacing 2007 Street Sweeper.**
  - **Mr. Vennettilli explained the 2007 sweeper is need major repairs that will cost around \$25,000 to fix and the 2016 sweeper is also in need of repairs, in the amount of \$10,650. Mr. Vennettilli spoke with PW Directors at other municipalities to see how they financed/leased equipment. Mr. Vennettilli acknowledged there was no budget for this item but hoped Council would consider other financing options. He placed a bid out and received four different lease rates from S&T, TD, Fulton and Uninvest. The lowest interest rate was 2.85% for a 5-year lease with quarterly payments of \$13,775. A decision needs to be made to repair or replace. Mr. Flynn suggested this be discussed at the Finance Committee meeting on Wednesday, July 14, 2021. Mr. Flynn also suggested using some of the SPF funds to pay for the sweeper. Mr. Vennettilli expressed concern because the streets are not getting cleaned and the cost to rent a sweeper is over \$1,800 per day. Mr. Flynn and Mr. Braceland agreed with Mr. Vennettilli's approach of a lease purchase since the normal life cycle of a sweeper is 10 to 12 years.**
    - **No action – further discussion needed**
  
8. Discuss charging a fee for bulk trash pick-up.
  - Mr. Braceland explained he received an email and suggestion from former Council member John Manion regarding charging for bulk trash pick-up. Mr. Manion did some research on neighboring municipalities and forwarded it to Council members. Mr. Vennettilli stated that the Borough was charged \$2,500 last year to dispose of mattresses. Everyone agreed that they need to continue this discussion since trash fees increase every year. Mr. Perrone stated that Will Williams, Sustainability Director, is currently doing a sustainability study of trash costs per household.

Dale McClure, Marshall Street resident, questioned if this would eliminate the once-a-month bulk item pick-up. Since the idea is still being evaluated, no answer could be given.

  - **No action – further discussion needed**

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9. Presentation of Preliminary 2022 Public Works Operations Budget
  - Mr. Vennettilli provided a preliminary overview of the PW Budget
10. Presentation of Preliminary 2022 Parks & Recreation Operations Budget
  - Mr. Kurowski provided a preliminary overview of the Recreation Budget
11. Presentation of Preliminary 2022 Stream Protection Operations Budget
  - Mr. Williams provided a preliminary overview of the Stream Protection Budget
12. Discuss Larvicide Program
  - Interim Mayor Norley wanted to discuss spraying and the current larvicide program in the Borough. Mr. Perrone explained that the Borough does not spray for mosquitos, only the County sprays. We distribute mosquito dunks to residents to place on their private property and PW places dunks in low lying areas and inlets. Will Williams has taken over the residential dunk distribution from Public Works. The Borough is not permitted to place any dunks on private property. Mr. Norley wanted to improve on the education portion. Mr. Flynn explained a few years back door hangers were part of a public relations blitz, and the County tracked the West Nile Virus. Mr. Flynn also stated there were excess door hangers and he would supply them to Mr. Norley and his team could coordinate volunteer efforts.
    - No action
13. Approve June 2021 meeting minutes.
  - Approved with no changes 3 – 0
14. Adjourn 7:17 PM

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# AGENDA

## Public Works Committee

**Date:** August 10, 2021 @ 6:00 PM

**Committee Members:** Don Braceland (Chair)  
Bernie Flynn  
Lisa Dorsey

**Department Heads:** Al Vennetilli, Director of Public Works  
Sean Mitchell, Wastewater Superintendent Goose Creek  
Michael Findley, Wastewater Superintendent Taylor Run  
Keith Kurowski, Director of Parks & Recreation

**Borough Manager:** Michael A. Perrone, C.B.O. – Borough Manager

### Attachment Information:

Visit [www.west-chester.com](http://www.west-chester.com) for easy access to all attachments. Please see the table on the front page to view all Committee agendas and attachments.

1. Call to Order
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda
3. Consider approving West Chester Business Improvement District (WC BID) request to apply for a grant to wrap the Big Belly trash cans. The WC BID will cover all costs. (See **PW attachment**)
4. Authorize Public Works to purchase a new Street Sweeper at an approximate cost of \$260,000 and to repair the 2016 model Street Sweeper at a cost of approximately \$11,000 using the American Rescue Plan Funds.
5. Authorize Public Works to lease a new Ford F-550 Dump Body Truck to replace current 2011 model F-550, at an estimated annual cost of \$13,656.00 (See **PW attachment**)
6. Approve the sale of the Ford Explorer used as a Police training vehicle on MuniBid.
7. Consider awarding bid for site work and stormwater management facilities for Everhart Park improvement project. (See **PR attachment**)
8. Approve July 2021 meeting minutes.
9. Adjourn

This meeting is being audio recorded for the public record.

## Public Works Committee

Date: **August 10, 2021, 6:00 PM**

Committee Members Present: Don Braceland (Chair)  
Bernie Flynn  
Lisa Dorsey

Department Heads Present:  
Al Vennetilli, Director Public Works  
Keith Kurowski, Director of Parks and Recreation  
Sean Mitchell, Goose Creek Wastewater Superintendent  
Will Williams, Sustainability Director

Borough Manager: Michael A. Perrone, C.B.O.

Assistant Borough Manager: Sean Metrick

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1. Call to Order - meeting was called to order at 6:00 PM
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda.
  - John O'Brien, from the BID, discussed an initiative with the West Chester Green Team to start planting to attract pollinators. The plantings would be in S. Prescott Alley near the Chestnut Street Parking Garage. The BID is paying for everything. Plantings would start in Fall 2021 through Spring 2022.
  - No action
3. Consider approving West Chester Business Improvement District (WC BID) request to apply for a grant to wrap the Big Belly trash cans. The WC BID will cover all costs. (**See PW attachment**)
  - John O'Brien from BID explained that the BID is interested in submitting a preliminary grant application to wrap the remaining Big Belly trash cans in the Business Improvement District. The wrap messaging will be public education on recycling. BID would cover all costs. Mr. Flynn stated the wraps have cut down on graffiti. Mr. Perrone said Council should approve the artwork.
  - **Sent to worksession with a vote of 3-0**
4. Authorize Public Works to purchase a new Street Sweeper at an approximate cost of \$260,000 and to repair the 2016 model Street Sweeper at a cost of approximately \$11,000 using the American Rescue Plan Funds. (**See PW attachment**)
  - Al Vennetilli, Public Works Director, explained the 2007 sweeper is need major repairs that will cost around \$25,000 to fix and the 2016 sweeper is also in need of repairs, in the amount of approx. \$11,000~~6,650~~. Mr. Vennetilli is recommending that the Borough purchase a new sweeper with the American Rescue Plan Funds. Mr. Flynn asked why the funds could be used and Mr. Perrone explained the MS4 and Streams are tied to

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the street sweeper and can be utilized for this purchase. Ms. Dorsey requested that

- #4 continued -- Ms. Lioni, Finance Director, explain the American Rescue Plan funds. Ms. Lioni, explained the Borough received \$1,000,000 in rescue funds due to Covid -19. These funds can only be used in four categories and improving Stormwater Management is one of the areas. This is government money and was not in our budget for 2021, but Mr. Perrone stated it needs to be budgeted for 2022. Also, explained these funds will be closely audited. Mr. Perrone said that item #7 on the agenda is asking to use these funds for Everhart Park.

Ms. Lillian DeBaptiste of Walden Drive questioned if Montgomery Avenue flooding at Goose Creek can be included. Mr. Braceland and Mr. Perrone both stated that is West Goshen. Mr. Perrone also explained that the Borough and West Goshen are applying for grants for Goose Creek watershed which goes from near LA Fitness in West Goshen through the Borough. The stream channel is not big enough and needs to be a joint project.

Dale McClure of W. Marshall Street questioned how long the sweepers have been down. Mr. Vennettilli explained the 2016 sweeper has been down for 7 weeks while the 2007 has been down for 10 weeks. Mr. McClure questioned why community service can't clean up the streets. Mr. Flynn explained the community service people are only working in the BID – downtown area. Mr. McClure also asked why there wasn't a moratorium on writing tickets in the 8 – 11. Mr. Flynn explained it enables Public Works to pick up limbs and also do any additional road work.

- Sent to worksession with a vote of 3-0

5. Authorize Public Works to lease a new Ford F-550 Dump Body Truck to replace current 2011 model F-550, at an estimated annual cost of \$13,656.00 (**See PW attachment**)
  - Mr. Vennettilli is requesting to lease a new F550 dump truck. It is our work horse truck and primary truck used during snowstorms. We could lease it from Enterprise as this is the largest vehicle, they could provide to us. While this wasn't in the packet of vehicles discussed last month Mr. Vennettilli explained this is for 2021 and last months discussion was for 2022. Mr. Flynn asked Ms. Lioni if there were any available funds that could be used. Ms. Lioni stated there were some savings in Public Works. Ms. Dorsey would like to review the line items before the work session discussions.
    - Further discussion at work session
6. Approve the sale of the Ford Explorer used as a Police training vehicle on MuniBid.
  - Mr. Braceland explained this is a straight-forward sale of a vehicle no longer in use on MuniBid.
    - Sent to worksession with a vote of 3-0

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7. Consider awarding bid for site work and stormwater management facilities for Everhart Park improvement project. (**See PR attachment**)
  - Keith Kurowski, Parks and Recreation Director, explained the site work and stormwater management project for Everhart Park. Grants have been received for this project as well as utilizing funds from the American Rescue Plan. Discussions ensued and the committee approved to go forward.
    - **Sent to worksession with a vote of 3-0**
8. Approve July 2021 meeting minutes.
  - Approved with no changes 3 – 0
9. Adjourn 6:48 PM

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# AGENDA

## Public Works Committee

Date: **October 12, 2021 @ 6:00 PM**

**Committee Members:** Don Braceland (Chair)  
Bernie Flynn  
Lisa Dorsey

**Department Heads:** Al Vennettilli, Director of Public Works  
Sean Mitchell, Wastewater Superintendent Goose Creek  
Michael Findley, Wastewater Superintendent Taylor Run  
Keith Kurowski, Director of Parks & Recreation

**Borough Manager:** Michael A. Perrone, C.B.O. – Borough Manager

### Attachment Information:

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1. Call to Order
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda
3. **Discuss stormwater damages and issues from Tropical Storm Ida**
4. Adopt a resolution and authorize entering into Winter Maintenance Services Agreement with PennDot for snow and ice removal on PennDot roadways throughout the Borough for the winter of 2021 – 2022 (**See PW attachments**)
5. Consider request to amend Chapter 104: Vehicle and Traffic Article III Parking Regulations 104-32 – Parking prohibited during certain hours to read as shown below: (**See PW attachments**)

<u>Highway</u>	<u>Side</u>	<u>Days/Hours/Location</u>
S. Brandywine St.	East	Wednesdays 8:00AM – 11:00AM W. Union St. to Dean St.
S. Brandywine St.	West	Thursdays 8:00AM – 11:00AM W. Union St. to Dean St.

6. Authorize the leasing of a new Ford F-600 Dump Body with winter maintenance upfitting at an estimated monthly lease rate of \$1,700.00
7. Authorize the sale of the 2006 Ford Econoline E-350 Maintenance Van and the Parking Enforcement 2004 Jeep Grand Cherokee on Muni-Bid.

This meeting is being audio recorded for the public record.

## Public Works Committee

Date: **October 12, 2021, 6:00 PM**

Committee Members Present: Don Braceland (Chair)  
Bernie Flynn  
Lisa Dorsey

Department Heads Present:  
Al Vennettilli, Director Public Works  
Keith Kurowski, Director of Parks and Recreation  
Michael Findley, Taylor Run Creek Wastewater Superintendent  
Will Williams, Sustainability Director

Borough Manager: Michael A. Perrone, C.B.O. (absent)  
Assistant Borough Manager: Sean Metrick

\*\*\*\*\*

1. Call to Order - meeting was called to order at 6:00 PM
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda.
  - None
3. Discuss stormwater damages and issues from Tropical Storm Ida.
  - Al Vennettilli, Public Works Director, discussed the damages as a result of Tropical Storm Ida. Mr. Vennettilli showed images of the damage. 200 S. Franklin Street has a 7' wide x 10' long x 7' deep sink hole. Contractor has been brought in to do the repairs and line has been partially videoed. The line has been flushed and we are waiting on the new pipe to finish this emergency repair. 317 E. Marshall has a 36" metal pipe between two homes causing several sink holes in the rear yards. The video shows the pipe has deteriorated and the bottom has rotted to the point where stone is visible below the pipe. The SW corner of S. Matlack and E. Miner has a sinkhole near a storm inlet. The pipe is a brick pipe and has begun collapsing. The pipe is half full of brick and debris and needs to be replaced with new pipe.
    - No action
4. Adopt a resolution and authorize entering into Winter Maintenance Services Agreement with PennDot for snow and ice removal on PennDot roadways throughout the Borough for the winter of 2021 – 2022. **(See PW attachment)**
  - Mr. Vennettilli explained this in an on-going agreement with PADOT to reimburse the Borough for salting and plowing PADOT roadways during winter storms for the next 5-year period. It is a new agreement which Buckley Brion has reviewed.
    - Sent to worksession with a vote of 3-0

This meeting is being audio recorded for the public record.

# AGENDA

## Public Works Committee

Date: **December 7, 2021 @ 6:00 PM**

**Committee Members:** Don Braceland (Chair)  
Bernie Flynn  
Lisa Dorsey

**Department Heads:** Al Vennettilli, Director of Public Works  
Sean Mitchell, Wastewater Superintendent Goose Creek  
Michael Findley, Wastewater Superintendent Taylor Run  
Keith Kurowski, Director of Parks & Recreation

**Borough Manager:** Michael A. Perrone, C.B.O. – Borough Manager

### Attachment Information:

Visit [www.west-chester.com](http://www.west-chester.com) for easy access to all attachments. Please see the table on the front page to view all Committee agendas and attachments.

1. Call to Order
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda
3. Consider awarding the Installation of the Verizon Street Light Nodes on the Borough Street Lights to Lenni Electric Corporation in the amount of \$133,803.67. **(PW attachment)**
4. Consider awarding the Traffic Signal Improvements Project to Miller Bros. in the amount of \$508,839.38. **(PW attachment)**
5. Consider awarding the annual contracts to the following: **(PW attachments)**
  - a. 2022 Furnishing of Materials to Glasgow, Inc. at the attached unit prices.
  - b. **2022 Rain Garden Maintenance to All Seasons Landscaping Co., Inc. in the amount of \$20,500.00.**
  - c. 2022 Street & Traffic Signage to Garden State Highway Products, Inc. in the amount of \$31,970.56.
  - d. **2022 Shade Tree Planting to All Seasons Landscaping Co., Inc. in the amount of \$38,600.00.**
6. Consider amending the Sewer Ordinance, Chapter 89-1.1H, to specifically state that is it the property owner's responsibility to maintain and repair the sewer lateral and its connection to the sewer main.
7. Consider amending the Tree Ordinance, Chapter 102-3E, to limit the tree removal reimbursement to 50% of the cost, up to a maximum of \$750.00, conditioned upon replacing of the tree within 3 months. **(PW attachment)**
8. Consider revising the fee schedule to charge a fee of \$50 for large bulk trash pickup items and charging a recycling \$10 fee for up to 17" tires and \$25 for over 17" tires. **(PW attachment)**

This meeting is being audio recorded for the public record.

## Public Works Committee

**Date:** December 7, 2021, 6:00 PM

Committee Members Present: Don Braceland (Chair)  
Bernie Flynn  
Lisa Dorsey

Department Heads Present:  
Al Vennettilli, Director Public Works  
Keith Kurowski, Director of Parks and Recreation  
Michael Findley, Taylor Run Creek Wastewater Superintendent  
Will Williams, Sustainability Director

Borough Manager: Michael A. Perrone, C.B.O.  
Assistant Borough Manager: Sean Metrick

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1. Call to Order - meeting was called to order at 6:00 PM
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda.
  - None
3. Consider awarding the Installation of the Verizon Street Light Nodes on the Borough Street Lights to Lenni Electric Corporation in the amount of \$133,803.67. **(PW attachment)**
  - Al Vennettilli, Public Works Director, explained the project installation went to bid and Lenni Electric was the low bidder out of two bidders. Lenni's bid came in under what was budgeted in 2022. Councilman Mr. Flynn wants to install the nodes in certain wards first because it is so dark. Mr. Vennettilli stated that Lenni would be coming up with a schedule that was feasible and logistically sound. The hope is for the project to start in January 2022 and is expected to last four (4) months.
    - Sent to worksession with a vote of 3 – 0
4. Consider awarding the Traffic Signal Improvements Project to Miller Bros. in the amount of \$508,839.38. **(PW attachment)**
  - Mr. Vennettilli explained this is part of the Green Light Go grant. The Borough received \$688,000 and had to match \$172,000 to install and program the closed loop system relative to the traffic signal improvement project to Miller Brothers in the amount of \$508,839.38. This will update 18 intersections. PADOT requested we bid out eleven additional signals which put the Borough over budget, so we are recommending using the bid for 18 intersections.
    - Sent to worksession with a vote of 3 – 0

This meeting is being audio recorded for the public record.

5. Consider awarding the annual contracts to the following: (**PW attachments**)
  - 2022 Furnishing of Materials to Glasgow, Inc. at the attached unit prices.
  - 2022 Rain Garden Maintenance to All Seasons Landscaping Co., Inc. in the amount of \$20,500.00.
  - 2022 Street & Traffic Signage to Garden State Highway Products, Inc. in the amount of \$31,970.56.
  - 2022 Shade Tree Planting to All Seasons Landscaping Co., Inc. in the amount of \$38,600.00.
    - All four (4) sent to worksession with a vote of 3-0
  
6. Consider amending the Sewer Ordinance, Chapter 89-1.1H, to specifically state that it is the property owner's responsibility to maintain and repair the sewer lateral and its connection to the sewer main.
  - Mr. Vennettilli explained that this is a past practice and the ordinance needs to state more clearly who is responsible for the sewer lateral. Mr. Metrick, Assistant Borough Manager explained it is the standard practice for the property owner to maintain their lateral to the main. Mr. Braceland stated we would need the solicitor to amend the ordinance.
  - Mr. Kevin Mash, 419 N. Walnut Street spoke regarding this lateral issue. He wanted to know where in the code it specifically states he is responsible for the lateral under a public street. Mr. Mash feels we are modifying the ordinance because he asked for clarification. He also feels he shouldn't be responsible past the curb trap into the public roadway. Mr. Bill Scott spoke on behalf of his constituent in Ward 1 and doesn't believe he should be responsible for the repair.
  - Mr. Metrick will speak with the Solicitors Office, Public Works and Building & Housing and discuss further.
    - Tabled for further discussion
  
7. Consider amending the Tree Ordinance, Chapter 102-3E, to limit the tree removal reimbursement to 50% of the cost, up to a maximum of \$750.00, conditioned upon replacing of the tree within 3 months. (**PW attachment**)
  - Mr. Vennettilli explained that the Tree ordinance was amended for the Borough to reimburse property owners 50% of their cost to remove a condemned tree. The condition of reimbursement is they must commit to replant a new tree. For 2021 over 20 trees were condemned and the reimbursements cost the Borough over \$31,000 to date. There are still 16 trees condemned that haven't been submitted for reimbursement, yet which could cost the Borough an additional \$25,000. We are recommending that we reduce the reimbursement to a maximum of \$750 per property owner and they again must commit to replant.
  - Mr. Braceland asked if they use the Borough contractor could the property owner get a discount. Mr. Vennettilli stated he didn't know, but it could be discussed. Mr. Braceland asked who condemned the trees and Mr. Vennettilli explained Mike Dunn our consulting arborist along with input from the Shade Tree Commission.

# AGENDA

## Public Works Committee

**Date:** February 8, 2022 @ 6:00 PM

**Committee Members:** Patrick McCoy (Chair)  
Bernie Flynn  
Sheila Vaccaro

**Department Heads:** Al Vennettilli, Director of Public Works  
Sean Mitchell, Wastewater Superintendent Goose Creek  
Michael Findley, Wastewater Superintendent Taylor Run  
Keith Kurowski, Director of Parks & Recreation

**Borough Manager:** Sean Metrick – Borough Manager

### Attachment Information:

Visit [www.west-chester.com](http://www.west-chester.com) for easy access to all attachments. Please see the table on the front page to view all Committee agendas and attachments.

1. Call to Order
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda
3. Approve a 1-year extension of the existing Custodial Contract of \$53,604.00 with a 3% increase, totaling \$55,212.12, with ServiceMaster Services
4. Consider awarding the Marshall Drive Streambank Restoration Project to Stonewood Landshaping, Inc. in the amount of \$106,950.00. **(Attachment)**
5. Approve the easement agreements for the Marshall Drive Streambank Restoration project between the Borough of West Chester and Property Owners, relative to the following parcels **(Attachments)**:
  - UPI 1-2-41 (John McDermott)
  - UPI 1-2-42 (Jessica S. & Matthew W. Payne)
  - UPI 1-2-43 (Amanda K. Martin)
  - UPI 1-2-44 (John L. & Terese M Daly)
  - UPI 1-2-50 (Stanley M. & Lisa D. Alexander)
  - UPI 1-2-60 (Michael & Kathryn Meredith)
  - UPI 1-2-61 (Joseph V. & Dorothy J. Losito)
  - UPI 1-2-62 (Barbara J. & Philip C. Haag)
  - UPI 1-2-63 (James Christopher DeAngelo)
6. Adopt a resolution for PennDOT to abandon W. Gay Street from N. Matlack Street to N. New Street so it becomes a Borough roadway. **(Attachment)**
7. Approve the sale of a 2014 Police Ford Explorer Interceptor SUV on MunicBid due to a bad transmission.
8. Accept a \$1,000 donation from Matthew Adams for a fallen oak tree

This meeting is being audio recorded for the public record.

## Public Works Committee

Date: **February 8, 2022, 6:00 PM**

Committee Members Present: Patrick McCoy – 1<sup>st</sup> Ward (Chair)  
Bernie Flynn – 6<sup>th</sup> Ward  
Sheila Vaccaro – 5<sup>th</sup> Ward

Department Heads Present:  
Al Vennettilli, Director Public Works  
Keith Kurowski, Director of Parks and Recreation  
Will Williams, Sustainability Director

Borough Manager: Sean Metrick

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1. Call to Order - meeting was called to order at 6:00 PM
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda.
  - None
3. Consider Approve a 1-year extension of the existing Custodial Contract of \$53,604.00 with a 3% increase, totaling \$55,212.12, with ServiceMaster Services
  - Mr. Vennettilli, Public Works Director, explained the current cleaning contract has an extension clause and we are requesting a one-year extension with a 3% increase. The contract for 2023 will go out to bid at the end of this year, 2022.
    - Sent to worksession with a vote of 3 – 0
4. **Consider awarding the Marshall Drive Streambank Restoration Project to Stonewood Landshaping, Inc. in the amount of \$106,950.00. (Attachment)**
  - **Mr. Vennettilli explained this project is near Goshen Road and the 700 block of Marshall Drive. It is a two-step process of a streambank rehabilitation and further up near the outlet. The bids using riprap came in at \$106,950 s under budget even without inspection and engineering fees. Mr. Vennettilli anticipates those additional fees will still bring this project under budget. Ms. Vaccaro questioned whether there was money carried over to the 2022 budget since this project was originally budgeted in 2021? Mr. Flynn questioned whether we would need a budget modification? Ms. Barbara Lonti, Finance Director, stated we do have the cash for this project in the budget.**
    - **Sent to worksession with a vote of 3 – 0**

This meeting is being audio recorded for the public record.

5. Approve the easement agreements for the Marshall Drive Streambank Restoration project between the Borough of West Chester and Property Owners, relative to the following parcels (**Attachments**):

- UPI 1-2-41 (John McDermott)
- UPI 1-2-42 (Jessica S. & Matthew W. Payne)
- UPI 1-2-43 (Amanda K. Martin)
- UPI 1-2-44 (John L. & Terese M Daly)
- UPI 1-2-50 (Stanley M. & Lisa D. Alexander)
- UPI 1-2-60 (Michael & Kathryn Meredith)
- UPI 1-2-61 (Joseph V. & Dorothy J. Losito)
- UPI 1-2-62 (Barbara J. & Philip C. Haag)
- UPI 1-2-63 (James Christopher DeAngelo)

- Mr. Vennettilli explained that these easements are necessary for the Marshall Drive Streambank Restoration project. Two more are needed for this project to commence. The Meredith property is going to settlement shortly and the new owners have already agreed to sign the easement papers on settlement day, February 18, 2022. PW has been unsuccessful at contacting the other property owner, it was decided since only a small portion affects their property, we will modify the plan and will not touch their property.

- Sent to worksession with a vote of 3 – 0

6. Adopt a resolution for PennDOT to abandon W. Gay Street from N. Matlack Street to N. New Street so it becomes a Borough roadway. (**Attachment**)

- Mr. Metrick explained the process of gaining ownership of the PennDOT roadway: One (1) would be to swap roads and PennDOT did not want that option because it isn't frequently used; Two (2) turn back to the Borough, however, that was rejected because PennDOT would have to perform major repairs and modifications to the roadway; and three (3) abandonment which means PennDOT give to the Borough "as is". There are four conditions in the resolution which three of them are related to giving PennDOT the right to intervene on traffic flow/circulation and the Borough cannot permanently close Gay Street. If the committee and then Council approves it will be sent to Harrisburg for review and final approval. Adjustments would need to be made and financially PennDOT would adjust the Winter Snow Agreement and Liquid Fuel Tax.

Mr. Flynn has some concerns with the wording with regards to PA Road 3 and State Road 3 since Gay Street is Route 3 and not Chestnut Street. Mr. McCoy stated he would get clarification before next weeks Council Meeting. Mr. Vennettilli stated the signage states Chestnut is an alternate to PA Route 3. John O'Brien, Director of BID, stated his concerns with the resolution. He wants to know if the Borough will need approval every time from PennDOT when they want to close for an event because the current process is a nightmare. Also questioned the signs for aesthetic purposes. It was stated that PennDOT has final say over the signs.

# AGENDA

## Public Works Committee

Date: March 8, 2022 @ 6:00 PM

Committee Members: Patrick McCoy (Chair) – 1<sup>st</sup> Ward  
Bernie Flynn – 6<sup>th</sup> Ward  
Sheila Vaccaro – 5<sup>th</sup> Ward

Department Heads: Al Vennettilli, Director Public Works  
Sean Mitchell, Wastewater Superintendent Goose Creek  
Michael Findley, Wastewater Superintendent Taylor Run  
Keith Kurowski, Director of Parks & Recreation

Borough Manager: Sean Metrick – Borough Manager

### **Attachment Information:**

Visit [www.west-chester.com](http://www.west-chester.com) for easy access to all attachments. Please see the table on the front page to view all Committee agendas and attachments.

1. Call to order
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda
3. Discussion items
  - a. Wastewater monthly report
4. Action items
  - a. **Approve stormwater easements: Pipe Replacement Project**
    - i. Parcel # 1-12-167 423 College Avenue, Marcocci
    - ii. Parcel # 1-12-137.1 516 Spring Grove Lane, Markoski
    - iii. Parcel # 1-5-79, 317 E. Marshall Street, Korbonits
  - b. Approve wastewater bids:
    - i. Supply and Delivery of Soda Ash, one year contract - *Univar Solutions, Inc. - \$81,060.00*
    - ii. Supply and Delivery of Aluminum Chloride Hydroxide Sulfate, two-year contract - *USALCO, Inc. - \$149,050.00*
  - c. Approve February 2022 meeting minutes.
5. Other Business
6. Adjourn

This meeting is being audio recorded for the public record.

## Public Works Committee

Date: **March 8, 2022, 6:00 PM**

Committee Members Present: Patrick McCoy – 1<sup>st</sup> Ward (Chair)  
Bernie Flynn – 6<sup>th</sup> Ward  
Sheila Vaccaro – 5<sup>th</sup> Ward

Department Heads Present:  
Al Vennettilli, Director Public Works  
Keith Kurowski, Director of Parks and Recreation  
Will Williams, Sustainability Director  
Sean Mitchell, Superintendent Goose Creek Treatment Plant

Borough Manager: Sean Metrick

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1. Call to Order - meeting was called to order at 6:04 PM
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda.
  - Darrell Cook from 506 S. Walnut Street requested permission to have his street tree removed from his property.
3. Discussion items
  - Wastewater monthly report
    - Sean Mitchell, Superintendent, provided a status of the tertiary filter system project at Taylor Run. The pipe has been placed and there has been a delay waiting on parts. The Taylor Run NPDES permit expires in May 2022 and the application renewal is in progress. Goose Creek Copper lines have been replaced with fiber optics. Still waiting for PECO to tag ground where there is a gas line at the Davis Property. Inspection of the sulfur dioxide mixer started.
    - Personnel related: Taylor Run 1- retiree and 1 – resignation and Goose Creek 1- retiree and 1 - resignation
2. Action items
  - a. **Approve stormwater easements: to replace collapsed corrugated metal pipe**
    - i. Parcel # 1-12-167 423 College Avenue, Marcocci
    - ii. Parcel # 1-12-137.1 516 Spring Grove Lane, Markoski
    - iii. Parcel # 1-5-79, 317 E. Marshall Street, Korbonits
      - **Al Vennettilli explained the pipe replacement project is from significant damage from Hurricane Ida. The easements for College Avenue and Spring Grove are necessary to replace the pipe. The Marshall Street easement is necessary to repair the CMP pipe which deteriorated, and the inlet runs through property. This is urgent since the erosion is possibly undermining their foundation.**
        - **Sent to worksession 3 -0**

**REVISED AGENDA**  
**POSTED: June 8, 2022 at 10:00 AM**

**AGENDA**

**Public Works Committee**

Date: June 7, 2022 @ 6:00 PM

Committee Members: Patrick McCoy (Chair) – 1<sup>st</sup> Ward  
Bernie Flynn – 6<sup>th</sup> Ward  
Sheila Vaccaro – 5<sup>th</sup> Ward

Department Heads: Donald Edwards, Director Public Works  
Sean Mitchell, Wastewater Superintendent Goose Creek  
Michael Findley, Wastewater Superintendent Taylor Run  
Keith Kurowski, Director of Parks & Recreation

Borough Manager: Sean Metrick – Borough Manager

**Attachment Information:**

Visit [www.west-chester.com](http://www.west-chester.com) for easy access to all attachments. Please see the table on the front page to view all Committee agendas and attachments.

- 1) Call to order
- 2) Comments, suggestions, petitions by residents in attendance regarding items not on the agenda
- 3) Discussion items
  - a) Public Works report (attachment)
  - b) Wastewater report (attachment)
  - c) Parks and Recreation report
  - d) Friends of Parks leaf mulching proposal
- 4) Action items
  - a) Schedule a Public Hearing to amend Chapter 102, Section 102-10 “Trees” to permit the Borough Arborist to enforce the regulations of Chapter 102 (attachment)
  - b) Approve May 2022 meeting minutes (attachment)

\*c) **Consider the Greenfield Park stormwater improvements**

Mr. Flynn made a Motion to amend the June 7, 2022 Public Works agenda to add, “Consider Greenfield Park stormwater improvements;” Ms. Vaccaro made a Second to the Motion.

Mr. Flynn – Yes; Mr. McCoy – Yes; Ms. Vaccaro - Yes

Motion Carries: 3-0

- 5) Other Business
- 6) Adjourn

This meeting is being audio recorded for the public record.

## Public Works Committee

**Date:** June 7, 2022, 6:00 PM

Committee Members Present: Patrick McCoy – 1<sup>st</sup> Ward (Chair)  
Bernie Flynn – 6<sup>th</sup> Ward  
Sheila Vaccaro – 5<sup>th</sup> Ward

Department Heads Present:  
Al Vennetilli, Director Public Works  
Keith Kurowski, Director of Parks and Recreation  
Will Williams, Sustainability Director  
Sean Mitchell, Superintendent Goose Creek Treatment Plant

Borough Manager: Sean Metrick

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1. Call to Order - meeting was called to order at 6:00 PM
2. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda.
  - none
3. Discussion items
  - Public Works Report
    - Don Edwards introduced himself as the new Public Works Director. He stated he is happy to be here and excited to do some great things for the Borough. Mr. Edwards said the road paving project has started and is moving along. Mr. McCoy asked if they will be notified if there are updates. Mr. Edwards assured him that updates will be disseminated if they occur.
  - Wastewater Report
    - Sean Mitchell, Goose Creek Superintendent, explained the Tertiary Filter System Project at Taylor Run is on schedule. The block has been installed, electricians are on site and the precast wet well was lowered. Waiting on the doors and windows. Still on target to be completed by August 2022 and all preliminary testing looks good.
    - Goose Creek employees have all been hired and trained. Weekend Overtime should level off now that we are full staffed. Spring maintenance has been completed as well as the quarterly pump station clean outs and inspections.

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- Parkes and Recreation Report
  - Keith Kurowski, Parks & Recreation Director explained that they are working with West Chester Press as the Recreation Departments marketing arm instead of printing a recreation guide for over \$25,000 a year. This joint venture is a way to distribute information about events. The busy season for our department is the Summer which is upon us. We just held the Turk's Head Music Festival, and it was one of the best events in 18 years. A lot of volunteers and a high turn out for the event. The backstage crew has been volunteering for over 40 years and it was a huge success.
  - Upcoming Summer events: Summer Concert Series June 30<sup>th</sup> at Hoopes Park, July 14<sup>th</sup> at Everhart Park and August 11<sup>th</sup> at Greenfield. Movie Night will be held at Greenfield and John O' Green Park. Summer Camps are utilizing the Borough Parks via a 3<sup>rd</sup> party contracting company.
  - Next big event is to combine the "Touch A Truck" with the annual "Police Night Against Crime" in August. Beyond that the Restaurant Festival, Halloween Parade and Holiday events will take us through the Fall into Winter.
  - **Park Maintenance Projects – new biodegradable mutt mitt bags have been installed in all the parks.** Everhart Park fencing installed to save the grass. Kathy McBratnie Fall zone completed and Rustin's Fall Zone upgrade has been approved. Greenfield lights have been changed and Marshall Square's playground was upgraded. Hoopes line of sight curb issues have been resolved and damaged fence repaired. **Barclay's Spring clean-up done. John O'Green's water park has a seam issue that will be addressed in the Fall when the water park is closed for the season as to not disrupt it during the summer months.**
  - Finally, I am starting to compile and prioritize the 2023 capital projects. Mr. Flynn asked if the railroad ties at McBratnie Park were going to be removed. Mr. Kurowski said yes, we are experiencing supply chain delays, so hopefully by the end of the Summer. Ms. Vaccaro asked about the new slide and Mr. Kurowski explained it was an act of vandalism and is also on backorder.
  - Mowing and Mulching – Mr. Kurowski met with the Friends of Hoopes, Everhart and Marshall Square Parks. They expressed their concerns about mowing efforts at the Parks and their dissatisfaction. The mowing contract expires this year and up for RFP. The Park Friends would like to cut the summer cuts and have the leaves cut and mulched in the Fall. Marshall Square Friends hired an outside group the past few years and have been happy with the results and the other Friends groups want the same service. Mr. Kurowski spoke to some of the neighboring municipalities, and they do not provide this service. The Borough can consider reducing some cuts in the Summer to offset this cost. Mr. McCoy asked about spraying and Mr. Kurowski explained the Borough doesn't spray. Mr. Flynn stated he sprayed an environmentally friendly vinegar

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mixture, but it didn't work. Mr. Flynn likes the leaf mulching idea at the three big parks. Ms. Vaccaro disagreed and said we should consider other parks as well. Mr. Kurowski said more research will be done before we go to RFP.

4. Action items

- a. Schedule a Public Hearing to amend Chapter 102, Section 102-10 "Trees" to permit the Borough Arborist to enforce the regulations of Chapter 102 (attachment)

- Mr. Metrick explained we need to schedule a public hearing to amend the arborist enforcement regulations. Mr. Flynn explained this is so we can have the arborist write citations on behalf of the Borough. Mr. Metrick suggested the meeting take place on July 20, 2022, at 6:30PM.
  - Sent to worksession 3 -0

- b. Approve May 2022 meeting minutes.

- approved with a vote of 3 – 0

c. Consider the Greenfield Park stormwater improvements

- Mr. Metrick explained that approximately 5 years ago we received a grant .."audio cut out for 9 minutes"... Mr. Flynn explained that college students destroy the park and that area. It is a mess when it floods and the students use rafts and kayaks in the flood waters. The Summer is a good time to do this work because the student population drops. Mr. Flynn hopes they don't destroy the rain gardens. Ms. Vaccaro said she hopes that by elevating the area aesthetically that maybe they won't be as destructive. Mr. McCoy questioned how the water will flow into the rain garden with the current curb stops and does that entire parking area need to be improved. Mr. Flynn explained the water flows under and around the curb stops so the aren't an issue; and yes, the parking lot does need to be paved. Water flows into Goose Creek near flagpole which is in dire need to paving. R. Metrick explained the grant has been extended through July 2023.

- Action: Mr. Flynn made a motion to amend the June 7, 2022, agenda to add "Consider the Greenfield Park stormwater improvements" and Ms. Vaccaro made a second to the motion.

- Motion carries 3 – 0

5. Other Business

- none

6. Adjourn 6:45 PM

**A G E N D A**

Borough Council Worksession Meeting  
February 15, 2022 @ 7:00 PM

Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Michael Stefano	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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**Public Hearings:**

*Liquor License Hearing at 6:00 P.M.*

*44 West Gay Street; Blaze West Chester, LLC*

The Applicant is requesting Borough Council approval of an intermunicipal transfer of a restaurant liquor license from Tredyffrin Township to West Chester Borough. The Applicant proposes to use the liquor license at a new restaurant to be located on the ground floor of a building known as 44 West Gay located at 44 West Gay Street, West Chester Borough.

*Amendment to Chapter 104 at 7:00 P.M.*

Chapter 104 titled "Vehicles and Traffic," Section 104-45 to add a handicapped parking space at 3 South Brandywine Street and to remove a handicapped parking space at 215 West Lafayette Street.

**Borough Council Meeting at 7:00 P.M.:**

- 1) Call to Order
- 2) Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda
- 4) Announce the purpose of the January 18, 2022 Executive Session
- 5) Boards/Commissions/Committees Interview: Community Campus Committee  
*James Cappello; Manager - Saloon 151*
- 6) Annual report and presentation of Pop-Up Metro Shuttle Concept  
*Jo Ann Kelton and Tom Hickey - Committee to Reestablish Rail Service to West Chester*

**Administration, Communication & Technology Committee**

- 7) Schedule a Public Hearing on March 16, 2022 at 7:00 P.M. to amend Chapter 81, “Plastic Bag and Plastic Straw Regulations” (*attachment*)

*Committee Recommendation: 3-0*

**Public Works Committee**

- 8) Enter into a 1-year contract extension with ServiceMaster Services for custodial services in the amount of \$55,212.12

*Committee Recommendation: 3-0*

- 9) Enter into a contract with Stonewood Landshaping, Inc. for the Marshall Drive Streambank Restoration Project in the amount of \$106,950.00 (*attachment*)

*Committee Recommendation: 3-0*

- 10) Approve the easement agreements for the Marshall Drive Streambank Restoration Project between the Borough of West Chester and Property Owners: (*attachment*)

- UPI 1-2-41 (John McDermott)
- UPI 1-2-42 (Jessica S. & Matthew W. Payne)
- UPI 1-2-43 (Amanda K. Martin)
- UPI 1-2-44 (John L. & Terese M Daly)
- UPI 1-2-50 (Stanley M. & Lisa D. Alexander)
- UPI 1-2-60 (Michael & Kathryn Meredith)
- UPI 1-2-61 (Joseph V. & Dorothy J. Losito)
- UPI 1-2-62 (Barbara J. & Philip C. Haag)
- UPI 1-2-63 (James Christopher DeAngelo)

*Committee Recommendation: 3-0*

- 11) Discuss the Resolution to abandon West Gay Street, from North Matlack Street to North New Street (*attachment*)

*Committee Recommendation for further discussion at the February 15, 2022 Worksession: 3-0*

- 12) Approve the sale of a 2014 Police Ford Explorer Interceptor SUV on MuniBid

*Committee Recommendation: 3-0*

- 13) Accept a \$1,000 donation from Matthew Adams in exchange for portions of a fallen oak tree on Borough property

*Committee Recommendation: 3-0*

*This meeting is being audio recorded for public record*

**A G E N D A**

Borough Council Worksession Meeting

**401 East Gay Street**

**West Chester, PA 19380**

July 20, 2021 @ 7:00 PM

**Borough Council Members:**

Michael Galey, Esquire	President, 3 <sup>rd</sup> Ward	Term Expires: 12/31/21
Donald Braceland, Vice President	Vice President, 5 <sup>th</sup> Ward	Term Expires: 12/31/21
William J. Scott, Esquire	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/21
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Michael Stefano	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/21

**Mayor:** Jordan Norley

**Borough Manager:** Michael A. Perrone, C.B.O.

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**Borough Council Meeting**

- 1) Call to Order
- 2) Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda
- 4) Accept the recommendation from the Business Improvement District to appoint Kevin Finn and Matt Holliday to the BID Board of Directors (*Attachment*)
- 5) Interview: West Chester Library Board of Directors – (1) vacancy
  1. Lauren Grow
  2. Matthew C. Cooper

➤ *Administration, Communication & Technology Committee*

- 6) Approve live-streaming Borough Council Meetings on YouTube and/or Facebook

*Committee Recommendation 2-0*

➤ *Public Works Committee*

- 7) Enter into a contract with Elite Tree Care for shade tree maintenance for the remainder of 2021, and for 2022, at the submitted hourly bid rates (*Attachment*)

*Committee Recommendation 3-0*

*This meeting is being audio recorded for public record*

**MINUTES**

Borough Council Worksession Meeting

**401 East Gay Street**

**West Chester, PA 19380**

July 20, 2021 @ 7:00 PM

**Borough Council Members:**

Michael Galey, Esquire	President, 3 <sup>rd</sup> Ward	Term Expires: 12/31/21
Donald Braceland, Vice President	Vice President, 5 <sup>th</sup> Ward	Term Expires: 12/31/21
William J. Scott, Esquire	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/21
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Michael Stefano	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/21

**Mayor:** Jordan Norley

**Borough Manager:** Michael A. Perrone, C.B.O.

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**Borough Council Meeting**

- 1) The July 20, 2021 Borough Council Worksession Meeting was called to Order at 7:02 PM
- 2) Mr. Flynn led the Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

**Discussion:** There were no comments, suggestions, or petitions by residents in attendance regarding items not on the July 20, 2021 Borough Council agenda

- 4) Accept the recommendation from the Business Improvement District to appoint Kevin Finn and Matt Holliday to the BID Board of Directors

**Discussion:** Borough Council accepted the recommendation from the Business Improvement District to appoint Kevin Finn and Matt Holliday to the BID Board of Directors.

*This item was moved to the July 21, 2021 Consent Agenda*

- 5) Interview: West Chester Library Board of Directors – (1) vacancy
  1. Lauren Grow
  2. Matthew C. Cooper

**Discussion:** The two candidates were interviewed. Mr. Galey thanked the applicants and informed them a decision would be made and announced at the July 21, 2021 Borough Council Meeting.

*This item was moved to the July 21, 2021 Discussion Agenda*

➤ Administration, Communication & Technology Committee

- 6) Approve live-streaming Borough Council Meetings on YouTube and/or Facebook

**Discussion:** The topic of this discussion was regarding live streaming only. Mr. Mann informed Borough Council only one series at a time can be streamed and recommended streaming to Facebook due to a large number of subscribers and the alert system. Meetings will continue to be uploaded to the Borough website and YouTube.

*This item was moved to the July 21, 2021 Consent Agenda*

➤ Public Works Committee

- 7) Enter into a contract with Elite Tree Care for shade tree maintenance for the remainder of 2021, and for 2022, at the submitted hourly bid rates

**Discussion:** Knight Brothers, the company originally awarded the contract, was not able to perform the services as required. The contract was mutually terminated. Elite Tree Care is the low bidder. The fees provided are more appropriate to the services the Borough requires.

*This item was moved to the July 21, 2021 Consent Agenda*

- 8) Enter into a contract with JEV Construction, LLC., at a cost of \$1,388,600 for civil/mechanical work; and, Eastern Environmental Contractors, Inc., at a cost of \$95,900 for electrical work, for the Taylor Run WWTP Tertiary Filtration System (*Attachment*)

**Discussion:** Mr. Findley informed Borough Council a 3-week pilot study at the Taylor Run Wastewater Treatment Plant using media filtration was previously approved by Borough Council in December 2019. The pilot test worked well with this type of system. This new system must be in place by November 2022. Taylor Run Wastewater Treatment Plant is required by the Pennsylvania Department of Environmental Protection (PADEP) to comply with the discharge limits in the NPDES Permit by October 31, 2022. Taylor Run currently does not have the full capability to meet the limits for aluminum and possible future limits for copper or phosphorus. Mr. Galey asked if we are able to use Stream Protection Fee money. Mr. Perrone replied only sewer fund money should be used.

*This item was moved to the July 21 2021 Consent Agenda*

- 9) Approve the Resolution to authorize filing a grant application for wastewater system upgrade capital program funds with the Chester County Department of Community Development – Community Revitalization Program

**Discussion:** The Resolution is required to accompany the grant application for the Taylor Run WWTP Tertiary Filtration System.

*This item was moved to the July 21, 2021 Consent Agenda*

*This meeting is being audio recorded for public record*

**MINUTES**

Borough Council Meeting

**401 East Gay Street**

**West Chester, PA 19380**

July 21, 2021 @ 7:00 PM

**Borough Council Members:**

Michael Galey, Esquire	President, 3 <sup>rd</sup> Ward	Term Expires: 12/31/21
Donald Braceland, Vice President	Vice President, 5 <sup>th</sup> Ward	Term Expires: 12/31/21
William J. Scott, Esquire	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/21
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Michael Stefano	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/21

**Mayor:** Jordan Norley

**Borough Manager:** Michael A. Perrone, C.B.O.

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\*Mr. Galey did not attend the July 21, 2021 Borough Council meeting. Vice-President Braceland proceeded over the Council Meeting.

**Borough Council Meeting**

- 1) The July 21, 2021 Borough Council Meeting was Called to Order at 7:00 pm
- 2) The Pledge of Allegiance was led by Mr. Flynn
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

There were no comments, suggestions, or petitions by the residents in attendance regarding items not on the July 21, 2021 Borough Council agenda

- 4) Comments from the Borough Council and Mayor

**Ms. Dorsey:** Welcomed everyone to the Council Meeting and said she enjoys participation from the public. She is hoping we will not be impacted by the Delta Variant in Chester County.

**Mr. Allen:** Said it was good to be back and enjoy the rest of the summer.

**Mr. Stefano:** Asked all to get vaccinated, as the numbers are rising. He advised he plays music in town and is financially compensated. He wanted to be transparent and asked Borough Council if he should recuse himself from voting on the consent agenda, relative to the live music item. Borough Council did not ask Mr. Stefano to recuse himself.

**Mr. Flynn:** There is a new candy/ice cream store in town, Kilwins Chocolate, Fudge & Ice Cream. Thanked Judge Vito for her assistance with the community service program, and the students from WCU for cleaning the downtown.

**Roll Call:**

*Ms. Dorsey – Yes; Mr. Allen – No; Mr. Stefano – Yes; Mr. Flynn – Yes;  
Mr. Braceland – Yes; Mr. Scott – Yes;*

***Motion Carries 5-1***

9) CONSENT:

- A) Accept the recommendation from the Business Improvement District to appoint Kevin Finn and Matt Holliday to the BID Board of Directors (*Attachment*)
- B) Approve live-streaming Borough Council Meetings on Facebook
- C) Enter into a contract with Elite Tree Care for shade tree maintenance for the remainder of 2021, and for 2022, at the submitted hourly bid rates (*Attachment*)
- D) Enter into a contract with JEV Construction, LLC., at a cost of \$1,388,600 for civil/mechanical work; and, Eastern Environmental Contractors, Inc., at a cost of \$95,900 for electrical work, at the Taylor Run WWTP Tertiary Filtration System (*Attachment*)
- E) Approve the Resolution to authorize filing a grant application for wastewater system upgrade capital program funds with the Chester County Department of Community Development – Community Revitalization Program (*Attachment*)
- F) Enter into an agreement with Keystone Alliance to perform a Sewer Tap Fee Study at a cost of \$4,500.00 (*Attachment*)
- G) Approve the proposal from PFM to determine the range of value for the sanitary system, at no cost to the Borough (*Attachment*)
- H) Enter into a contract with Eastern Armored Services, Inc. for cash and coin transport services at a cost of \$864/month (*Attachment*)
- I) Schedule a public hearing for Tuesday, August 17, 2021 at 7:00 P.M., and direct the Solicitor to prepare an amendment to Chapter 104, Section 104-45, to install a handicap parking space at 507 East Barnard Street (*Attachment*)
- J) Approve hiring three West Chester Borough police officers (*Attachment*)
- K) Approve allowing live music on Gay Street, within the open-air market, with the following restrictions: all live music shall not begin until noon on Saturday and Sunday, and not before 5:00 P.M. Monday through Friday; all music shall conclude no later than 10:00 P.M. each day; musicians must contain their music within the area of the business; and, business owners will coordinate with their surrounding businesses to avoid multiple performances.
- L) Approve the Land Development application for the Reverse Subdivision at 110-112 South Matlack (*Attachment*)

*This meeting is being audio recorded for public record*

**A G E N D A**

Borough Council Worksession Meeting

**401 East Gay Street**

**West Chester, PA 19380**

August 17, 2021 @ 7:00 PM

**Borough Council Members:**

Michael Galey, Esquire	President, 3 <sup>rd</sup> Ward	Term Expires: 12/31/21
Donald Braceland, Vice President	Vice President, 5 <sup>th</sup> Ward	Term Expires: 12/31/21
William J. Scott, Esquire	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/21
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Michael Stefano	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/21

**Mayor:** Jordan Norley

**Borough Manager:** Michael A. Perrone, C.B.O.

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**Public Hearing @ 7:00 P.M.**

An Ordinance of the Borough of West Chester, Chester County, Pennsylvania, amending the Code of the Borough of West Chester, specifically Chapter 104 titled, "Vehicles and Traffic," Section 104-45 to add a handicapped parking space at 333 East Miner Street and 507 East Barnard Street.

**Borough Council Meeting**

- 1) Call to Order
- 2) Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda
- 4) Approve the recommendation from the West Chester Business Improvement District to appoint Scott Zukin to the Business Improvement District Board of Directors

➤ **Administration, Communication & Technology Committee**

- 5) Approve an enforcement date of January 1, 2022, prohibiting the use of single-use plastic bags and plastic straws, pursuant to Chapter 81, *Plastic Bag and Plastic Straw Regulations* (*attachment*)

*Committee Recommendation 3-0*

- 6) Approve deleting Paragraph #4, Section #305, from the West Chester Borough Personnel Policy relating to accruing vacation and sick time while on military leave (*attachment*)

*Committee Recommendation 2-1*

➤ Public Works Committee

- 7) Approve the request from the West Chester Business Improvement District to apply for a grant for Big Belly trash can wraps. The West Chester Business Improvement District will cover all costs and Borough Council will have final approval of all art designs (*attachment*)

*Committee Recommendation 3-0*

- 8) Approve the purchase of a Street Sweeper, at an approximate cost of \$260,000; and, approve the repair of the 2016 Street Sweeper, at an approximate cost of \$11,000 using American Rescue Plan Act funds

*Committee Recommendation 3-0*

- 9) Authorize leasing a Ford F-550 Dump Body Truck at an approximate annual cost of \$13,656 (*attachment*)

*No Committee Recommendation*

- 10) Approve the sale of the Ford Explorer (police training vehicle) on MunicBid

*Committee Recommendation 3-0*

- 11) Enter into a contract with Lechmanik, Inc., for site work and stormwater management facilities, for the Everhart Park improvement project, at a cost of \$184,871; and, approve funding of \$230,000 using American Rescue Plan Act funds (*attachment*)

*Committee Recommendation 3-0*

➤ Parking Committee

- 12) Enter into an Agreement with Imperial Parking, LLC for management of the Bicentennial and Chestnut Street Garages and Lots #6, #9 and #10, for the term September 1, 2021 through August 31, 2022 (*attachment*)

*Committee Recommendation 3-0*

- 13) Enter into an Agreement with Passport Labs., Inc. for pay by phone services (*attachment*)

*Committee Recommendation 3-0*

- 14) Enter into a contract with Hudak Infrastructure for structural repairs to the Bicentennial Garage at a cost of \$341,985; and, consider the \$14,000 facade alternate (*attachment*)

*Committee Recommendation 3-0*

- 15) Enter into Amendment #5 of the Agreement with the County of Chester to lease up to 60 parking spaces at the Chestnut Street Garage at a rate of \$90 per month/per space, for the term of September 1, 2021 through August 31, 2022 (*attachment*)

*Committee Recommendation 3-0*

removed and replaced with new aluminum louvers that fit the size of the existing frame openings; brick repointing will match original mortar; and existing shutters at the first floor windows may be removed at the applicant's option.

*Committee Recommendation 3-0 for HARB Certificates of Appropriateness a) thru c)*

- 19) Schedule a Public Hearing on October 20, 2021 at 6:00 P.M. for the Zoning Ordinance Update and the Planned University Campus Ordinance

*Committee Recommendation 3-0*

➤ Finance & Revenue Committee

- 20) Schedule a Public Hearing to create Pension Plan Committee's for the West Chester Borough Non-Uniform and West Chester Borough Police Pension Plans (*attachment*)

*Committee Recommendation 3-0*

- 21) Approve the recommended 2021 Actuarial Valuation Assumption Changes #2, #3 and #4 (*attachment*)

#2) Lowering the interest rate assumption from 7.00% to 6.75% per year;

#3) Lowering the salary increase assumption from 4.50% to 4.25% per year; and,

#4) Updating the mortality assumption, from the RP-2014 mortality table with 50% Blue Collar adjustment and mortality improvement projected with rates derived from the Long-Range Demographic Assumptions for the Social Security Administration's 2015 Trustee Report, to the PubG-2010 mortality table and mortality improvement projected from base year 2015 with rates derived from the Long-Range Demographic Assumptions for the Social Security Administration's 2020 Trustee Report.

*Committee Recommendation 3-0*

- 22) Approve the Budget Modification to reallocate \$300,000 from Stream Protection expense line items for final payment of the John O Green Park project

*Committee Recommendation 3-0*

- 23) Other Business:

- a. Approve the July 20, 2021, and July 21, 2021, Borough Council Meetings Minutes
- b. Discuss amendment to Title 65 of the Pennsylvania Consolidated Statutes, *Public Notice and Notification of Agency Business Required and Exceptions*

**Adjournment**

*This meeting is being audio recorded for public record*

**MINUTES**

Borough Council Worksession Meeting

**401 East Gay Street**

**West Chester, PA 19380**

August 17, 2021 @ 7:00 PM

**Borough Council Members:**

*Michael Galey, Esquire	President, 3 <sup>rd</sup> Ward	Term Expires: 12/31/21
Donald Braceland, Vice President	Vice President, 5 <sup>th</sup> Ward	Term Expires: 12/31/21
William J. Scott, Esquire	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/21
*Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Michael Stefano	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/21

**Mayor:** Jordan Norley

**Borough Manager:** Michael A. Perrone, C.B.O.

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*\*Messrs. Galey and Allen, and Mayor Norley were not in attendance at the August 17, 2021 Borough Council Meeting. Mr. Scott arrived at 7:06 P.M. after the conclusion of the Public Hearing.*

**Public Hearing @ 7:00 P.M.**

An Ordinance of the Borough of West Chester, Chester County, Pennsylvania, amending the Code of the Borough of West Chester, specifically Chapter 104 titled, "Vehicles and Traffic," Section 104-45 to add a handicapped parking space at 333 East Miner Street and 507 East Barnard Street.

**Discussion:** Mr. Metrick reviewed the Ordinance, Amendment and Exhibits and asked to include the Exhibits into the Record. Mr. Metrick asked Borough Council if they had any questions or comments. Borough Council did not have any questions or comments. Mr. Metrick asked attendants if they had any questions or comments. There were no comments or questions from attendants.

Mr. Flynn made a Motion to adopt the Ordinance to amend the Code of the Borough of West Chester, specifically Chapter 104 titled, "Vehicles and Traffic," Section 104-45 to add a handicapped parking space at 333 East Miner Street and 507 East Barnard Street; Mr. Stefano made a Second to the Motion.

**Roll Call:**

*Ms. Dorsey – Yes; Mr. Stefano – Yes; Mr. Flynn – Yes;  
Mr. Braceland – Yes;*

***Motion Carries 4-0***

- 6) Approve deleting Paragraph #4, Section #305, from the West Chester Borough Personnel Policy relating to accruing vacation and sick time while on military leave (*attachment*)

**Discussion:** Karen Armstead, Human Resources Director, advised Borough Council this item came to her attention via Chief Morehead. She researched the legalities of deleting the accrual of vacation and sick time, while on military leave from the Borough, from the Personnel Policy; our Labor Law attorney confirmed the Borough is in its right to not offer these benefits. The employee can remain employed, keep their existing benefits, but they will not be entitled to accrue vacation or sick time while on military leave. She advised Borough Council that the Family Medical Leave Act (FMLA) is 12 weeks unpaid leave with no accrual of any vacation or sick time to employees while not in service to the Borough. She believes deleting this benefit will provide consistency between Military Leave and the Family Medical Leave Act (FMLA).

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

➤ Public Works Committee

- 7) Approve the request from the West Chester Business Improvement District to apply for a grant for Big Belly trash can wraps. The West Chester Business Improvement District will cover all costs and Borough Council will have final approval of all art designs (*attachment*)

**Discussion:** Mr. John O'Brien advised Borough Council he would like to apply for this grant. There will be no cost to the Borough, and Borough Council will have final approval on all art designs. Mr. Flynn said the wraps clean nicely and there is little to no graffiti vandalism on the existing wraps.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

- 8) Approve the purchase of a Street Sweeper, at an approximate cost of \$260,000; and, approve the repair of the 2016 Street Sweeper, at an approximate cost of \$11,000 using American Rescue Plan Act funds

**Discussion:** Mr. Vennettilli reminded Borough Council both street sweepers have been out of commission for several weeks. In addition to requesting a new street sweeper, repairs will be made to the 2016 street sweeper, with funds from the American Rescue Plan Act. The 2007 sweeper will be repurposed for use as a vacuum truck.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

- 9) Authorize leasing a Ford F-550 Dump Body Truck at an approximate annual cost of \$13,656 (*attachment*)

**Discussion:** Mr. Vennettilli advised Borough Council the truck has been out of commission for several months and needs a new engine. Because of the high cost of the engine and the age of the truck, Mr. Vennettilli suggested purchasing a new truck. Mr. Flynn advised Mr. Vennettilli the Borough is not in a position, financially, to purchase the truck and to revisit this matter at a later time.

*This item was removed from the August 18, 2021 Borough Council Agenda*

- 10) Approve the sale of the Ford Explorer (police training vehicle) on MunicBid

**Discussion:** Borough Council has no issue with the sale of this item. Mr. Vennettilli asked to include the Ford F-550 Dump Body Truck; Borough Council agreed to add the truck, as well.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

- 11) Enter into a contract with Lechmanik, Inc., for site work and stormwater management facilities, for the Everhart Park improvement project, at a cost of \$184,871; and, approve funding of \$230,000 using American Rescue Plan Act funds (*attachment*)

**Discussion:** Keith Kurowski advised Borough Council, at the August 10, 2021 Public Works Committee Meeting, the Committee agreed to recommend the bid of \$184,871 to full Council for the site work contract; however, additional monies are needed to satisfy payment of the entire project, and Mr. Kurowski is asking Borough Council to approve \$230,000 to pay for the entire project using American Rescue Plan Act funds.

Ms. Dorsey asked for clarification. She was under the impression the American Rescue Plan Act funds could not be used for projects after March 3, 2021.

Mr. Perrone replied the funds can be used for projects after March 3, 2021. He then directed Council to the attachment which shows the expenses and revenues for the project. Mr. Kurowski was originally under the impression grant money would cover the entire expense of this project. However, the Borough was not awarded the anticipated grant money and the bids for the site work were higher than anticipated.

Ms. Dorsey asked Mr. Perrone if the \$130,000 dollars the Borough allotted for this project was still available.

Mr. Perrone replied, yes; however, he believes it is better to not use General Fund dollars that can be used elsewhere or carried over for use next year in case there are shortfalls.

Ms. Dorsey pointed out the Borough has used almost half of the American Rescue Act funds received to date.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

➤ Parking Committee

- 12) Enter into an Agreement with Imperial Parking, LLC for management of the Bicentennial and Chestnut Street Garages and Lots #6, #9 and #10, for the term September 1, 2021 through August 31, 2022 (*attachment*)

**Discussion:** Mr. Braceland reviewed the applications. Borough Council did not have any concerns with the applications.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

- 19) Schedule a Public Hearing on October 20, 2021 at 6:00 P.M. for the Zoning Ordinance Update and the Planned University Campus Ordinance

**Discussion:** Borough Council agreed to the date and time, which will allow the Building Department ample time to send notices to the public.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

➤ Finance & Revenue Committee

- 20) Schedule a Public Hearing to create Pension Plan Committees for the West Chester Borough Non-Uniform and West Chester Borough Police Pension Plans (*attachment*)

**Discussion:** Mr. Flynn reminded Borough Council they previously approved creating a Pension Plan Committee to manage the Borough Non-Uniform and West Chester Borough Police Pension Plans. The Solicitor prepared two Ordinances and a public hearing is required to approve them. Borough Council set a Public Hearing date for September 15, 2021.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

- 21) Approve the recommended 2021 Actuarial Valuation Assumption Changes #2, #3 and #4 (*attachment*)

#2) Lowering the interest rate assumption from 7.00% to 6.75% per year;

#3) Lowering the salary increase assumption from 4.50% to 4.25% per year; and,

#4) Updating the mortality assumption, from the RP-2014 mortality table with 50% Blue Collar adjustment and mortality improvement projected with rates derived from the Long-Range Demographic Assumptions for the Social Security Administration's 2015 Trustee Report, to the PubG-2010 mortality table and mortality improvement projected from base year 2015 with rates derived from the Long-Range Demographic Assumptions for the Social Security Administration's 2020 Trustee Report.

**Discussion:** Mockenhaupt Benefits Group attended two Finance Committee meetings to discuss and review their recommendations. The Finance Committee recommended approving Items 2, 3 and 4.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

- 22) Approve the Budget Modification to reallocate \$300,000 from Stream Protection expense line items for final payment of the John O. Green Park project

**Discussion:** Mr. Williams explained when COVID struck last year, both the John O. Green and Plum Run projects stopped for several months while the Borough was in lock-down. Plum Run was completed earlier this year, under budget. John O. Green is nearly complete. The contractor and engineer have submitted invoices for final payment. Monies were carried over into 2021, but a line item was not created. Mr. Williams reviewed other line items within the SPF budget to reallocate for the John O. Green project. The other line items that are being reallocated are expected to be completed in 2022.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

23) Other Business:

- a) Approve the July 20, 2021, and July 21, 2021, Borough Council Meetings Minutes

**Discussion:** Borough Council did not have any concerns with the July 20, 2021, and July 21, 2021, Borough Council Meetings Minutes, and no edits were made to the draft Minutes.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

- b) Discuss amendment to Title 65 of the Pennsylvania Consolidated Statutes, *Public Notice and Notification of Agency Business Required and Exceptions*

**Discussion:** Mr. Perrone discussed this item at the beginning of the meeting.

*No Action was taken on this item*

**Discussion:** Mr. Flynn advised Borough Council House Bill H.B.734 is currently sitting in Committee. The Bill will allow residents of the Commonwealth of Pennsylvania, at the age of 65 years old, to have their property taxes frozen, if they have lived at the property for at least five years. Mr. Flynn said the Borough should support their Senior Citizens and will discuss this item further at the next Finance Committee.

*No Action was taken on this item*

**Discussion:** Mr. Flynn said there was an in-depth Finance Committee meeting last week. All Department Heads were in attendance. The conclusion was revenue is not sufficient to carry expenses in 2022. Mr. Flynn asked Borough Council to schedule a date to have a full Borough Council meeting to discuss the 2022 Budget. Borough Council set a date of September 1, 2021 at 6:00 P.M.

*This item was placed on the August 18, 2021 Borough Council Consent Agenda*

No other business was discussed. The August 17, 2021 Borough Council meeting was adjourned at 8:52 P.M.

Respectfully Submitted,

Dana

Dana C. DiDomenico

*This meeting is being audio recorded for public record*

**MINUTES**

Borough Council Meeting  
**401 East Gay Street**  
**West Chester, PA 19380**  
August 18, 2021 @ 7:00 PM

**Borough Council Members:**

Michael Galey, Esquire	President, 3 <sup>rd</sup> Ward	Term Expires: 12/31/21
Donald Braceland, Vice President	Vice President, 5 <sup>th</sup> Ward	Term Expires: 12/31/21
William J. Scott, Esquire	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/21
*Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Michael Stefano	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/21

**Mayor:** Jordan Norley

**Borough Manager:** Michael A. Perrone, C.B.O.

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**\*Mr. Allen was not in attendance at the August 18, 2021 Borough Council Meeting**

**Borough Council Meeting**

- 1) Call to Order at 7:03 pm
- 2) The Pledge of Allegiance was led by Ms. Dorsey
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

There were no comments, suggestions, petitions by residents in attendance regarding items not on the agenda

- 4) Comments from the Borough Council and Mayor

*Ms. Dorsey:* Encouraged all to get vaccinated and stay safe.

*Mr. Stefano:* Reiterated Ms. Dorsey's comments. He is excited to get back into the classroom and wished the best of luck to all students, teachers, and school staff.

*Mr. Flynn:* The Gay Street Project is coming to fruition. Happy Labor Day, stay safe and wear a mask.

*Mr. Scott:* Purchased the movie that was filmed in the Borough several years ago, *Project Pay Day*. He reminded Borough Council he had a small part in the movie as a Judge. It is a good movie, and you can recognize various sections of the Borough in the movie. The 225<sup>th</sup> anniversary of the Borough is fast approaching and the 20<sup>th</sup> anniversary of 911 is next month.

*Mr. Braceland:* He will be glad when the students return, and it doesn't seem the same without them.

- D) Approve the request from the West Chester Business Improvement District to apply for a grant for Big Belly trash can wraps. The West Chester Business Improvement District will cover all costs and Borough Council will have final approval of all art designs (*attachment*)
- E) Approve the purchase of a Street Sweeper, at an approximate cost of \$260,000; and, approve the repair of the 2016 Street Sweeper, at an approximate cost of \$11,000 using American Rescue Plan Act funds
- F) Approve the sale of the Ford Explorer (police training vehicle) and Ford F-550 Dump Body Truck on MuniBid
- G) Enter into a contract with Lechmanik, Inc., for site work and stormwater management facilities, for the Everhart Park improvement project, at a cost of \$184,871; and, approve funding of \$230,000 using American Rescue Plan Act funds (*attachment*)
- H) Enter into an Agreement with Imperial Parking, LLC for management of the Bicentennial and Chestnut Street Garages and Lots #6, #9 and #10, for the term September 1, 2021 through August 31, 2022 (*attachment*)
- I) Enter into an Agreement with Passport Labs., Inc. for pay by phone services (*attachment*)
- J) Enter into a contract with Hudak Infrastructure for structural repairs to the Bicentennial Garage at a cost of \$341,985; and, the \$14,000 facade alternate (*attachment*)
- K) Enter into Amendment #5 of the Agreement with the County of Chester to lease up to 60 parking spaces at the Chestnut Street Garage at a rate of \$90 per month/per space, for the term of September 1, 2021 through August 31, 2022 (*attachment*)
- L) Approve the Resolution to create a Community Campus Coalition Committee of Borough Council; and, authorize the Solicitor to prepare an Ordinance (*attachment*)
- M) Approve the Resolution for the Preliminary Land Development application from 611 E. Niels Street, LLC., for the property located at 611 East Niels Street (the Wyeth Property) Tax Parcels #1-10-83, #1-10-235 (*attachments*)
- N) Approve the July 2021 HARB Certificates of Appropriateness (*attachments*)
- a. 2021-24: 124 W. Market Street - Oz Bridal, Bridal Attire Clothing.  
*Proposed work:* Proposal new hanging sign on proposed new bracket on the front façade of the building
- HARB Recommendation:** Approved with the following conditions: That the bracket used to hang the sign be black in lieu of stainless steel finish.
- b. 2021-25: 26 S. High Street - Chester County Legal Building, Db a MacElree Harvey
- Proposed work:* Proposed repointing of brick on front façade of building; also proposed replacing the trim of the wood bay which unites the 2<sup>nd</sup> and 3<sup>rd</sup> floor windows; also proposed replacing existing windows on second and third floors of front façade with new wood windows.

**HARB Recommendation:** Approved with the following conditions: That the material used to replace the wood facing and trim at the bay be composite, pvc or poly-ash, field painted and milled to match all of the existing dimensions and profiles, and that the windows match the style and dimensions of the existing, but may be fixed in place rather than operable; painting of the brick face should be limited to the existing painted finishes on the ground level (no Unpainted brick will be painted).

c. *2021-26: 17 W. Miner Street - Chester County Legal Building, DBA as MacElree Harvey*

*Proposed work:* Proposed replacement of the metal roofing on the existing awning or pent roof; also proposed repairing the wood of the existing gable eave; also proposed installation of new lights in soffit of ex. pent roof; also proposed repointing the brick of the front façade; also proposed repair of stucco soffit or ceiling of pent roof; also proposed replacement of ex. vinyl windows with new wood window on front façade of building.

**HARB Recommendation:** Approved with the following conditions: That the soffit of the eave will be finished with beaded board (composite) in lieu of stucco; the triangular ends of the pent will be finished with vertical board in lieu of stucco; the new gutter at the pent roof will be half-round aluminum in lieu of the existing K-gutter; the attic level louvers will be removed and replaced with new aluminum louvers that fit the size of the existing frame openings; brick repointing will match original mortar; and existing shutters at the first floor windows may be removed at the applicant's option.

- O) Schedule a Public Hearing on October 20, 2021 at 6:00 P.M. for the Zoning Ordinance Update and the Planned University Campus Ordinance
- P) Schedule a Public Hearing on September 15, 2021 to adopt the Ordinances to create Pension Plan Committees for the West Chester Borough Non-Uniform and West Chester Borough Police Pension Plans (*attachment*)
- Q) Approve the recommended 2021 Actuarial Valuation Assumption Changes #2, #3 and #4 for the Non-Uniform Pension Plan (*attachment*)
  - #2) Lowering the interest rate assumption from 7.00% to 6.75% per year;
  - #3) Lowering the salary increase assumption from 4.50% to 4.25% per year; and,
  - #4) Updating the mortality assumption, from the RP-2014 mortality table with 50% Blue Collar adjustment and mortality improvement projected with rates derived from the Long-Range Demographic Assumptions for the Social Security Administration's 2015 Trustee Report, to the PubG-2010 mortality table and mortality improvement projected from base year 2015 with rates derived from the Long-Range Demographic Assumptions for the Social Security Administration's 2020 Trustee Report.
- R) Approve the Budget Modification to reallocate \$300,000 from Stream Protection expense line items for final payment of the John O. Green Park project
- S) Approve the July 20, 2021, and July 2021, 2021, Borough Council Meetings Minutes
- T) Approve scheduling a Special Borough Council Meeting on September 1, 2021 at 6:00 P.M. to review the 2022 Preliminary Budget

*This meeting is being audio recorded for public record*

**A G E N D A**

Borough Council Worksession Meeting

**401 East Gay Street**

**West Chester, PA 19380**

December 14, 2021 @ 7:00 PM

**Borough Council Members:**

Michael Galey, Esquire	President, 3 <sup>rd</sup> Ward	Term Expires: 12/31/21
Donald Braceland, Vice President	Vice President, 5 <sup>th</sup> Ward	Term Expires: 12/31/21
William J. Scott, Esquire	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/21
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Michael Stefano	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/21

**Mayor:** Jordan Norley

**Borough Manager:** Michael A. Perrone, C.B.O.

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**Borough Council Meeting**

- 1) Call to Order
- 2) Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda
- 4) Conduct interviews to fill vacancies on the following Boards and Commissions:

**Vacancies:**

Railroad Restoration Committee <i>Note: (One Seat - Borough Resident Required)</i>	2 Vacant Seats	12/31/2022 12/31/2023
Library Board of Directors	1 Vacant Seat	12/31/2024
Zoning Hearing Board <i>Note: (Borough Resident Required)</i>	1 Vacant Seat	12/31/2023
Historic Commission	1 Vacant Seat	12/31/2022
Recreation Commission	1 Vacant Seat	12/31/2023
Sustainability Ad-Hoc Committee <i>Note: (One Seat -Borough Resident Required)</i>	2 Vacant Seats	12/31/2022 12/31/2023
Community Campus Committee appointed by Borough Council:  A Borough resident from the 2W and 4 <sup>th</sup> Wards	1 Seat /Ward	

- 6) Discuss revising Chapter 81, Plastic Bags and Plastic Straws Regulations, *Section 81-5;A “Compliant Bags”* to eliminate the \$.10 cent per compliant bag fee; and, *Section 81-6, “Exemptions”* to eliminate the fee for compliant bags for food delivery and takeout (*Attachment*)

*No Committee Recommendation*

➤ *Public Works*

- 7) Enter into a Contract with Lenni Electric, to install the Verizon streetlight nodes on Borough street lights, in the amount of \$133,803.67 (*Attachment*)

*Committee Recommendation 3-0*

- 8) Enter into a Contract with Miller Brothers to install and program the closed loop system relative to the Traffic Signal Improvements Project, in the amount of \$508,839.38 (*Attachment*)

*Committee Recommendation 3-0*

- 9) Enter into annual Contracts with the following: (*Attachment*)
  - a. 2022 furnishing of roadway materials to Glasgow, Inc., at the submitted unit prices;
  - b. 2022 rain garden maintenance to All Seasons Landscaping Co., Inc. in the amount of \$20,500.00;
  - c. 2022 street & traffic signage to Garden State Highway Products, Inc. in the amount of \$31,970.56; and,
  - d. 2022 shade tree planting to All Seasons Landscaping Co., Inc. in the amount of \$38,600.00.

*Committee Recommendation 3-0*

- 10) Discuss amending Chapter 102, Trees, *Section 102-3E, “Trees - Responsibility for removal and maintenance of street trees and public trees”* to limit tree removal reimbursement from 50% of the cost, to a maximum of \$750.00, conditioned upon replacing the tree within 3 months (*Attachment*)

*No Committee Recommendation*

- 11) Discuss revising the Borough Fee Schedule to charge a \$50 fee for large bulk trash pickup items; a \$10 recycling fee for tires up to 17”; and, a \$25 recycling fee for tires over 17” (*Attachment*)

*No Committee Recommendation*

- 12) Reject all bids for the Taylor Run Wastewater Treatment Plant Digester Gas Safety Equipment Upgrade and rebid the project in 2022 (*Attachment*)

*Committee Recommendation 3-0*

*This meeting is being audio recorded for public record*

**MINUTES**

Borough Council Worksession Meeting

**401 East Gay Street**

**West Chester, PA 19380**

December 14, 2021 @ 7:00 PM

**Borough Council Members:**

Michael Galey, Esquire	President, 3 <sup>rd</sup> Ward	Term Expires: 12/31/21
Donald Braceland, Vice President	Vice President, 5 <sup>th</sup> Ward	Term Expires: 12/31/21
William J. Scott, Esquire	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/21
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Michael Stefano	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/21

**Mayor:** Jordan Norley

**Borough Manager:** Michael A. Perrone, C.B.O.

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**Borough Council Meeting**

- 1) The December 14, 2021 Borough Council Meeting was Call to Order at 7:06 P.M.
- 2) The Pledge of Allegiance was led by Mr. Braceland
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

**Discussion:** There were no comments, suggestions, or petitions by residents in attendance regarding items that are not on the agenda

- 4) Conduct interviews to appoint vacancies on the following Boards and Commissions:

**APPLICANTS:**

<b>Member</b>	<b>Committee</b>
Tommy Myles <i>(Non-Borough Resident)</i>	Railroad Restoration Committee
Jordan Norley	Railroad Restoration Committee
Rick Bullotta	Recreation Commission
Michael Reese	Recreation Commission
Christine Kinkaid <i>(Non-Borough Resident)</i>	Library Board of Directors
Katie van Schaijik	Library Board of Directors
Paul V. Sookiasian <i>(Non-Borough Resident)</i>	Library Board of Directors
Jules van Schaijik	Zoning Hearing Board
E Terrence Keenan	Zoning Hearing Board

Mr. O'Brien said not all purchases are a planned event and not every person carries a retail bag on their person. He also cited issues with keeping a sufficient number of coins on hand, the point of sales system, and inventory management as being difficult for the businesses.

Mr. Galey replied while it may be somewhat complicated, but could be accomplished with little effort.

Morgan Harris, the owner of Meatball U, said he appreciates that Borough Council eliminated the fee for take-out. He asked if patrons who take food home with them after their meal would be included in take-out/delivery. Borough Council agreed take-home food is "take-out."

Jim Wylie, Vice-Chair of the Sustainability Advisory Committee, said the fee is about changing habits and making people think. He reminded all there is an exemption clause in the Ordinance.

Mr. Galey thanked Mr. Williams for his presentation and advised Borough Council will direct the Solicitor to amend the Ordinance to eliminate the fee for delivery and take-out only. Section 81-5;A "Compliant Bags" will remain in the Ordinance.

*The Item to eliminate the fee for compliant bags for food delivery and take-out was placed on the December 15, 2021 Consent Agenda*

- 7) Enter into a Contract with Lenni Electric, to install the Verizon streetlight nodes on Borough streetlights, in the amount of \$133,803.67 (*Attachment*)

**Discussion:** Borough Council did not have any questions or concerns with this item.

*This item was placed on the December 15, 2021 Consent Agenda*

- 8) Enter into a Contract with Miller Brothers to install and program the closed loop system relative to the Traffic Signal Improvements Project, in the amount of \$508,839.38 (*Attachment*)

**Discussion:** This item is related to the Green Light Go Grant. Mr. Galey asked how much money was grant money and how much was Borough money. Mrs. Lioni replied there is a 20% match. The grant award is \$860,000, with a Borough match of \$172,000.00. The project is currently under budget.

*This item was placed on the December 15, 2021 Consent Agenda*

- 9) Enter into annual Contracts with the following: (*Attachment*)
  - a. 2022 furnishing of roadway materials to Glasgow, Inc., at the submitted unit prices;
  - b. 2022 rain garden maintenance to All Seasons Landscaping Co., Inc. in the amount of \$20,500.00;
  - c. 2022 street & traffic signage to Garden State Highway Products, Inc. in the amount of \$31,970.56; and,
  - d. 2022 shade tree planting to All Seasons Landscaping Co., Inc. in the amount of \$38,600.00.

**MINUTES**

Borough Council Worksession Meeting

February 15, 2022 @ 7:00 PM

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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The Public Hearings:

***Liquor License Hearing at 6:00 PM***

***44 West Gay Street; Blaze West Chester, LLC***

The Applicant is requesting Borough Council approval of an intermunicipal transfer of a restaurant liquor license from Tredyffrin Township to West Chester Borough. The Applicant proposes to use the liquor license at a new restaurant to be located on the ground floor of a building known as 44 West Gay located at 44 West Gay Street, West Chester Borough.

***A stenographer was present at the Public Hearing and a Transcript is on file.***

***Amendment to Chapter 104 at 7:02 PM***

Chapter 104 titled "Vehicles and Traffic," Section 104-45 to add a handicapped parking space at 3 South Brandywine Street and to remove a handicapped parking space at 215 West Lafayette Street.

**Discussion:** Mr. Michael Gill, Borough Solicitor, reviewed the exhibits and amendment. Seeing no comments or questions from Borough Council or the public, Mr. Stefano called for a Motion

Mr. Flynn made a Motion to amend Chapter 104 titled "Vehicles and Traffic," Section 104-45 to add a handicapped parking space at 3 South Brandywine Street and to remove a handicapped parking space at 215 West Lafayette Street; Ms. Dorsey made a Second to the Motion.

**Roll Call:**

**Mr. McCoy – Yes; Mr. Allen – Yes; Mr. McGinnis – Yes; Mr. Stefano – Yes;  
Ms. Vaccaro – Yes; Mr. Flynn – Yes; Ms. Dorsey – Yes**

**Motion Carries: 7-0**

Jo Ann Kelton said the Feasibility Study is not relative to this project. The Committee is not going to pursue the 2018 project. The Committee is trying to bring rail service back to the Borough for less than \$15M through other channels. It is time-sensitive as the Biden Administration is pro-infrastructure and pro-trains. The Transportation Department is putting money into grants. The time is now.

Mr. Stefano said to be clear, there is no action being taken at this meeting.

### **Administration, Communication & Technology Committee**

- 7) Schedule a Public Hearing on March 16, 2022 at 7:00 PM to amend Chapter 81, “Plastic Bag and Plastic Straw Regulations”

**Discussion:** Mr. Williams reviewed the amendment with Borough Council which is amending the Ordinance to define take-out and delivery and exempt those scenarios from the 10-cent fee for a compliant bag. Mr. Stefano asked to define “Takeout” – Mr. Williams explained the definition.

*This item was moved to the February 16, 2022 Borough Council Meeting Consent Agenda.*

### **Public Works Committee**

- 8) Enter into a 1-year contract extension with ServiceMaster Services for custodial services in the amount of \$55,212.12

**Discussion:** Mr. Vennettilli informed Borough Council he is seeking an extension of the existing contract, which includes a 3% increase of the current cost. The original contract is a one-year contract with the ability to extend for two years. Mr. Vennettilli said he is only seeking a one-year extension and will go out to bid at the end of this year.

Mr. Allen asked if the contract was based on weekly hours. Mr. Vennettilli replied the contract is based on specific duties and does not know how many hours are used by the cleaning service.

*This item was moved to the February 16, 2022 Borough Council Meeting Consent Agenda.*

- 9) Enter into a contract with Stonewood Landshaping, Inc. for the Marshall Drive Streambank Restoration Project in the amount of \$106,950.00 (attachment)

**Discussion:** Mr. Vennettilli informed Borough Council the contract is for services to repair the erosion in the rear yards of several residential properties.

*This item was moved to the February 16, 2022 Borough Council Meeting Consent Agenda.*

- 10) Approve the easement agreements for the Marshall Drive Streambank Restoration Project between the Borough of West Chester and Property Owners: (attachment)

- UPI 1-2-41 (John McDermott)
- UPI 1-2-42 (Jessica S. & Matthew W. Payne)
- UPI 1-2-43 (Amanda K. Martin)
- UPI 1-2-44 (John L. & Terese M Daly)

- UPI 1-2-50 (Stanley M. & Lisa D. Alexander)
- UPI 1-2-60 (Michael & Kathryn Meredith)
- UPI 1-2-61 (Joseph V. & Dorothy J. Losito)
- UPI 1-2-62 (Barbara J. & Philip C. Haag)
- UPI 1-2-63 (James Christopher DeAngelo)

**Discussion:** This item is relative to Item #09, *Approve the easement agreements for the Marshall Drive Streambank Restoration Project between the Borough of West Chester and Property Owners.* The easements were prepared by the Solicitor, which the residents should sign in order to proceed with the project. There are two outstanding easements: one property is being sold next week; the new owner will sign the easement at settlement. The property for the other easement has minimal impact and they are able to work around the property.

*This item was moved to the February 16, 2022 Borough Council Meeting Consent Agenda.*

- 11) Discuss the Resolution to abandon West Gay Street, from North Matlack Street to North New Street (*attachment*)

**Discussion:** Mr. Metrick reviewed the Resolution with Borough Council: PennDOT reserves the right to designate the use of the PA 3 (Matlack / Chestnut) route as a detour for potential future PennDOT construction projects in the vicinity; - PennDOT review and approval is required prior to modifying the current traffic pattern (2-lane through traffic / 1 lane parking) along the PA 3 (Matlack/Chestnut) route in the future; - PennDOT review and approval is required for any engineering and traffic studies along the PA 3 (Matlack/Chestnut) route prior to any significant traffic restrictions or modifications being implemented by the Borough; and, any permanent full closure of Gay street will need to be evaluated from traffic impact standpoint and will be submitted to the department for review and approval.

Ms. Vaccaro said she received emails in great support of closing Gay street to extend into the fall season.

Mayor DeBaptiste said the abandonment will allow the Borough to make locally informed decisions.

Kyle Hudson said the closure has not helped all businesses, and long-term planning needs consistency. Not all businesses signed up for a closure.

John O'Brien asked to discuss the open-air market during other business.

*This item was moved to the February 16, 2022 Borough Council Meeting Consent Agenda.*

- 12) Approve the sale of a 2014 Police Ford Explorer Interceptor SUV on MuniBid

**Discussion:** This is a standard operating procedure with older vehicles. Borough Council did not have any concerns with this item.

*This item was moved to the February 16, 2022 Borough Council Meeting Consent Agenda.*

**MINUTES**

Borough Council Meeting  
February 16, 2022 @ 7:00 PM

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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- 1) The February 16, 2022 Borough Council Meeting was Called to Order at 7:01 PM
  - 2) The Pledge of Allegiance was led by Ms. Dorsey
  - 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

**Discussion:** There were no comments, suggestions, or petitions by residents in attendance regarding items not on the agenda

- 4) Comments by the Borough Council and the Mayor

*Mr. McCoy:* The first full month has been quite an experience and he is happy to be here.

*Ms. Vaccaro:* Very excited to get started and work with everyone in the Borough and community.

*Mr. McGinnis:* Thank you.

*Mr. Flynn:* There are five distilleries and five breweries in the 6th Ward. Enjoy the President's Day holiday

*Mr. Allen:* It has been a nice month with the new Borough Council and he is encouraged by the work accomplished in such a small amount of time.

*Ms. Dorsey:* Welcomed new Council Members. She is looking forward to working with Borough Council and the residents and is excited to work on the changes the Council can make for an even better Borough of West Chester.

*Mayor DeBaptiste:* Chief Morehead and a small contingency of officers will travel to Harrisburg as our officers have passed their accreditation. Also, the West Chester Police Department has become the first remote emergency protection from abuse site.

*Mr. Stefano:* Congratulated the West Chester Police Department on their fine work, the accreditation, and on being the first remote emergency protection from abuse site. He thanked our Fire Department for their assistance fighting a fire at Highland Orchards. It has been a

**Roll Call:**

**Mr. McCoy – Yes; Mr. Allen – Yes; Mr. McGinnis – Yes; Mr. Stefano – Yes;  
Ms. Vaccaro – Yes; Mr. Flynn – Yes; Ms. Dorsey – Yes**

***Motion Carries: 7-0***

- G) Discuss participating in a Distributor Settlement Agreement against McKesson, Cardinal Health and AmerisourceBergen; and Janssen Pharmaceuticals, Inc., and its parent company Johnson & Johnson to resolve all Opioids litigation.

Mr. Flynn made a Motion to participate in a Distributor Settlement Agreement against McKesson, Cardinal Health and AmerisourceBergen; and Janssen Pharmaceuticals, Inc., and its parent company Johnson & Johnson to resolve all Opioids litigation; Mr. McGinnis made a Second to the Motion;

**Roll Call:**

**Mr. McCoy – Yes; Mr. Allen – No; Mr. McGinnis – Yes; Mr. Stefano – Yes;  
Ms. Vaccaro – Yes; Mr. Flynn – Yes; Ms. Dorsey – No**

***Motion Carries: 5-2 with Mr. Allen and Ms. Dorsey dissenting.***

**7) CONSENT:**

- A) Schedule a Public Hearing on March 16, 2022 at 7:00 P.M. to amend Chapter 81, “Plastic Bag and Plastic Straw Regulations” (*attachment*)
- B) Enter into a 1-year contract extension with ServiceMaster Services for custodial services in the amount of \$55,212.12
- C) Enter into a contract with Stonewood Landshaping, Inc. for the Marshall Drive Streambank Restoration Project in the amount of \$106,950.00 (*attachment*)
- D) Approve the easement agreements for the Marshall Drive Streambank Restoration Project between the Borough of West Chester and Property Owners: (*attachment*)
- UPI 1-2-41 (John McDermott)
  - UPI 1-2-42 (Jessica S. & Matthew W. Payne)
  - UPI 1-2-43 (Amanda K. Martin)
  - UPI 1-2-44 (John L. & Terese M Daly)
  - UPI 1-2-50 (Stanley M. & Lisa D. Alexander)
  - UPI 1-2-60 (Michael & Kathryn Meredith)
  - UPI 1-2-61 (Joseph V. & Dorothy J. Losito)
  - UPI 1-2-62 (Barbara J. & Philip C. Haag)
  - UPI 1-2-63 (James Christopher DeAngelo)
- E) Approve the Resolution to abandon West Gay Street, from North Matlack Street to North New Street (*attachment*)

*This meeting is being audio recorded for public record*

**A G E N D A -**

**REVISED: Posted 3/16/2022 @ 10:10 AM**

Borough Council Worksession Meeting

March 15, 2022 @ 7:00 PM

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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**Borough Council Meeting:**

- 1) Call to Order
- 2) Announce the purpose of the March 15, 2022 Executive Session
- 3) Pledge of Allegiance
- 4) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

Ms. Dorsey made a Motion to amend the March 15, 2022 agenda to include: approve the removal and resignation of Lt. Chris Daly from the West Chester Borough Police Department, and to appoint a Solicitor to the Civil Service Commission; Mr. Flynn made a Second to the Motion:

4.a) approve the removal and resignation of Lt. Chris Daly from the West Chester Borough Police Department

4.b) approve the hiring of Civil Service Commission legal counsel, David MacMain, Esquire; MacMain, Connell & Leinhauser

- 5) Annual Report - Civil Service Commission  
*Mr. Tony Polito, Chair of the Civil Service Commission*
- 6) Approve the Transfer of Liquor License agreement between Blaze West Chester, LLC & the Borough of West Chester – 44 West Gay Street, *LaScala's Fire*
- 7) Presentation: Accessory Dwelling Units (Attachment)  
*West Chester Planning Commission*
- 8) West Chester Railroad extension

**Administration, Communication & Technology Committee**

- 9) Approve Borough of West Chester meeting room policy (Attachment)

*Committee Recommendation 3-0*

**Public Works Committee**

- 10) Approve stormwater easements: *Pipe Replacement Project* (Attachment)

- a) Parcel # 1-12-167                      423 College Avenue, Marcocci
- b) Parcel # 1-12-137.1                  516 Spring Grove Lane, Markoski
- c) Parcel # 1-5-79                        317 E. Marshall Street, Korbonits

*Committee Recommendation 3-0*

- 11) Approve wastewater bids: (Attachment)

- a) Supply and delivery of soda ash  
*one year contract - Univar Solutions, Inc. - \$81,060.00*
- b) Supply and delivery of aluminum chloride hydroxide sulfate  
*two-year contract - SALCO, Inc. - \$149,050.00*

*Committee Recommendation 3-0*

- 12) Consider request from the CRC Watershed Association and West Chester Green Team, for assistance with the annual Goose Creek Clean-up on March 26, 2022, to provide use of the Public Works Department parking lot, and employees to collect trash bags and debris

*Committee Recommendation 3-0*

**Parking Committee**

- 13) Approve removing the handicap parking space at 338 East Miner Street; and, the handicap parking space at 104 Price Street (Attachment)

*Committee Recommendation 3-0*

- 14) Approve free street-level parking for *First Friday*, on Friday, May 6th at 4 PM; and, Friday, October 7<sup>th</sup> at 4 PM (Attachment)

*Committee Recommendation 3-0*

**Public Safety, Events & Quality of Life**

- 15) Approve the Gay Street closure 2022, from Memorial Day to Labor Day, 24 hours/7 days (Attachments)

*Committee Recommendation 2-1*

- 16) Approve a Resolution to adopt the Emergency Operations Plan (Attachment)

*Committee Recommendation 3-0*

**Finance & Revenue Committee**

- 17) Consider preparing requests for proposals for the Borough of West Chester solicitor, auditor and engineers

*Committee Recommendation 3-0*

- 18) Approve appointing the following delegates to the Chester County Tax Collection Committee (Attachment)

- a. Sean Metrick, Primary Voting Delegate
- b. Barbara Lioni, First Alternate Voting Delegate
- c. Nick Allen, Second Alternate Voting Delegate

*Committee Recommendation 3-0*

**Smart Growth Committee**

- 19) Discuss the Tree Commission's linear park concept plan at 400-430 E. Gay Street (Attachment)

*Committee Recommendation 3-0*

- 20) Approve the preliminary land development application for 250 E. Market Street (Attachment)

*Committee Recommendation 3-0*

- 21) Approve the lot line change application for 601 & 605 Price Street (Attachment)

*Committee Recommendation 3-0*

- 22) Approve the proposal by Limoncello Restaurant, 9 North Walnut Street, to add a second dining platform at 5 N. Walnut Street (Attachment)

*Committee Recommendation 3-0*

- 23) Approve waiving the Borough busking laws for the *Fête de la Musique* event on Tuesday, June 21, 2022 (rain date: June 23, 2022) (Attachment)

*Committee Recommendation 3-0*

- 24) Approve the recommendation from the Smart Growth Committee for no Solicitor attendance at the Zoning Hearing relative to the following application: (Attachment)

*This meeting is being audio recorded for public record*

**MINUTES**

Borough Council Worksession Meeting

March 15, 2022 @ 7:00 PM

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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**Borough Council Meeting:**

1) The March 15, 2022 Borough Council Meeting was called to order at 7:03 PM

2) Announce the purpose of the March 15, 2022 Executive Session

Mr. Stefano announced the March 15, 2022 Executive Session was called to discuss personnel and legal issues

3) The Pledge of Allegiance was led by Mr. Flynn

4) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

There were no comments, suggestions, petitions by residents in attendance regarding items not on the agenda by those in attendance.

Ms. Dorsey made a Motion to amend the March 15, 2022 agenda to include two additional items: approve the removal and resignation of Lt. Chris Daly from the West Chester Borough Police Department; and, to appoint a Solicitor to the Civil Service Commission; Mr. Flynn made a Second to the Motion:

**Roll Call:**

**Mr. McCoy – Yes; Mr. Allen – Yes; Mr. McGinnis – Yes; Mr. Stefano – Yes;  
Ms. Vaccaro – Yes; Mr. Flynn – Yes; Ms. Dorsey – Yes**

***Motion Carries: 7-0***

4.a) Approve the removal and resignation of Lt. Chris Daly from the West Chester Borough Police Department

**Administration, Communication & Technology Committee**

- 9) Approve Borough of West Chester meeting room policy (Attachment)

*Discussion:* Mr. Allen asked to place this item on the March 16, 2022 Discussion agenda.

*This item was placed on the March 16, 2022 Borough Council Discussion Agenda*

**Public Works Committee**

- 10) Approve stormwater easements: *Pipe Replacement Project* (Attachment)

- a) Parcel # 1-12-167                      423 College Avenue, Marcocci
- b) Parcel # 1-12-137.1                516 Spring Grove Lane, Markoski
- c) Parcel # 1-5-79                        317 E. Marshall Street, Korbonits

*Discussion:* Mr. Metrick advised Borough Council these easements are for two projects, as a result of damages from tropical storm Ida: a) and b) is for work in the Plum Run area; and, c) is for work close to the Chester County Hospital. All three projects are for the replacement of existing infrastructure, and funding is available through the Federal and State governments.

*This item was placed on the March 16, 2022 Borough Council Consent Agenda*

- 11) Approve wastewater bids: (Attachment)

- a) Supply and delivery of soda ash  
*one year contract - Univar Solutions, Inc. - \$81,060.00*
- b) Supply and delivery of aluminum chloride hydroxide sulfate  
*two-year contract - SALCO, Inc. - \$149,050.00*

*Discussion:* Mr. Findley explained this is an annual purchase. Borough Council did not have any questions or concerns.

*This item was placed on the March 16, 2022 Borough Council Consent Agenda*

- 12) Consider request from the CRC Watershed Association and West Chester Green Team, for assistance with the annual Goose Creek Clean-up on March 26, 2022, to provide use of the Public Works Department parking lot, and employees to collect trash bags and debris

*Discussion:* Mr. Stefano said this is a great event that is beneficial to the Borough.

*This item was placed on the March 16, 2022 Borough Council Consent Agenda*

*This item was placed on the March 16, 2022 Borough Council Consent Agenda*

- 18) Approve appointing the following delegates to the Chester County Tax Collection Committee (Attachment)
- a. Sean Metrick, Primary Voting Delegate
  - b. Barbara Lioni, First Alternate Voting Delegate
  - c. Nick Allen, Second Alternate Voting Delegate

*Discussion:* This is an annual request from the Chester County Tax Collection Committee to appoint delegates to the committee.

*This item was placed on the March 16, 2022 Borough Council Consent Agenda*

**Smart Growth Committee**

- 19) Discuss the Tree Commission's linear park concept plan at 400-430 E. Gay Street (Attachment)

*Discussion:* Mr. Gore reviewed the plan, which the Tree Commission presented to the Planning Commission. He advised the Planning Commission made favorable recommendations. At present, this is only a concept plan for the empty lot directly across from Borough Hall. The Tree Commission would like to install a linear park in the right of way along that street frontage. The linear park would beautify the area, assist with stormwater management controls, and traffic calming measures, as well. One of the recommendations from the Planning Commission is to dedicate and officially recognize the area on the official map as park space. Mr. Gore reiterated this is a conceptual plan and funding will have to be secured through grants and other avenues. The Tree Commission is looking for Borough Council to approve the concept plan so they can move forward with securing funding.

Fred Gunther is the property owner, and the Borough will have to work with him and coordinate efforts, especially if Mr. Gunther has plans on redeveloping the lot in the future.

*This item was placed on the March 16, 2022 Borough Council Consent Agenda*

- 20) Approve the preliminary land development application for 250 E. Market Street (Attachment)

*Discussion:* The Planning Commission made a favorable recommendation to approve the preliminary land development plan, and a favorable recommendation to approve the four requested waivers. The applicant is required to address several outstanding issues before they can apply for final approval of the plan.

Mr. Allen said he was concerned with the two waivers related to stormwater.

Mr. Gore replied the borough engineer supports the two stormwater waivers. The applicant is providing a *managed release system* since they cannot infiltrate due to the water table. This is a standard engineering practice where the release of the water is controlled instead of the water going straight into the stream. The DEP is looking at reworking the stormwater regulations to incorporate the managed release system.

**MINUTES**

Borough Council Meeting  
March 16, 2022 @ 7:00 PM

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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Ms. Dorsey was not in attendance at the March 16, 2022 Borough Council meeting

**Public Hearing:**

The March 16, 2022 Public Hearing was called to order at 7:05 PM

Amending the Code of the Borough of West Chester, specifically Chapter 81 titled “Plastic Bag and Plastic Straw Regulations”, Section 81-2 to add a definition for “take out or delivery food”; Section 81-3 to make it clear that the prohibition for single-use plastic carry-out bags applies to bags used for take-out and delivery orders; section 81-5 to not require commercial establishments to charge a \$.10 fee for single-use plastic carry-out bags used for take-out or delivery food.

*Discussion:* Mr. Metrick reviewed the amendment and exhibits. Mr. Stefano asked if there were any questions from Borough Council or any public comments.

Mr. Flynn made a Motion to amend the Code of the Borough of West Chester, specifically Chapter 81 titled “Plastic Bag and Plastic Straw Regulations”, Section 81-2 to add a definition for “take out or delivery food”; Section 81-3 to make it clear that the prohibition for single-use plastic carry-out bags applies to bags used for take-out and delivery orders; section 81-5 to not require commercial establishments to charge a \$.10 fee for single-use plastic carry-out bags used for take-out or delivery food; Ms. Vaccaro Seconds the Motion

**Roll Call**

**Mr. McCoy – Yes; Mr. Allen – Yes; Mr. McGinnis – Yes; Mr. Stefano – Yes;  
Ms. Vaccaro – Yes; Mr. Flynn – Yes;**

***Motion Carries: 6-0***

The Public Hearing closed at 7:08 PM

D) Consider changing the meeting time of the Borough Council Worksession and Voting Session

*Discussion:* Ms. Dorsey had concerns with the meetings beginning at 6:00 PM. Borough Council agreed to a start time of 6:30 PM beginning with the May meetings.

Mr. Flynn made a Motion to change the meeting time of the Borough Council Worksession and Voting Session Meetings to 6:30 PM, Mr. McGinnis made a Second to the Motion.

Mr. Metrick suggested changing the meeting time to become effective in May to advertise and provide the public with plenty of notice of the time change.

Mr. McGinnis made a Motion to change the meeting time of the Borough Council Worksession and Voting Session Meetings to 6:30 PM beginning in May, 2022; Mr. Flynn made a Second to the Motion.

**Roll Call:**

**Mr. McCoy – Yes; Mr. Allen – Yes; Mr. McGinnis – Yes; Mr. Stefano – Yes;  
Ms. Vaccaro – Yes; Mr. Flynn – Yes;**

*Motion Carries: 6-0*

**6) CONSENT:**

A) **Approve stormwater easements: *Pipe Replacement Project (Attachment)***

1. Parcel # 1-12-167                      423 College Avenue, Marcocci
2. Parcel # 1-12-137.1                  516 Spring Grove Lane, Markoski
3. Parcel # 1-5-79                        317 E. Marshall Street, Korbonits

B) Approve wastewater bids: (Attachment)

1. Supply and delivery of soda ash  
*one year contract - Univar Solutions, Inc. - \$81,060.00*
2. Supply and delivery of aluminum chloride hydroxide sulfate  
*two-year contract - SALCO, Inc. - \$149,050.00*

C) **Approve the request from the CRC Watershed Association and West Chester Green Team, for assistance with the annual Goose Creek Clean-up on March 26, 2022, to provide use of the Public Works Department parking lot, and employees to collect trash bags and debris**

D) Direct the Solicitor to prepare an amendment to remove the handicap parking space at 338 East Miner Street; and, remove the handicap parking space at 104 Price Street; and, schedule a Public Hearing (Attachment)

E) Approve free street-level parking for *First Friday*, on Friday, May 6th at 4 PM; and, Friday, October 7<sup>th</sup> at 4 PM (Attachment)

F) Approve a Resolution to adopt the Emergency Operations Plan (Attachment)

- G) Approve preparing requests for proposals for the Borough of West Chester solicitor, auditor, and engineer
- H) Approve appointing the following delegates to the Chester County Tax Collection Committee (Attachment)
1. Sean Metrick, Primary Voting Delegate
  2. Barbara Lioni, First Alternate Voting Delegate
  3. Nick Allen, Second Alternate Voting Delegate
- I) Approve the Tree Commission's request to explore the installation of a linear park plan at 400-430 E. Gay Street (Attachment)
- J) Approve the lot line change application for 601 & 605 Price Street (Attachment)
- K) Approve the proposal by Limoncello Restaurant, 9 North Walnut Street, to add a second dining platform at 5 N. Walnut Street (Attachment)
- L) Approve waiving the Borough busking laws for the *Fête de la Musique* event on Tuesday, June 21, 2022 (rain date: June 23, 2022) (Attachment)
- M) Approve the February 2022 HARB Certificates of Appropriateness: (Attachment)
1. 2021-02: 40 E. Gay St-Opa Tavern - Proposed work: Continued discussion of canopy.  
**Recommendation: Approved with the following conditions:** The flashing at the edge of the sheet metal standing seam roof will be limited to 1.5" vertically.
  2. 2022-03 336 W. Union St.- Proposed work: Renovate carriage house.  
**Recommendation: Approved with the following conditions:** *The recommendation for approval is limited to repointing of the brick facades, structural repairs at the interior, and replacement of the roof with a standing seam metal roof. The applicant will return to the HARB with further details on the fenestration improvements planned.*
  3. 2022-04 17 W. Gay St. - Proposed work: Sign.  
**Recommendation: Approved with the following conditions:** *That the sign to be installed match the dimensions and details of the pin mounted letter sign that was presented at meeting time at the HARB meeting, superseding the initially submitted sign.*
  4. 2022-05 133 N. Church St. - Proposed work: Barber pole & directory sign.  
**Recommendation: Approved as presented**
  5. 2022-06: 39 S. Church St - Proposed work: Siding (change from HARB #2022-01)

**MINUTES**

Borough Council Worksession Meeting

**June 14, 2022 @ 6:30 PM**

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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Ms. Dorsey attended the June 14, 2022 Hearings and Council meeting virtually.

**Public Hearing @ 6:30 PM**

Proposed new Economic Development Restaurant Liquor License: 16 East Gay Street

**Note: A stenographer was present at the hearing. A transcript is available in the Borough Manager's office.**

**Public Hearing @ 7:00 PM**

An Ordinance of the Borough of West Chester, providing for the adoption of certain procedures related to the solicitation and award of public contracts within the Borough of West Chester providing for certification requirements for public contractors; providing for certification requirements for subcontractors on public contracts; providing for public contract review procedures; repealing inconsistent ordinances or parts of ordinances; containing a savings clause and providing for an effective date.

**Note: A stenographer was present at the hearing. A transcript is available in the Borough Manager's office.**

**Borough Council Meeting:**

- 1) Call to Order – The June 14, 2022 Borough Council meeting was called to order at 8:06 PM
- 2) The Pledge of Allegiance was led by Mr. Flynn
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

Mr. Darrell Cook requested the street area in front of his home be given to him for personal use. Mr. Stefano advised his request is on the record.

- 4) Interview: Mr. Scott Zukin - Community Campus Committee  
*"A Member of the West Chester Restaurant Association/Business owner in the Borough who owns student rentals units"*

The two prospective operators are SEPTA and TMAcc, and the annual operating costs are estimated to be between \$17,000 and \$600,000. However, the Committee has independently produced an estimate of \$824,000. There is a long-established formula used for dividing the local share of regional rail service subsidies between the counties and the city of Philadelphia.

Capital funding will come from a capital investment grant from either federal or state sources, and more than likely a combination of both.

SEPTA's involvement is necessary. The Committee anticipates support from Borough Council, Chester and Delaware counties, TMAcc, the PA Public Utility Commission, and the US Federal Railroad Administration.

RDC extended an invitation to Borough Council to see how the Metro works and take a short ride in mid-July.

Mr. Allen asked if this would be timed with the regional rail schedule. Mr. Hickey replied it would be an enforced connection. If the SEPTA train is late, the shuttle will wait and make up time elsewhere.

Mr. Hickey asked Borough Council to consider a Resolution in support of the West Chester Metro concept.

Mr. McGinnis said for the record he is in support of this project.

Mr. Stefano advised this item will be discussed at the Smart Growth Committee in July.

### **Public Works Committee**

- 6) Schedule a Public Hearing on July 20, 2022 at 6:30 PM to amend Chapter 102, Section 102-10 "Trees" to permit the Borough Arborist to enforce the regulations of Chapter 102 (*Attachment*)

**Discussion:** Borough Council agreed to schedule a Public Hearing on July 20, 2022 at 6:30 PM.

Borough Council moved this item to the June 15, 2022 Consent agenda.

- 7) Approve bid award to DiRocco Brothers for Greenfield Park stormwater improvements, in the amount of \$151,955.00 (*Attachment*)

**Discussion:** McCoy asked to put this item on the Discussion agenda so the bid alternates can be discussed.

Borough Council moved this item to the June 15, 2022 Discussion agenda.

### **Parking Committee:**

**A G E N D A**

Borough Council Worksession Meeting

**June 14, 2022 @ 6:30 PM**

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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**Public Hearing @ 6:30 PM**

Proposed new Economic Development Restaurant Liquor License: 16 East Gay Street

**Public Hearing @ 7:00 PM**

An Ordinance of the Borough of West Chester, providing for the adoption of certain procedures related to the solicitation and award of public contracts within the Borough of West Chester providing for certification requirements for public contractors; providing for certification requirements for subcontractors on public contracts; providing for public contract review procedures; repealing inconsistent ordinances or parts of ordinances; containing a savings clause and providing for an effective date.

**Borough Council Meeting:**

- 1) Call to Order
- 2) Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda
- 4) Interview: Mr. Scott Zukin - Community Campus Committee  
*"A Member of the West Chester Restaurant Association/Business owner in the Borough who owns student rentals units"*
- 5) Presentation by the Committee to Reestablish Rail Service to West Chester (*Attachment*)

**Public Works Committee**

- 6) Schedule a Public Hearing on July 20, 2022 at 6:30 PM to amend Chapter 102, Section 102-10 "Trees" to permit the Borough Arborist to enforce the regulations of Chapter 102 (*Attachment*)

*Committee Recommendation 3-0*

- 7) Approve bid award to DiRocco Brothers for Greenfield Park stormwater improvements, in the amount of \$151,955.00 (*Attachment*)

*Committee Recommendation 3-0*

**Parking Committee:**

- 8) Schedule a Public Hearing on July 20, 2022 at 6:30 PM, and authorize the Solicitor to prepare an amendment to remove the handicap parking space at 137 East Miner Street, northside; remove the handicap parking space at 124 East Miner Street, southside; add one handicap space in front of 144 East Miner Street, southside; and, add one handicap space in the 300 Block of Linden Street, southside (Between Sgt Yarnall Alley and South Penn) (*Attachment*)

*Committee Recommendation 3-0*

- 9) Schedule a Public Hearing on July 20, 2022 at 6:30 PM, and authorize the Solicitor to prepare an amendment to add one handicapped space in front of 132 East Miner Street, southside (*Attachment*)

*Committee Recommendation 3-0*

**Public Safety, Events & Quality of Life Committee**

- 10) Motion to request the Civil Service Commission to prepare a list of eligible candidates for promotion to the position of Sergeant, West Chester Borough Police Department

*Committee Recommendation 3-0*

- 11) Approve the Special Events application for the July 23, 2022 West Chester Children's Business Fair (*Attachment*)

*Committee Recommendation 3-0*

**Finance & Revenue Committee**

- 12) Approve the Sewer Tap Fee study prepared by Keystone Alliance and direct the Borough Solicitor to draft an Ordinance to enact a change of sewer tap fees (*Attachment*)

*Committee Recommendation 3-0*

- 13) Approve the request from the Civil Service Commission for a \$10,000 increase in the legal fees budget (*Attachment*)

*Committee Recommendation 3-0*

- 14) Approve the proposal from Traffic, Planning & Design, for planning of the long-term closure of Gay Street, in the amount of \$33,700, funded through the American Rescue Plan Act money (*Attachment*)

*Committee Recommendation 3-0*

**MINUTES**

Borough Council Meeting

**June 15, 2022 @ 6:30 PM**

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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**Ms. Dorsey attended virtually**

**Borough Council Meeting:**

- 1) The June 15, 2022 Borough Council meeting was called to order at 6:31 PM
- 2) The Pledge of Allegiance was led by Mr. McCoy
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

**Discussion:** There were no comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

- 4) Comments by the Borough Council and the Mayor

**Mr. McCoy:** Thursday is the first Marshall Square Park “Music in the Park” event this year. Hopes everyone can make it and the weather holds out.

**Ms. Vaccaro:** Spent this past week meeting with representatives from the University and the BID, and is excited about the future of West Chester.

**Mr. McGinnis:** Thanked Borough Council for passing the Responsible Contractor Ordinance and reminded people that the “happening ward” is Ward 3 as that is where PorchFest was held, as well as the music festival. Both were a big success, and he thanked everyone for participating in these events.

**Mr. Flynn:** Advised when the wards are realigned all of Everhart Park will be in the 6th Ward. Thanked Keith Kurowski for a beautiful job on the Turks Head Festival. Wanted to bring attention to a special store in the Borough located at 36 South High Street - Katie Mac Floral Design. Katie Mac retired, and rather than sell her business, she gifted it to the Chester County Down Syndrome Institute Group. One hundred percent of the proceeds go to programming and support for individuals with special needs. Mr. Flynn urged everyone to support this business that helps children with special needs learn a trade and skill.

Mayor DeBaptiste asked the BID what they can do about the building owned by the Laurento's and if a business opens and they do not join the Chamber, will BID assist them.

Mr. O'Brien responded he does not know what the plans are for Laurento's, but he does know the property owner(s) does not want to lease it. He did see recent activity with painting and power washing the building. He has reached out to the property owner, but the property owner is not always responsive. He believes Codes Enforcement has been in contact with the property owner for simple building maintenance issues.

The BID will work with a new business when they open by assisting with social media and advertising, and by requesting the *Daily Local News* to run a story on the business. The BID is considering doing more of a ribbon-cutting event but will want to work with the Chamber in that respect.

Darrell Cook asked if there was any feedback from the non-Gay Street businesses concerning the closure of Gay Street. Mr. O'Brien said he has not received any negative feedback since the closure.

6) Presentation of Proclamation by Mayor Lillian DeBaptiste: *Year of Humphry Marshall*

Mayor DeBaptiste advised it is the Year of Humphry Marshall. Humphry Marshall was born on October 10th, 1722 in Bradford Township, Chester County, the 8th child of Quaker immigrants. Mr. Marshall had an interest in astronomy, meteorology, agriculture, and natural science; and, served the Chester County Community as an assessor, treasurer, and trustee for the general loan office. He published his Magnus Opus, entitled, *The American Grove*. It was the first botanical book produced in America. As a public citizen, Humphrey helped to establish the Chester County Alms House and the Westtown School. Mayor DeBaptiste thanked Malcolm Johnstone who portrayed Humphrey Marshall at the Borough Council meeting.

7) **Discussion**

A) Approve bid award to DiRocco Brothers for Greenfield Park stormwater improvements, in the amount of \$151,955.00 (*Attachment*)

Mr. McCoy asked to discuss this item to review the bid alternates that were not available at the time of the Public Works Committee meeting.

Mr. Metrick provided some background and a slide presentation on the project. The Chester County Conservation District awarded a grant in the amount of \$127,270 in April 2019. Greenfield Park is mostly used for baseball but can be used for other recreational activities. In the early stages of the project, a series of infiltration trenches along Greenview Alley were considered to handle the runoff from the apartment building and several rear parking spaces behind the properties that front East Nields Street.

Mr. Metrick said they began to look at lower-cost options for Stormwater improvement and the focus changed to the parking lot area which is used for people visiting the park, and the residents of the apartment building across the street. There are approximately 8 parking meters used for short-term parking which generates some revenue.

The project presented is going to manage stormwater from the cross-hatched area in the parking lot into two connected rain gardens that will be planted in the parking lot median areas in the mid-island, and then on the island that borders Franklin Street. A pipe will be installed to join the overflow from the western parking median into the eastern pipe, and then it will discharge into Goose Creek at the southern end of the parking area.

Mr. Metrick said to think of the rain garden as a sponge to absorb water from the parking lot. Plants that can tolerate frequent inundation, salt, dirt, excessive rains, etc., will be used in the gardens.

The bids were opened June 6<sup>th</sup>, 2022 and the low bidder of the project was DiRocco Brothers with a base bid of \$151,955.00. The parking lot paving as an alternate, and the Greenview alley paving as an alternate, were bid separately.

The project budget is \$130,635.00, slightly over budget, which is why there is no recommendation to award any of the alternates. Mr. Metrick suggested looking at the project in a phased approach and consider pervious paving options next year when reviewing the stream protection program and capital planning.

Mr. Stefano asked what the expected time frame is if Council approved the bid tonight. Metrick said a notice to proceed, and mobilization, can occur in approximately six weeks.

Mr. Stefano asked if the project would help mitigate the flooding that occurs on South Franklin. It is a concern for residents, and it will also assist with the beautification of that area.

Mr. Metrick replied it is not going to solve the entire flooding problem but will certainly help.

It is not going to alleviate flooding during tropical storms or hurricanes, but it is going to assist during the more frequent, small rain events and will discharge cleaner water into Goose Creek.

Mr. Flynn asked if the \$151,000 is basically for the installation of the rain gardens. Mr. Metrick replied the rain gardens and the piping.

Mr. Metrick said he and staff are recommending awarding the base bid, which is valid for 60 days, and urged Borough Council to act promptly so the work can begin when parking pressures are not as high and the student populations are lower.

Mr. McCoy made a Motion to Approve the bid award to DiRocco Brothers for Greenfield Park stormwater improvements, in the amount of \$151,955.00; Ms. Vaccaro made a second to the motion.

**Roll Call:**

**Mr. McCoy – Yes; Mr. Allen – Yes; Mr. McGinnis – Yes;  
Mr. Stefano – Yes; Ms. Vaccaro – Yes; Mr. Flynn – Yes; Ms. Dorsey - Yes**

**Motion Carries: 7-0**

*This meeting is being audio recorded for public record*

**A G E N D A – Amended 8/16/2022**

Borough Council Worksession Meeting

**August 16, 2022 @ 6:30 PM**

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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**Public Hearing @ 6:30 PM**

A Public Hearing to amend the Code of the Borough of West Chester, Chapter 89, titled, “Sewers”, Section 89-1.1(g) to revise sewer tapping fees

**Borough Council Meeting:**

- 1) Call to Order
- 2) Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda
- 4) Render a decision on the Economic Development Restaurant Liquor License application:  
16 East Gay Street – White Cow, LLC
- 5) Discuss the special donation request: Unite for HER (*attachment*)  
  
*Committee Recommendation 2-0*
- 6) New Police Department hire recommendations from Mayor DeBaptiste
- 7) Discuss the reapportionment of the West Chester Borough voting wards ([online map options](#))  
  
*Committee Recommendation 2-0*
- 8) Discuss the Reproductive Rights Ordinance (*attachment*)  
  
*Committee Recommendation 2-0*
- 8A) Approve amending the August 16, 2022 agenda to approve sending a letter of support for reproductive rights to State Representative Dianne Herrin and State Senator Carolyn Comitta

from North to West [Added 9-16-2015 by Ord. No. 12-2015] - schedule a public hearing date on September 20, 2022 (*attachment*)

*Committee Recommendation 3-0*

- 15) Authorize the Solicitor to amend Chapter 104 to add parking meters on the 200 Block of East Market Street, south side - schedule a public hearing date on September 20, 2022 (*attachment*)

*Committee Recommendation 3-0*

- 16) Authorize the Solicitor to amend Chapter 104-45, *Special purpose parking zones established; parking otherwise prohibited* – to add a handicapped parking space at 508 East Miner Street – schedule a public hearing date on September 20, 2022 (*attachment*)

*Committee Recommendation 3-0*

➤ **Smart Growth Committee**

- 17) Approve proposed changes to Stormwater Ordinance and schedule a public hearing date on September 21, 2022 at 6:30pm (*attachment*)

*Committee Recommendation 3-0*

- 18) Approve Final Land Development Plan for 501 Hannum Avenue (*attachment*)

*Committee Recommendation 3-0*

- 19) Approve July 2022 HARB submissions recommendations (*attachments*)

**1. 2022-21: 11 West Gay Street – Buddy’s Burgers**

*Proposed Work*; Sign

*Recommendation*: Board recommends a Certificate of Appropriateness for application 2022-21 as submitted, with no visible electrical connections.

**2. 2022-24: 130 East Chestnut Street**

*Proposed Work*; Carriage House Renovation

*Recommendation*: For carriage houses, the HARB does not make a formal recommendation for COA. Carol Quigley moved to send Kevin Gore a letter of support for application 2022-24.

**3. 2022-25: 44 West Gay Street – Sedona Tap House**

*Proposed Work*; Sign and Patio Enclosure

*Recommendation*: Board recommends a Certificate of Appropriateness for application 2022-25 as submitted, as shown on the updated July meeting design documents, and the addition of low stone base elements at each side of the new Gay Street entrance doors.

*Committee Recommendation 3-0 to approve the July HARB COAs*

- 20) Deny the extension request for the dining platform at Greystone Oyster Bar, 7 North Church Street (*attachment*)

**MINUTES**

Borough Council Worksession Meeting

**August 16, 2022 @ 6:30 PM**

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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Mr. Allen was not in attendance during the public hearing or the August 16, 2022 Borough Council meeting. Ms. Vaccaro attended virtually.

**Public Hearing @ 6:30 PM**

A Public Hearing to amend the Code of the Borough of West Chester, Chapter 89, titled, “Sewers”, Section 89-1.1(g) to revise sewer tapping fees

**Discussion:** Mr. Oeste reviewed the amendment and exhibits.

Mr. Stefano asked for questions or comments from Borough Council and the public. There were no questions or comments from Borough Council or the public.

Ms. Dorsey made a Motion to amend the Code of the Borough of West Chester, Chapter 89, titled, “Sewers”, Section 89-1.1(g) to revise sewer tapping fees; Mr. Flynn made a second to the Motion.

**Roll Call:**

**Mr. McCoy – Yes; Mr. McGinnis – Yes; Mr. Stefano – Yes;  
Ms. Vaccaro – Yes; Mr. Flynn – Yes; Ms. Dorsey – Yes**

**Motions Carries 6-0**

**Borough Council Meeting:**

- 1) Call to Order  
The August 16, 2022 Borough Council meeting was called to order at 6:34 PM
- 2) Pledge of Allegiance  
Mr. McGinnis led the Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

There were no comments, suggestions, petitions by residents in attendance regarding items not on the agenda

- 14) Authorize the Solicitor to amend Chapter 104 to add parking meters on the 200 Block of East Market Street, south side - schedule a public hearing date on September 20, 2022 (*attachment*)

**Discussion:** Borough Council did not have any questions or concerns.

**This item is moved to the August 17, 2022 Consent Agenda**

- 15) Authorize the Solicitor to amend Chapter 104-45, *Special purpose parking zones established; parking otherwise prohibited* – to add a handicapped parking space at 508 East Miner Street – schedule a public hearing date on September 20, 2022 (*attachment*)

**Discussion:** Mr. Metrick advised a resident requested a handicapped parking space. There is one other handicapped parking space on the block. Mr. Mojica said there is no issue with two handicapped parking spaces on the same block.

**This item is moved to the August 17, 2022 Consent Agenda**

➤ ***Smart Growth Committee***

- 16) Approve proposed changes to Stormwater Ordinance and schedule a public hearing date on September 21, 2022 at 6:30 pm (*attachment*)

**Discussion:** Mr. Williams said the Borough is required to update the Ordinance, with a deadline of September 30, 2022.

**This item is moved to the August 17, 2022 Consent Agenda**

- 17) Approve Final Land Development Plan for 501 Hannum Avenue (*attachment*)

**Discussion:** Mr. Gore advised Borough Council the applicant is proposing a 6,000 square foot office building, which will house an orthodontist office, and has additional 2,000 square feet for a second tenant in the future. There are 38 parking spaces on the site, which was approved via variance. The Planning Commission made a favorable recommendation for approval of this project with associated waivers the applicant is seeking. The review letters are clean, and Mr. Gore is currently working through the administrative aspects of the agreements.

**This item is moved to the August 17, 2022 Consent Agenda**

- 18) Approve July 2022 HARB submissions recommendations (*attachments*)

1. **2022-21: 11 West Gay Street – Buddy’s Burgers**

*Proposed Work; Sign*

*Recommendation:* Board recommends a Certificate of Appropriateness for application 2022-21 as submitted, with no visible electrical connections.

2. **2022-24: 130 East Chestnut Street**

*Proposed Work; Carriage House Renovation*

**A G E N D A**

Borough Council Meeting  
**August 17, 2022 @ 6:30 PM**

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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**Borough Council Meeting:**

- 1) Call to Order
- 2) Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda
- 4) Comments by the Borough Council and the Mayor
- 5) Announce the reason for the August 17, 2022 Executive Session
- 6) DISCUSSION:

A) Appointment to the vacancy on the Library Board and the Planning Commission:

West Chester Library Board of Directors:

- 1) Andrea Moore – Borough Resident
- 2) Kelly Dungee

Planning Commission:

- 1) Craig J Loundas – Borough Resident
- 2) Tom West – Borough Resident
- 3) Matthew Clapp, P.E., PMP– Borough Resident

7) CONSENT:

- A) Approve the new Police Department hire recommendations
- B) Approve sending a letter of support for reproductive rights to State Representative Dianne Herrin and State Senator Carolyn Comitta (attachment)

- C) Approve the request from the BID to provide a grant support letter for a Keystone Communities Program Grant to help fund the façade improvement grant program (*attachment*)
- D) Approve a Resolution authorizing the Borough Manager to sign a Nonexclusive Video Sharing License Agreement with PennDOT (approved at the April, 2022 Borough Council meeting) (*attachment*)
- E) Approve amendment to Bicentennial Garage lease agreement between the West Chester Borough and Eclat Chocolate (Confiserie Curtin Et Companion, Inc.) to alter the terms and conditions of the “Option Term” (*attachment*)
- F) Authorize the Solicitor to amend Chapter 77, *Parking Program, Residential*, to remove all references to parking stickers and associated costs; guest cards and associated costs; and special business cards and associated costs from the entire Ordinance; remove the following holidays from Section 77-2 *Definitions - “Holiday”* Columbus Day, General Election Day, Veterans Day - schedule a hearing date on September 20, 2022 (*attachment*)
- G) Authorize the Solicitor to amend Chapter 104-45, *Special purpose parking zones established; parking otherwise prohibited* – to change the direction at 224 Biddle Street from North to West [Added 9-16-2015 by Ord. No. 12-2015] - schedule a hearing date on September 20, 2022 (*attachment*)
- H) Authorize the Solicitor to amend Chapter 104 to add parking meters on the 200 Block of East Market Street, south side - schedule a hearing date - schedule a hearing date on September 20, 2022 (*attachment*)
- I) Authorize the Solicitor to amend Chapter 104-45, *Special purpose parking zones established; parking otherwise prohibited* – to add a handicapped parking space at 508 East Miner Street – schedule a hearing date - schedule a hearing date on September 20, 2022 (*attachment*)
- J) Approve proposed changes to Stormwater Ordinance and schedule a public hearing date for September 21, 2022 at 6:30pm (*attachment*)
- K) Approve Final Land Development Plan for 501 Hannum Avenue (*attachment*)
- L) Approve July 2022 HARB submissions recommendations (*attachments*)

**1. 2022-21: 11 West Gay Street – Buddy’s Burgers**

*Proposed Work; Sign*

*Recommendation:* Board recommends a Certificate of Appropriateness for application 2022-21 as submitted, with no visible electrical connections.

**2. 2022-25: 44 West Gay Street – Sedona Tap House**

*Proposed Work; Sign and Patio Enclosure*

*Recommendation:* Board recommends a Certificate of Appropriateness for application 2022-25 as submitted, as shown on the updated July meeting design documents, and the addition of low stone base elements at each side of the new Gay Street entrance doors.

**MINUTES**

Borough Council Meeting  
**August 17, 2022 @ 6:30 PM**

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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**Ms. Vaccaro was not present at the August 17, 2022 Borough Council meeting.**

**Borough Council Meeting:**

1) Call to Order

The August 17<sup>th</sup> Borough Council meeting was called to order at 6:58 PM

2) Pledge of Allegiance

The Pledge of Allegiance was led by Mr. McCoy

3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

There were no Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda

4) Comments by the Borough Council and the Mayor

**Mr. McCoy:** The last concert in Marshall Square Park is this Thursday. The summer series has been very enjoyable.

**Mr. McGinnis:** Appreciates the progress the Borough Council is making to protect women's reproductive rights and is hoping to see more progress.

**Mr. Flynn:** Happy Labor Day. His 70<sup>th</sup> Birthday is this month.

**Mr. Allen:** Thanked Borough Council for their patience during his absence, and it is good to be back. He appreciates Mr. McGinnis' comments regarding women's reproductive rights and is encouraged by and impressed with the work so far accomplished.

**Ms. Dorsey:** Back to school is fast approaching.

**Mayor DeBaptiste:** Believes it has been a good week for Borough Council with many accomplishments. She is pleased to submit the four applicants as new officers in the Police Department. They are excellent applicants and will bring diversity to the Borough.

7) CONSENT:

- A) Approve the new Police Department hire recommendations
- B) Approve sending a letter of support for reproductive rights to State Representative Dianne Herrin and State Senator Carolyn Comitta (attachment)
- C) Approve the request from the BID to provide a grant support letter for a Keystone Communities Program Grant to help fund the façade improvement grant program (attachment)
- D) Approve a Resolution authorizing the Borough Manager to sign a Nonexclusive Video Sharing License Agreement with PennDOT (approved at the April, 2022 Borough Council meeting) (attachment)
- E) Approve amendment to Bicentennial Garage lease agreement between the West Chester Borough and Eclat Chocolate (Confiserie Curtin Et Companion, Inc.) to alter the terms and conditions of the “Option Term” (attachment)
- F) Authorize the Solicitor to amend Chapter 77, *Parking Program, Residential*, to remove all references to parking stickers and associated costs; guest cards and associated costs; and special business cards and associated costs from the entire Ordinance; remove the following holidays from Section 77-2 *Definitions* - “Holiday” Columbus Day, General Election Day, Veterans Day - schedule a hearing date on September 20, 2022 (attachment)
- G) Authorize the Solicitor to amend Chapter 104-45, *Special purpose parking zones established; parking otherwise prohibited* – to change the direction at 224 Biddle Street from North to West [Added 9-16-2015 by Ord. No. 12-2015] - schedule a hearing date on September 20, 2022 (attachment)
- H) Authorize the Solicitor to amend Chapter 104 to add parking meters on the 200 Block of East Market Street, south side - schedule a hearing date - schedule a hearing date on September 20, 2022 (attachment)
- I) Authorize the Solicitor to amend Chapter 104-45, *Special purpose parking zones established; parking otherwise prohibited* – to add a handicapped parking space at 508 East Miner Street – schedule a hearing date - schedule a hearing date on September 20, 2022 (attachment)
- J) Approve proposed changes to Stormwater Ordinance and schedule a public hearing date for September 21, 2022 at 6:30pm (attachment)
- K) Approve Final Land Development Plan for 501 Hannum Avenue (attachment)
- L) Approve July 2022 HARB submissions recommendations (attachments)
  - 1. **2022-21: 11 West Gay Street – Buddy’s Burgers**  
*Proposed Work; Sign*  
*Recommendation:* Board recommends a Certificate of Appropriateness for application 2022-21 as submitted, with no visible electrical connections.

**A G E N D A**

Borough Council Meeting  
**September 21, 2022 @ 6:30 PM**

Michael Stefano, President	Member, 4 <sup>th</sup> Ward	Term Expires: 12/31/23
Lisa Dorsey, Vice President	Member, 7 <sup>th</sup> Ward	Term Expires: 12/31/25
Patrick McCoy	Member, 1 <sup>st</sup> Ward	Term Expires: 12/31/25
Nick Allen	Member, 2 <sup>nd</sup> Ward	Term Expires: 12/31/23
Brian McGinnis	Member, 3 <sup>rd</sup> Ward	Term Expires: 12/31/25
Sheila Vaccaro	Member, 5 <sup>th</sup> Ward	Term Expires: 12/31/25
Bernie Flynn	Member, 6 <sup>th</sup> Ward	Term Expires: 12/31/23

**Mayor:** Lillian L. DeBaptiste

**Borough Manager:** Sean Metrick

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**Public Hearing @ 6:30 PM**

An Ordinance of the Borough of West Chester, Chester County, Pennsylvania, amending the Borough of West Chester Stormwater Management Ordinance, which was adopted on December 18, 2013 as Ordinance No. 18-2013 and is codified in Chapter 94 of the Borough of West Chester code, and adopting amendments required by the 2022 Chester County model act 167 Stormwater Management Ordinance.

**Borough Council Meeting:**

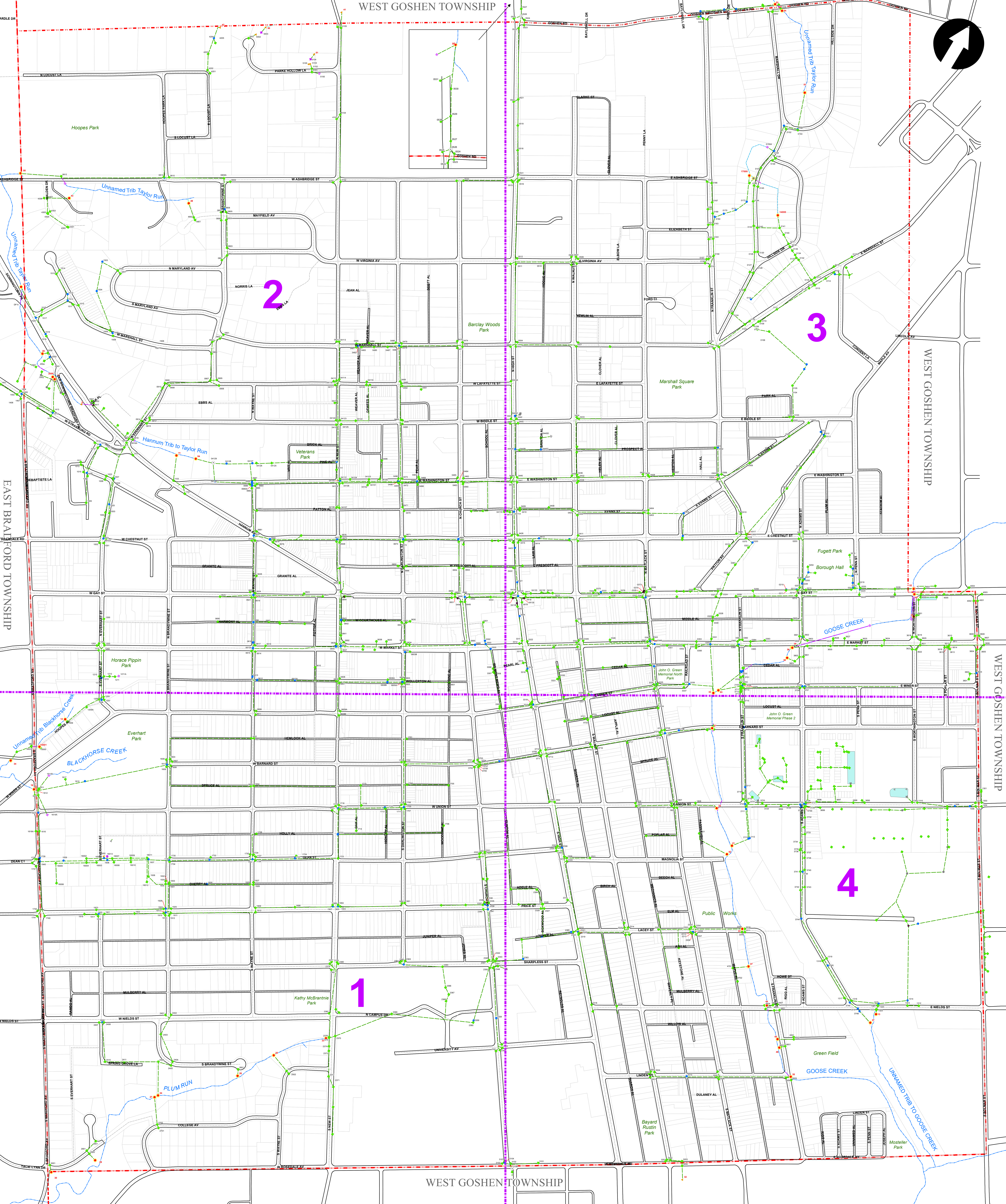
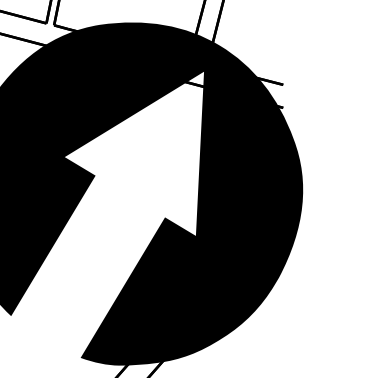
- 1) Call to Order
- 2) Pledge of Allegiance
- 3) Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda
- 4) Comments by the Borough Council and the Mayor

➤ **5) DISCUSSION:**

- a) Borough Manager presentation of the Preliminary Budget, 2023

➤ **6) CONSENT:**

- a) Approve hiring Zachary Turner as a patrol officer, West Chester Borough Police Department
- b) Approve the Business Improvement District Board of Directors appointment of Tyrone Taylor
- c) Approve Option B as the reapportionment of the Voting Wards (*attachment*)
  - i. [Proposed Voting Ward Map](#)
  - ii. [Existing Voting Wards Population Map](#)
  - iii. [Existing Voting Wards Racial Demographic Map](#)
  - iv. [Voting Ward Options – Preliminary Analysis](#)



**Legend**

	Outfall		Trench Drain
	Outfall (Private)		Swale
	Outlet Structure		Storm Line
	Outlet Structure-private		Stream-field surveyed
	Pipe Discharge		Culvert
	Pipe Discharge-private		basin
	Observation Point		Municipal Boundary
	Junction Box		Streams
	Inlet		Parcels
	Private Inlet		
	Headwall		

- NOTES**
- 1) Original MS4 GIS data from HRG February 10, 2012. Various storm sewer components have been field verified, GPS'd and/or digitally located from aerials/plans. Ongoing updates started in 2015.
  - 2) The Rights-of-Way shown on this map are a graphical representation provided as a courtesy only, and are not warranted to be accurate descriptions of the actual Rights-of-Way.
  - 3) Stream data is from Chester County GIS Department and Pennsylvania State University and has not been field verified by this office, 2016.
  - 4) Watershed delineation from the Pennsylvania Department of Environmental Protection, 1997, and refined based on field reconnaissance in 2019.
  - 5) Tax Parcel Lines are from Chester County GIS Department, 2019.

**WEST CHESTER BOROUGH**  
**MS4 MAP**

**WEST CHESTER BOROUGH, CHESTER COUNTY, PA**

**GILMORE & ASSOCIATES, INC.**  
ENGINEERING & CONSULTING SERVICES  
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JOB NO: 18-08030T      DATE: FEBRUARY 2022

0 100 200 400  
Feet

# **OUTFALL INSPECTIONS**

***FOR***

***WEST CHESTER BOROUGH  
CHESTER COUNTY, PENNSYLVANIA***

**JULY 2022**

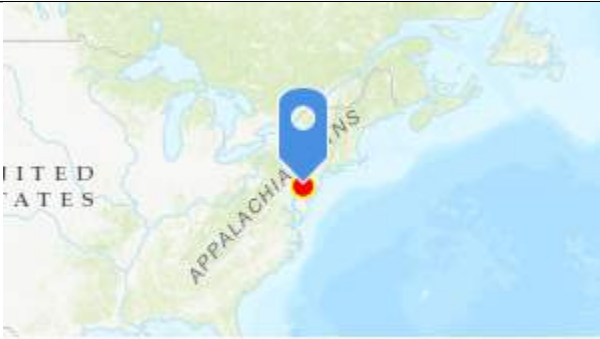


**Prepared by:**

**Gilmore & Associates, Inc.  
184 W. Main Street  
Trappe, PA 19426**






## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	3102
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95096356	Longitude	-75.59839733
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	HDPE	Circular	Single	Diameter: 24 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.	
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.	
Inspector Comments:	"M" type inlet
<b>RESPONSIBLE OFFICIAL CERTIFICATION</b>	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).	
Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	3106
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95084428	Longitude	-75.59830987
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	HDPE	Circular	Single	Diameter: 24 in	Yes - the outfall is submerged with sediment
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.

Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments: "M" type inlet. completely filled with sediment.

**RESPONSIBLE OFFICIAL CERTIFICATION**

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


Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

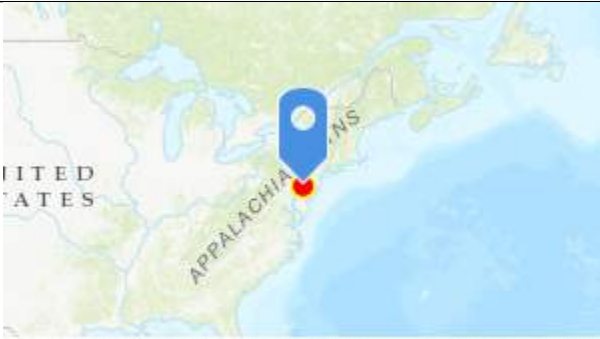
BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	32
Land Uses in Outfall Drainage Area:	Suburban Residential	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95230409	Longitude	-75.59433094
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	Other	Circular	Single	Diameter: 8 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.	
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.	
Inspector Comments:	unable to locate POD in highly vegetated area. Inspected at road
<b>RESPONSIBLE OFFICIAL CERTIFICATION</b>	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).	
Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	35
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95502719	Longitude	-75.59322642
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	CMP	Circular	Single	Diameter: 24 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.


Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

Inspector Comments:

**RESPONSIBLE OFFICIAL CERTIFICATION**

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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	45
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95558704	Longitude	-75.59420284
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	PVC	Circular	Single	Diameter: 8 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.

Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

Inspector Comments:


**RESPONSIBLE OFFICIAL CERTIFICATION**

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


Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT


BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	46
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95539795	Longitude	-75.593975
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	CMP	Circular	Single	Diameter: 12 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.	
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.	
Inspector Comments:	
<b>RESPONSIBLE OFFICIAL CERTIFICATION</b>	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).	
Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	44
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95603312	Longitude	-75.59478387
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	CMP	Circular	Single	Diameter: 18 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.


Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

Inspector Comments:

**RESPONSIBLE OFFICIAL CERTIFICATION**

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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	47
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95647122	Longitude	-75.5956038
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	HDPE	Circular	Single	Diameter: 15 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.

Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

**RESPONSIBLE OFFICIAL CERTIFICATION**

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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	22
Land Uses in Outfall Drainage Area:	Suburban Residential	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95696771	Longitude	-75.59615296
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	HDPE	Circular	Single	Diameter: 18 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.

Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

Inspector Comments:

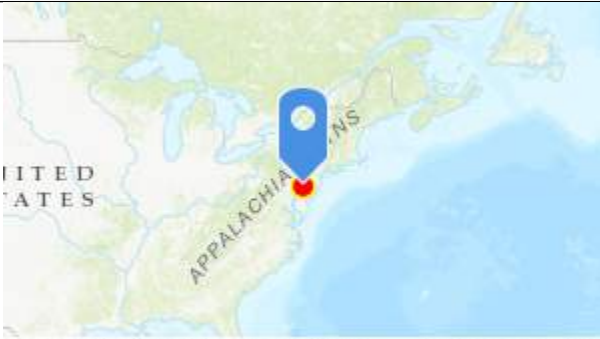

**RESPONSIBLE OFFICIAL CERTIFICATION**

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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	21
Land Uses in Outfall Drainage Area:	Industrial, Commercial,	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95829842	Longitude	-75.5974628
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	RCP	Circular	Single	Diameter: 17 in	Yes - the outfall is submerged in water
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.


Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

Inspector Comments:

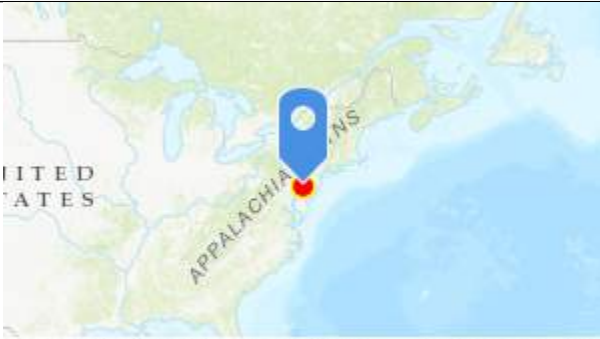


**RESPONSIBLE OFFICIAL CERTIFICATION**

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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	52
Land Uses in Outfall Drainage Area:	Industrial, Commercial,	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95825108	Longitude	-75.59742002
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	Other	Circular	Single	Diameter: 14 in	Yes - the outfall is submerged with sediment
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.	
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.	
Inspector Comments:	unable to locate POD, appears to be buried in debris and sediment.
<b>RESPONSIBLE OFFICIAL CERTIFICATION</b>	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).	
Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	18
Land Uses in Outfall Drainage Area:	Industrial, Commercial,	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95868785	Longitude	-75.59819218
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	RCP	Circular	Single	Diameter: 21 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.


Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

Inspector Comments:

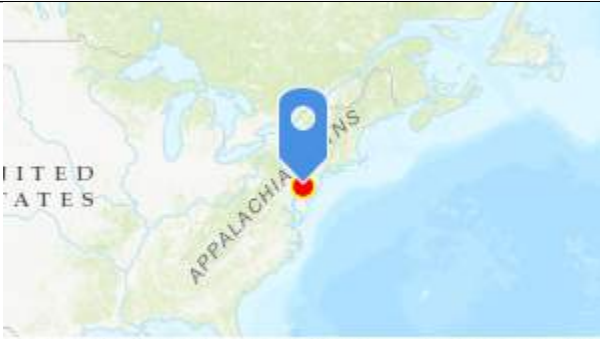


**RESPONSIBLE OFFICIAL CERTIFICATION**

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

Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	7
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.96002783	Longitude	-75.59932281
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	HDPE	Circular	Single	Diameter: 18 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.

Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

Inspector Comments:

**RESPONSIBLE OFFICIAL CERTIFICATION**

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

Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT


BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	33A
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.96109642	Longitude	-75.60034206
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	HDPE	Circular	Single	Diameter: 36 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			Yes	If No, skip to Certification Section.	
Description of Flow Rate:			Moderate		
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?		No		If Yes, provide a description	
Does the dry weather flow contain an odor?		No		If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?		No		If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?		No		If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?		No		If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate	2	GPM	Fecal Coliform	20,000	No./100 mL
pH	7.32	S.U	COD		mg/L
Total Residual Chlorine (TRC)	0	mg/L	BOD <sub>5</sub>		mg/L
Conductivity	1,670	umhos/cm	TSS		mg/L
Ammonia-Nitrogen	0.4	mg/L	TDS	1,070	mg/L
Other: Turbidity	22.61	NTU	Oil and Grease		mg/L
Other: Temperature	0	C	Dissolved O <sub>2</sub>	6.54	mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory: Fecal Coliform					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?		Yes			

If Yes, describe efforts made to determine the source(s) of the illicit discharge.	
track/trace	
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.	
track/trace	
Inspector Comments:	

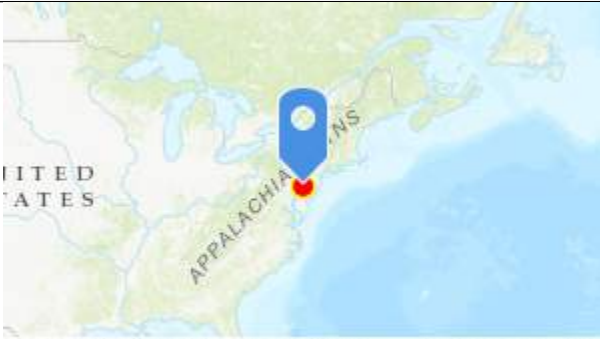

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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT


BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	33B
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.96066584	Longitude	-75.59977215
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	HDPE	Circular	Single	Diameter: 24 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			Yes	If No, skip to Certification Section.	
Description of Flow Rate:			Moderate		
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?		No		If Yes, provide a description	
Does the dry weather flow contain an odor?		Yes		If Yes, provide a description	
sewage					
Is there an observed change in the receiving waters as a result of the discharge?		Yes		If Yes, provide a description below.	
cloudy					
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?		Yes		If Yes, provide a description below.	
solids					
Were sample(s) collected of the dry weather flow?		No		If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate	4	GPM	Fecal Coliform	20,000	No./100 mL
pH	7.05	S.U	COD		mg/L
Total Residual Chlorine (TRC)	0	mg/L	BOD <sub>5</sub>		mg/L
Conductivity	1,020	umhos/cm	TSS		mg/L
Ammonia-Nitrogen	15	mg/L	TDS	651	mg/L
Other: Turbidity	23.79	NTU	Oil and Grease		mg/L
Other: Temperature	26.1	C	Dissolved O <sub>2</sub>	4.18	mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory: Fecal Coliform					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?		Yes			

If Yes, describe efforts made to determine the source(s) of the illicit discharge.	
track/trace	
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.	
track/trace	
Inspector Comments:	

**RESPONSIBLE OFFICIAL CERTIFICATION**

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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	13
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95692431	Longitude	-75.59234719
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	CMP	Circular	Triple	Diameter: 36 in	Yes - the outfall is submerged in water
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.


Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

Inspector Comments:

**RESPONSIBLE OFFICIAL CERTIFICATION**

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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 21, 2022	Outfall ID No.:	37
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.95656541	Longitude	-75.59217902
Photo 1			
			
Photo 2			
			

<b>OUTFALL DESCRIPTION</b>					
<b>TYPE</b>	<b>MATERIAL</b>	<b>SHAPE</b>		<b>DIMENSIONS</b>	<b>SUBMERGED</b>
Closed Pipe	HDPE	Circular	Single	Diameter: 36 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			Yes	If No, skip to Certification Section.	
Description of Flow Rate:			Significant		
<b>DRY WEATHER FLOW EVALUATION</b>					
Does the dry weather flow contain color?		No		If Yes, provide a description	
Does the dry weather flow contain an odor?		No		If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?		Yes		If Yes, provide a description below.	
cloudy					
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?		No		If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?		No		If Yes, No. Samples:	
<b>FIELD / LABORATORY ANALYSIS</b>					
<b>PARAMETER</b>	<b>RESULTS</b>	<b>UNITS</b>	<b>PARAMETER</b>	<b>RESULTS</b>	<b>UNITS</b>
Flow Rate	7	GPM	Fecal Coliform	20,000	No./100 mL
pH	7.39	S.U	COD		mg/L
Total Residual Chlorine (TRC)	0	mg/L	BOD <sub>5</sub>		mg/L
Conductivity	1,010	umhos/cm	TSS		mg/L
Ammonia-Nitrogen	3	mg/L	TDS	649	mg/L
Other: Turbidity	21.44	NTU	Oil and Grease		mg/L
Other: Temperature	5.3	C	Dissolved O <sub>2</sub>	4.14	mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory: Fecal coliform					
<b>ILLICIT DISCHARGES</b>					
Is the dry weather flow an illicit discharge?		Yes			


If Yes, describe efforts made to determine the source(s) of the illicit discharge.	
track/trace	
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.	
track/trace	
Inspector Comments:	
<b>RESPONSIBLE OFFICIAL CERTIFICATION</b>	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).	
Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 21, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT


BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 22, 2022	Outfall ID No.:	526
Land Uses in Outfall Drainage Area:	Suburban Residential, Open	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.97041138	Longitude	-75.61236938
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	RCP	Circular	Single	Diameter: 24 in	Yes - the outfall is submerged with sediment
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					


If Yes, describe efforts made to determine the source(s) of the illicit discharge.	
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.	
Inspector Comments:	
<b>RESPONSIBLE OFFICIAL CERTIFICATION</b>	
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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 22, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 22, 2022	Outfall ID No.:	1103
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.97191115	Longitude	-75.60843994
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	RCP	Circular	Single	Diameter: 0 in	No - the outfall is not submerged
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.	
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.	
Inspector Comments:	UTL POD. No flow ovaerved in inlet.
<b>RESPONSIBLE OFFICIAL CERTIFICATION</b>	
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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 22, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 22, 2022	Outfall ID No.:	39
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.96219909	Longitude	-75.59865581
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	RCP	Circular	Single	Diameter: 48 in	Yes - the outfall is submerged in water
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					

If Yes, describe efforts made to determine the source(s) of the illicit discharge.

Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

**RESPONSIBLE OFFICIAL CERTIFICATION**

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Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 22, 2022
Telephone Number	Date



## MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION			
Permittee Name:	West Chester Borough	NPDES Permit No.:	PA130026
Date of Inspection:	July 22, 2022	Outfall ID No.:	36
Land Uses in Outfall Drainage Area:	Commercial, Suburban	Dry Weather Inspection:	Yes
Inspectors Name:	Chris Freer	Date of Previous Precipitation:	July 19, 2022
		Amount of Previous Precipitation:	0.57 in
Location			
			
Latitude	39.96199117	Longitude	-75.59848771
Photo 1			
			
Photo 2			
			

OUTFALL DESCRIPTION					
TYPE	MATERIAL	SHAPE		DIMENSIONS	SUBMERGED
Closed Pipe	CMP	Circular	Double	Diameter: 72 in	Yes - the outfall is submerged in water
				Depth: in Top Width: in Bottom Width: in	
Dry Weather Flow Present at Outfall During Inspection?			No	If No, skip to Certification Section.	
Description of Flow Rate:					
DRY WEATHER FLOW EVALUATION					
Does the dry weather flow contain color?				If Yes, provide a description	
Does the dry weather flow contain an odor?				If Yes, provide a description	
Is there an observed change in the receiving waters as a result of the discharge?				If Yes, provide a description below.	
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?				If Yes, provide a description below.	
Were sample(s) collected of the dry weather flow?				If Yes, No. Samples:	
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD <sub>5</sub>		mg/L
Conductivity		umhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: Turbidity		NTU	Oil and Grease		mg/L
Other: Temperature		C	Dissolved O <sub>2</sub>		mg/L DO
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge?					


If Yes, describe efforts made to determine the source(s) of the illicit discharge.

Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.

Inspector Comments:

**RESPONSIBLE OFFICIAL CERTIFICATION**

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

Chris Freer	
Responsible Official Name	Signature
215-345-4330	July 22, 2022
Telephone Number	Date



### Results Report

Order ID: 2G07065

Gilmore & Associates Inc  
65 E. Butler Avenue  
New Britain, PA 18901

Project: West Chester MS4

Attn: Chris Freer

Regulatory ID:

Sample Number: 2G07065-01  
Collector: CRF

Site: 37  
Collect Date: 07/28/2022 10:00 am

Sample ID:  
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
-------------------------------	--------	-------	--------	------	----	-----------	----	---------------	----

Microbiology

Fecal Coliform                      20000                      cfu/100ml                      SM 9222-D                      1                      1                      07/28/22                      DCJ                      07/28/22 17:12                      DCJ

Sample Number: 2G07065-02  
Collector: CRF

Site: 33A  
Collect Date: 07/28/2022 10:30 am

Sample ID:  
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
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Microbiology

Fecal Coliform                      20000                      cfu/100ml                      SM 9222-D                      1                      1                      07/28/22                      DCJ                      07/28/22 17:12                      DCJ

Sample Number: 2G07065-03  
Collector: CRF

Site: 33B  
Collect Date: 07/28/2022 10:40 am

Sample ID:  
Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
-------------------------------	--------	-------	--------	------	----	-----------	----	---------------	----

Microbiology

Fecal Coliform                      20000                      cfu/100ml                      SM 9222-D                      1                      1                      07/28/22                      DCJ                      07/28/22 17:12                      DCJ

**Sample Receipt Conditions:**

All samples met the sample receipt requirements for the relevant analyses.

Units P/A = Present/Absent  
Units P/F = Pass/Fail

Report Generated On: 07/30/2022 9:45 am                      2G07065  
STL\_Results                      Revision #2.0                      Effective: 04/20/2022





# SUBURBAN TESTING LABS

The test *pH, Lab* is performed in the Laboratory as soon as possible. These results are not appropriate for compliance with NPDES, SDWA, or other regulatory programs that require analysis within 15 minutes of sample collection and should be considered for informational purposes only.

\**pH, Final* for ASTM leachate is performed by method SM 4500-H-B.

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

This laboratory report may not be reproduced, except in full, without the written approval of STL.

Results are considered Preliminary unless report is signed by authorized representative of STL.

**Reviewed and Released By:**

Timothy Swavely  
Laboratory Director

Report Generated On: 07/30/2022 9:45 am 2G07065  
STL\_Results Revision #2.0 Effective: 04/20/2022





West Chester Borough  
 PCSWM BMP Inspection Tracking  
 Inspection Schedule: Years 1-5 - Once per Year  
 Years 6 and up - Once every 3 Years  
 Construction completed - Date of U&O

INSPECT ONCE  
 EVERY THREE YEARS  
 YEAR 6 and ON

Job Name	NPDES PERMIT?	SWM Agreement Recorded (Date)	Date Construction Completed	PCSWM First Inspection Date	Date Inspect Complete	Date Second Inspection Req'd	Date Inspect Complete	PCSWM Third Inspection Req'd	Date Inspect Complete	PCSWM Fourth Inspection Req'd	Date Inspect Complete	PCSWM Fifth Inspection Req'd	Date Inspect Complete	PCSWM Yrs 6 - 8 Inspection Req'd	Date Inspect Complete	PCSWM Yrs 9 to 11 Inspection Req'd	Date Inspect Complete	PCSWM Yrs 12 to 14 Inspection Req'd	Date Inspect Complete	PCSWM Yrs 15 to 17 Inspection Req'd	Date Inspect Complete	PCSWM Yrs 18 to 20 Inspection Req'd	Date Inspect Complete	
DeBaptiste Funeral Home (25 S Worthington St)	No	2/27/2007	4/29/2008	4/29/2008	6/19/2009	4/29/2010	6/18/2010	4/29/2011	8/19/2011	4/29/2012	8/17/2012	4/29/2013	07/18/16	4/29/2016	7/18/2016	4/29/2019	7/15/2019	7/18/2020	6/23/2020	7/18/2023				
West Market St Office Complex	No	2/20/2007	6/30/2006	6/30/2007	6/19/2009	6/30/2008	6/18/2010	6/30/2009	8/19/2011	6/30/2010	8/17/2012	6/30/2011	07/18/16	6/30/2014	7/18/2016	7/18/2017	11/8/2018	7/18/2020	6/23/2020	7/18/2023				
223 Mechanics Alley (R. Bookius)	No	8/17/2004	7/12/2006	7/12/2007	6/19/2009	7/12/2008	6/19/2009	7/12/2009	8/19/2011	7/12/2010	8/19/2011	7/12/2011	08/17/12	7/12/2014	8/18/2016	7/12/2017	1/29/2019	7/12/2020	6/23/2020	7/12/2023				
225 Mechanics Alley (R. Bookius)	No	8/17/2004	6/29/2006	6/29/2007	6/19/2009	6/29/2008	6/19/2009	6/29/2009	6/19/2011	6/29/2010	8/19/2011	6/29/2011	08/17/12	6/29/2014	8/18/2016	6/29/2017	1/29/2019	6/29/2020	6/23/2020	6/29/2023				
Paxson Park	Yes	11/9/2006	7/29/2014	7/29/2015	8/2/2016	7/29/2016	8/2/2017	7/29/2017	8/2/2017	7/29/2018	8/2/2017	7/29/2018	10/26/2018	7/29/2022	8/4/2022	7/29/2025								
401 W. Ashbridge Street (Giunta)	No	2/21/2005	6/12/2006	6/12/2007	6/19/2009	6/12/2008	6/19/2009	6/12/2009	6/19/2011	6/12/2010	8/19/2011	6/12/2011	08/17/12	6/12/2014	7/18/2016	6/12/2017								
505 S. Bradford Ave. (Next door to 613 and 615 Sharpless)	No	3/8/2005	10/14/2005	10/14/2006	6/19/2009	10/14/2007	6/18/2010	10/14/2008	8/19/2011	10/14/2009	7/19/2016	10/14/2010	07/19/16	10/14/2013	7/19/2016	10/14/2016	7/19/2016	10/14/2019	1/29/2019	10/14/2022				
615 Sharpless St.	No	3/8/2005	3/1/2006	3/1/2006	6/19/2009	3/1/2006	6/18/2010	3/1/2008	8/19/2011	3/1/2009	7/20/2016	3/1/2010	07/20/16	3/1/2013	7/20/2016	3/1/2016	7/20/2016	3/1/2019	1/29/2019	3/1/2022	7/15/2022	3/1/2025		
613 Sharpless St. (was "617")	No	3/8/2005	6/27/2005	6/27/2006	6/19/2009	6/27/2006	6/18/2010	6/27/2008	8/19/2011	6/27/2009	8/17/2012	6/27/2010	07/20/16	6/27/2013	7/20/2016	6/27/2016	7/20/2016	6/27/2019	1/29/2019	6/27/2022	8/4/2022	6/27/2025		
216 North High Street	No	3/29/2006	2/27/2006	2/27/2007	6/19/2009	2/27/2008	6/19/2009	2/27/2009	8/19/2011	2/27/2010	8/19/2011	2/27/2011	08/17/12	2/27/2014	7/20/2016	2/27/2016	7/20/2016	2/27/2019	6/23/2020	2/27/2023				
356 E. Biddle St.	No	8/26/2005	6/26/2006	6/26/2007	6/19/2009	6/26/2008	6/18/2010	6/26/2009	8/19/2011	6/26/2010	8/17/2012	6/26/2011	07/18/16	6/26/2014	7/18/2016	6/26/2017	10/26/2018	6/26/2020	6/23/2020	6/26/2023				
358 E. Biddle St.	No	8/26/2005	6/26/2006	6/26/2007	6/19/2009	6/26/2008	6/18/2010	6/26/2009	8/19/2011	6/26/2010	8/17/2012	6/26/2011	07/18/16	6/26/2014	7/18/2016	6/26/2017	10/26/2018	6/26/2020	6/23/2020	6/26/2023				
358A E. Biddle St.	No	8/26/2005	6/26/2006	6/26/2007	6/19/2009	6/26/2008	6/18/2010	6/26/2009	8/19/2011	6/26/2010	8/17/2012	6/26/2011	07/18/16	6/26/2014	7/18/2016	6/26/2017	10/26/2018	6/26/2020	6/23/2020	6/26/2023				
WCU Off-Campus Housing (709 S. Walnut St.)	No	1/5/2006	7/19/2006	7/19/2007	6/19/2009	7/19/2008	6/19/2009	7/19/2009	6/19/2011	7/19/2010	8/19/2011	7/19/2011	08/17/12	7/19/2014	7/20/2016	7/19/2017	10/25/2018	7/19/2020	6/23/2020	7/19/2023				
400 E. Market Street	No	6/28/2006	1/21/2008	1/21/2008	6/19/2009	1/21/2009	6/19/2009	1/21/2010	8/19/2011	1/21/2011	8/19/2011	1/21/2012	08/17/12	1/21/2015	7/18/2016	1/21/2018	10/26/2018	1/21/2021	5/12/2021	1/21/2024				
Habitat for Humanity (117, 119, 121 S. Worthington St)	No	5/30/2006	9/19/2008	9/19/2009	6/19/2009	9/19/2010	6/18/2010	9/19/2011	8/19/2011	9/19/2012	8/17/2012	9/19/2013	08/18/16	9/19/2016	8/18/2016	9/19/2019	11/4/2019	9/19/2022						
Arthur Hall Insurance (107 E Chestnut St)	No	2/14/2007	6/15/2007	6/16/2008	6/19/2009	6/16/2008	6/19/2009	6/16/2010	8/19/2011	6/16/2011	8/19/2011	6/16/2012	08/17/12	6/16/2015	7/20/2016	6/16/2018	10/26/2018	6/16/2021	5/12/2021	6/16/2024				
KFC	No	6/15/2007	2/15/2008	2/15/2009	6/19/2009	2/15/2010	6/30/2010	2/15/2011	8/19/2011	2/15/2012	8/17/2012	2/15/2013	07/18/16	2/15/2016	7/18/2016	2/15/2019	1/29/2019	2/15/2022						
203 W. Chestnut St. (McFadden) Parking Lot	No	7/6/2007	Completed 2008	8/1/2009	6/19/2009	8/1/2010	6/18/2010	8/1/2011	8/19/2011	8/1/2012	8/17/2012	8/1/2013	07/20/16	8/1/2016	7/20/2016	8/1/2019	7/15/2019	8/1/2022	7/14/2022	6/1/2025				
601 S. Bradford Ave.	No	9/19/2007	4/22/2009	4/22/2010	7/19/2010	4/22/2011	3/20/2011	4/22/2012	3/20/2017	4/22/2013	3/20/2017	4/22/2014	03/20/17	4/22/2017	3/20/2017	4/22/2020	6/23/2020	4/22/2023						
West Chester University Dorms Phase 1	Yes	3/20/2008	9/3/2009	9/3/2010	6/18/2010	9/3/2011	8/19/2011	9/3/2012	8/17/2012	9/3/2013	8/18/2016	9/3/2014	09/29/17	9/3/2017	9/29/2017	9/3/2020	11/9/2020	9/3/2023						
West Chester Friends School (415 N High St)	No	10/25/2007	8/20/2008	8/20/2009	6/19/2009	8/20/2010	6/18/2010	8/20/2011	8/19/2011	8/20/2012	8/17/2012	8/20/2013	07/18/16	8/20/2016	7/18/2016	8/20/2019	11/4/2019	8/20/2022	7/18/2022	8/20/2025				
7-9 N. Walnut Street	No	2/7/2008	9/4/2008	9/4/2009	6/19/2009	9/4/2010	6/18/2010	9/4/2011	8/19/2011	9/4/2012	8/17/2012	9/4/2013	07/18/16	9/4/2016	7/18/2016	9/4/2019	11/4/2019	9/4/2022						
Warner Theater Hotel	No	2/4/2008	8/14/2012	8/14/2013	8/2/2016	8/14/2014	8/2/2017	8/14/2015	8/2/2017	8/14/2016	8/2/2017	8/14/2017	08/02/17	8/14/2020	1/14/2020	8/14/2023								
Hickam Mews (420 W Market St.)	No	5/21/2008	4/20/2010	4/20/2011	8/19/2011	4/20/2012	8/17/2012	4/20/2013	8/2/2017	4/20/2014	8/2/2017	4/20/2015	08/02/17	4/20/2018	10/25/2018	4/20/2021	5/12/2021	4/26/2024						
Habitat for Humanity - Phase 2	No	7/14/2008	6/22/2010	6/22/2011	8/19/2011	6/22/2012	8/17/2012	6/22/2013	8/18/2016	6/22/2014	8/2/2017	6/22/2015	08/02/17	6/22/2018	10/26/2018	6/22/2021	5/12/2021	6/22/2024						
50 & 54 North Brandywine St (Glauner - 500 West Gay Street Subdiv)	No	4/4/2011	Temp U&O 8/4/2021																					
401 West Rosedale Avenue (740 S Wayne St)	No	6/23/2008	4/29/2009	4/29/2010	6/18/2010	4/29/2011	8/19/2011	4/29/2012	8/19/2012	4/29/2013	7/19/2016	4/29/2014	04/06/17	4/29/2017	4/6/2017	4/29/2020	6/23/2020	4/6/2023						
137 East Marshall Street (139 E Marshal is site address)	No	9/10/2008	1/22/2011	1/22/2012	7/18/2016	1/22/2013	4/6/2017	1/22/2014	4/6/2017	1/22/2015	4/6/2017	1/22/2016	04/06/17	1/22/2019	1/29/2019	1/22/2022	7/18/2022	1/22/2025						
Ell Kahn Office Building (313 W. Market St.)	No	11/24/2008	4/1/2011	4/1/2012	8/17/2012	4/1/2013	7/20/2016	4/1/2014	3/20/2017	4/1/2015	3/20/2017	4/1/2016	03/20/17	4/1/2019	7/15/2019	4/1/2022								
Bradford Plaza	Yes	9/7/2010		10/7/2019 waiting for punch list resolution; 4/14/21 still waiting;	9/2/2012	7/18/2016	9/2/2013	9/29/2017	9/2/2014															
Union Station	Yes	8/4/2010																						
Shanahan Townhomes	Yes	10/7/2009	10/26/2012	10/26/2013	7/19/2016	10/26/2014	10/12/2017	10/26/2015	10/12/2017	10/26/2016	10/12/2017	10/26/2017	10/12/17	10/26/2020	11/4/2020	10/26/2023								
326 North Walnut Street (The Hickman) (Mary Taylor House)	No	8/24/2009	12/23/2010	12/23/2011	8/17/2012	12/23/2012	8/18/2016	12/23/2013	Attempted 12/20/2017; Access not provided	12/23/2014	Attempted 12/20/2017; Access not provided	12/23/2015	Attempted 12/20/2017; Access not provided	12/23/2018	Attempted several times; Access not provided	12/23/2021	Attempted 11/24/2021; access not provided.	12/23/2024						
530 West Gay Street (Stanab; 526, 528 & 532 created)	No	12/2/2009	526: 5/11/11; 528: 11/3/11; 532: 11/3/11	11/3/2012	7/20/2016	11/3/2013	8/2/2017	11/3/2014	8/2/2017	11/3/2015	8/2/2017	11/3/2016	08/02/17	11/3/2019	11/4/2019	11/3/2022								
WCU Recreation Center	Yes	10/20/2011	Unknown	8/2/2016	8/2/2017	8/2/2018	8/2/2017	8/2/2018	10/25/2018	8/2/2019	7/15/2019	8/2/2020	11/04/20	8/2/2023										
403 Pine Street	No	7/12/2010	8/27/2012	6/27/2013	6/27/2014	8/2/2017	6/27/2015	8/2/2017	6/27/2015	8/2/2017	6/27/2016	8/2/2017	08/02/17	6/27/2020	6/23/2020	6/27/2023								
220 E Chestnut St (201 E Gay St/220 Chestnut Assoc)	Yes	8/4/2011	11/3/2016	11/3/2017	11/3/2018	11/3/2019	11/3/2019	11/3/2020	11/3/2021	11/3/2020	11/3/2021	11/3/2021	11/24/21	11/3/2024										
21 S. Brandywine Street	No	2/24/2011	12/13/2011	12/13/2012	8/17/2012	12/13/2013	7/19/2016	12/13/2014	12/20/2017	12/13/2015	12/20/2017	12/13/2016	12/20/17	12/13/2019	11/4/2019	12/31/2022								
23 S. Brandywine Street	No	2/24/2011	12/13/2011	12/13/2012	8/17/2012	12/13/2																		

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 17 N. Church St (Mostellar Building)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground infiltration bed located in the plaza area, which captures roof flow via piping to underground bed.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 201 East Gay Street (220 Chestnut Associates LP)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground basin, inlets, amended soils and tree plantings, a courtyard area, and a green roof area.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).
3. The property owner should engage a qualified contractor knowledgeable in green roof maintenance to inspect the plantings and subsoil.

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 312 Parke Hollow Lane  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground infiltration bed.

### Immediate Corrections

1. Leaves were noted in the lawn inlet. These leaves should be removed.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 326 North Walnut Street (The Hickman) (Mary Taylor House)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates attempted to perform a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of a green roof.

### Immediate Corrections

1. Access to the site was not available during this visit.

### Recommendations

1. The property owner should engage a qualified contractor knowledgeable in green roofs to inspect the plantings and subsoil.

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** Sharpless Hall Redevelopment (The Hickman) 400 N Walnut Street  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground infiltration basin. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. Leaves were noted in the parking lot inlets. These leaves should be removed.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 400 S Church Street (Francis Iacobucci Properties, LLC)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground seepage bed. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. Leaves were noted in the driveway inlets. These leaves should be removed.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 413 S Church Street (Blanton Custom Homes)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists an infiltration bed. Yard drains and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect their system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 417 S Church Street (Blanton Custom Homes)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an infiltration bed. Yard drains and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. A fire pit and a pond feature (with a pump) are located on top of where the yard drains and infiltration bed are shown on the plans.

### Recommendations

1. The property owner should inspect their system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 430 Hannum Avenue (Providence Church)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an subsurface detention bed located in a courtyard area, which captures runoff from the parking lot through inlets and an underdrain.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 501 Hannum Avenue  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an infiltration bed located in an above-ground basin, which captures roof flow via piping to underground bed, and also overland flow via a swale.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 510 E. Barnard Street (Sophisticated Way)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of soil amendment areas, a rain garden, an underground detention bed and water quality control inlets. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 632 S Matlack Street (Dulin/Matlack Village)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground infiltration bed in the center courtyard area. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.



**Department of Building, Housing & Codes Enforcement**  
*Regulations for the Protection of Public Health, Safety and Welfare*

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401 East Gay Street ▪ West Chester, Pennsylvania 19380  
610-696-1773 ▪ Fax: 610-692-7958 ▪ web: [www.west-chester.com](http://www.west-chester.com)

December 2, 2021

Frederick D. Yanocha  
312 Parke Hollow Lane  
West Chester, 19380

Reference: **312 Parke Hollow Lane, West Chester, PA**  
***Post-Construction Best Management Practices Inspection Report***

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In accordance with the Stormwater Management Ordinance (Chapter 94) of the West Chester Borough Code and the signed and recorded Stormwater Facilities Maintenance and Monitoring Agreement, your property was inspected on November 16, 2021.

Gilmore & Associates, Inc. provided the Borough with a memo (see attached) stating the condition of all installed stormwater management facilities. Any corrective action will be indicated on the memo. A follow-up inspection may be necessary to ensure that any and all corrective actions have been addressed.

In accordance with the Stormwater Facilities Maintenance and Monitoring Agreement you are responsible for all fees associated with the required expenses. It has been determined that the inspection fee, including the memo, is \$80.00, as noted on the attached Invoice. Please remit payment on or before January 2, 2022.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Kevin Gore  
*Director – Building, Housing & Codes Enforcement*

Attachments

## MEMORANDUM

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**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 312 Parke Hollow Lane  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground infiltration bed.

### Immediate Corrections

1. Leaves were noted in the lawn inlet. These leaves should be removed.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.



## THE BOROUGH OF WEST CHESTER

Department of Building, Housing & Codes Enforcement  
401 East Gay Street • West Chester, Pennsylvania 19382  
610-696-1773

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### INVOICE

DATE: December 2, 2021  
RE: Post-Construction Best Management Practices Inspection  
LOCATION: 312 Parke Hollow Lane, West Chester, PA  
BILL TO: Frederick D. Yanocha 312 Parke Hollow Lane West Chester, 19380

Description	Amount due
Inspection of Stormwater Management Facilities	\$ 80.00
<b>TOTAL AMOUNT DUE</b>	<b>\$ 80.00</b>

Please remit to: Borough of West Chester  
Department of Building, Housing & Codes Enforcement  
401 East Gay Street  
West Chester, PA 19380

*(Please remit this portion of the Invoice along with your payment, payable to Borough of West Chester, on or before January 2, 2022)*

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## THE BOROUGH OF WEST CHESTER

Department of Building, Housing & Codes Enforcement  
401 East Gay Street • West Chester, Pennsylvania 19382  
610-696-1773

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### RECEIPT

DATE: December 2, 2021  
RE: Post-Construction Best Management Practices Inspection  
LOCATION: 312 Parke Hollow Lane, West Chester, PA  
BILL TO: Frederick D. Yanocha 312 Parke Hollow Lane West Chester, 19380

Description	Amount due
Inspection of Stormwater Management Facilities	\$ 80.00
<b>TOTAL AMOUNT DUE</b>	<b>\$ 80.00</b>



**Department of Building, Housing & Codes Enforcement**  
*Regulations for the Protection of Public Health, Safety and Welfare*

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401 East Gay Street ▪ West Chester, Pennsylvania 19380  
610-696-1773 ▪ Fax: 610-692-7958 ▪ web: [www.west-chester.com](http://www.west-chester.com)

December 2, 2021

Hickman Friends Senior Community of West Chester  
C/O PA Housing Finance Agency  
PO Box 8029  
Harrisburg, PA 17105

Reference: 326 North Walnut Street, The Hickman, West Chester, PA  
***Post-Construction Best Management Practices Inspection Report***

---

In accordance with the Stormwater Management Ordinance (Chapter 94) of the West Chester Borough Code and the signed and recorded Stormwater Facilities Maintenance and Monitoring Agreement, your property was inspected on November 16, 2021.

Gilmore & Associates, Inc. provided the Borough with a memo (see attached) stating the condition of all installed stormwater management facilities. Any corrective action will be indicated on the memo. A follow-up inspection may be necessary to ensure that any and all corrective actions have been addressed.

In accordance with the Stormwater Facilities Maintenance and Monitoring Agreement you are responsible for all fees associated with the required expenses. It has been determined that the inspection fee, including the memo, is \$80.00, as noted on the attached Invoice. Please remit payment on or before January 2, 2022.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Kevin Gore  
*Director – Building, Housing & Codes Enforcement*

Attachments

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 326 North Walnut Street (The Hickman) (Mary Taylor House)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates attempted to perform a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of a green roof.

### Immediate Corrections

1. Access to the site was not available during this visit.

### Recommendations

1. The property owner should engage a qualified contractor knowledgeable in green roofs to inspect the plantings and subsoil.

If you have any questions, please don't hesitate to contact me.



## THE BOROUGH OF WEST CHESTER

Department of Building, Housing & Codes Enforcement  
401 East Gay Street • West Chester, Pennsylvania 19382  
610-696-1773

---

### INVOICE

DATE: December 2, 2021  
RE: Post-Construction Best Management Practices Inspection  
LOCATION: 326 North Walnut Street, The Hickman, West Chester, PA  
BILL TO: Hickman Friends Senior Community of West Chester  
C/O PA Housing Finance Agency  
PO Box 8029, Harrisburg, PA 17105

Description	Amount due
Inspection of Stormwater Management Facilities	\$ 80.00
<b>TOTAL AMOUNT DUE</b>	<b>\$ 80.00</b>

Please remit to: Borough of West Chester  
Department of Building, Housing & Codes Enforcement  
401 East Gay Street  
West Chester, PA 19380

*(Please remit this portion of the Invoice along with your payment, payable to Borough of West Chester, on or before January 2, 2022)*

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## THE BOROUGH OF WEST CHESTER

Department of Building, Housing & Codes Enforcement  
401 East Gay Street • West Chester, Pennsylvania 19382  
610-696-1773

---

### RECEIPT

DATE: December 2, 2021  
RE: Post-Construction Best Management Practices Inspection  
LOCATION: 326 North Walnut Street, The Hickman, West Chester, PA  
BILL TO: Hickman Friends Senior Community of West Chester  
C/O PA Housing Finance Agency  
PO Box 8029, Harrisburg, PA 17105

Description	Amount due
Inspection of Stormwater Management Facilities	\$ 80.00
<b>TOTAL AMOUNT DUE</b>	<b>\$ 80.00</b>



**Department of Building, Housing & Codes Enforcement**  
*Regulations for the Protection of Public Health, Safety and Welfare*

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401 East Gay Street ▪ West Chester, Pennsylvania 19380  
610-696-1773 ▪ Fax: 610-692-7958 ▪ web: [www.west-chester.com](http://www.west-chester.com)

December 2, 2021

Church & Dean LLC  
3 Raymond Drive, Suite 200  
Havertown, PA 19083

Reference: 400 South Church Street, West Chester, PA  
***Post-Construction Best Management Practices Inspection Report***

---

In accordance with the Stormwater Management Ordinance (Chapter 94) of the West Chester Borough Code and the signed and recorded Stormwater Facilities Maintenance and Monitoring Agreement, your property was inspected on November 16, 2021.

Gilmore & Associates, Inc. provided the Borough with a memo (see attached) stating the condition of all installed stormwater management facilities. Any corrective action will be indicated on the memo. A follow-up inspection may be necessary to ensure that any and all corrective actions have been addressed.

In accordance with the Stormwater Facilities Maintenance and Monitoring Agreement you are responsible for all fees associated with the required expenses. It has been determined that the inspection fee, including the memo, is \$80.00, as noted on the attached Invoice. Please remit payment on or before January 2, 2022.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Kevin Gore  
*Director – Building, Housing & Codes Enforcement*

Attachments

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 400 S Church Street (Francis Iacobucci Properties, LLC)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground seepage bed. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. Leaves were noted in the driveway inlets. These leaves should be removed.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.



## THE BOROUGH OF WEST CHESTER

Department of Building, Housing & Codes Enforcement  
401 East Gay Street • West Chester, Pennsylvania 19382  
610-696-1773

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### INVOICE

DATE: December 2, 2021  
RE: Post-Construction Best Management Practices Inspection  
LOCATION: 400 South Church Street, West Chester, PA  
BILL TO: Church & Dean LLC  
3 Raymond Drive, Suite 200, Havertown, PA 19083

Description	Amount due
Inspection of Stormwater Management Facilities	\$ 80.00
<b>TOTAL AMOUNT DUE</b>	<b>\$ 80.00</b>

Please remit to: **Borough of West Chester**  
**Department of Building, Housing & Codes Enforcement**  
401 East Gay Street  
West Chester, PA 19380

*(Please remit this portion of the Invoice along with your payment, payable to Borough of West Chester, on or before January 2, 2022)*

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## THE BOROUGH OF WEST CHESTER

Department of Building, Housing & Codes Enforcement  
401 East Gay Street • West Chester, Pennsylvania 19382  
610-696-1773

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---

### RECEIPT

DATE: December 2, 2021  
RE: Post-Construction Best Management Practices Inspection  
LOCATION: 400 South Church Street, West Chester, PA  
BILL TO: Church & Dean LLC  
3 Raymond Drive, Suite 200, Havertown, PA 19083

Description	Amount due
Inspection of Stormwater Management Facilities	\$ 80.00
<b>TOTAL AMOUNT DUE</b>	<b>\$ 80.00</b>



**Department of Building, Housing & Codes Enforcement**  
*Regulations for the Protection of Public Health, Safety and Welfare*

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401 East Gay Street ▪ West Chester, Pennsylvania 19380  
610-696-1773 ▪ Fax: 610-692-7958 ▪ web: [www.west-chester.com](http://www.west-chester.com)

December 2, 2021

William & Paula Schmidt  
PO Box 197  
Westtown, PA 19395

Reference: 417 South Church Street, West Chester, PA  
***Post-Construction Best Management Practices Inspection Report***

---

In accordance with the Stormwater Management Ordinance (Chapter 94) of the West Chester Borough Code and the signed and recorded Stormwater Facilities Maintenance and Monitoring Agreement, your property was inspected on November 16, 2021.

Gilmore & Associates, Inc. provided the Borough with a memo (see attached) stating the condition of all installed stormwater management facilities. Any corrective action will be indicated on the memo. A follow-up inspection may be necessary to ensure that any and all corrective actions have been addressed.

In accordance with the Stormwater Facilities Maintenance and Monitoring Agreement you are responsible for all fees associated with the required expenses. It has been determined that the inspection fee, including the memo, is \$40.00, as noted on the attached Invoice. Please remit payment on or before January 2, 2022.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Kevin Gore  
*Director – Building, Housing & Codes Enforcement*

Attachments

## **MEMORANDUM**

---

**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 417 S Church Street (Blanton Custom Homes)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an infiltration bed. Yard drains and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. A fire pit and a pond feature (with a pump) are located on top of where the yard drains and infiltration bed are shown on the plans.

### Recommendations

1. The property owner should inspect their system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.



## THE BOROUGH OF WEST CHESTER

Department of Building, Housing & Codes Enforcement  
401 East Gay Street • West Chester, Pennsylvania 19382  
610-696-1773

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---

### INVOICE

DATE: December 2, 2021  
RE: Post-Construction Best Management Practices Inspection  
LOCATION: 417 South Church Street, West Chester, PA  
BILL TO: William & Paula Schmidt  
PO Box 197, Westtown, PA 19395

Description	Amount due
Inspection of Stormwater Management Facilities	\$ 40.00
<b>TOTAL AMOUNT DUE</b>	<b>\$40.00</b>

Please remit to: Borough of West Chester  
Department of Building, Housing & Codes Enforcement  
401 East Gay Street  
West Chester, PA 19380

*(Please remit this portion of the Invoice along with your payment, payable to Borough of West Chester, on or before January 2, 2022)*

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## THE BOROUGH OF WEST CHESTER

Department of Building, Housing & Codes Enforcement  
401 East Gay Street • West Chester, Pennsylvania 19382  
610-696-1773

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---

### RECEIPT

DATE: December 2, 2021  
RE: Post-Construction Best Management Practices Inspection  
LOCATION: 417 South Church Street, West Chester, PA  
BILL TO: William & Paula Schmidt  
PO Box 197, Westtown, PA 19395

Description	Amount due
Inspection of Stormwater Management Facilities	\$ 40.00
<b>TOTAL AMOUNT DUE</b>	<b>\$ 40.00</b>



GILMORE & ASSOCIATES, INC.  
ENGINEERING & CONSULTING SERVICES

## MEMORANDUM

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**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**cc:** David N. Leh, P.E.

**Reference:** 139 East Marshall Street  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On July 18, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground seepage bed, which captures roof runoff.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system once a month (at least) to ensure that there is no standing water.
2. The stormwater system should be inspected by the property owner on a bi-monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

BUILDING ON A FOUNDATION OF EXCELLENCE

184 West Main Street | Suite 300 | Trappe, PA 19426  
Phone: 610-489-4949 | Fax: 610-489-8447  
[www.gilmore-assoc.com](http://www.gilmore-assoc.com)



## MEMORANDUM

---

**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**cc:** David N. Leh, P.E.

**Reference:** 203 W Chestnut Street (McFadden Parking Lot)  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On July 14, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground infiltration bed, which captures parking area flow via an inlet.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.



## MEMORANDUM

---

**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**cc:** David N. Leh, P.E.

**Reference:** 217 W LaFayette Street  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On July 14, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground infiltration bed, which captures flow via roof drains and an inlet.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. The stormwater system should be inspected by the property owner on a bi-monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** August 17, 2022

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** MaryLou Lowrie, P.E.

**Reference:** Sharpless Hall Redevelopment (The Hickman) 400 N Walnut Street  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On August 10, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground infiltration basin. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**cc:** David N. Leh, P.E.

**Reference:** 400 S Church Street (Francis Iacobucci Properties, LLC)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

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On July 18, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground seepage bed. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. Standing water was observed in the inlet closest to adjacent residential properties; if this is a persistent issue, a flow channel may need to be installed. The inlet top closest to Church Street is misaligned / shifted and should be realigned with the box.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

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**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** MaryLou Lowrie, P.E.

**cc:** David N Leh, P.E.

**Reference:** 413 S Church Street (Blanton Custom Homes)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

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On July 15, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists an infiltration bed. Yard drains and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect their system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

---

**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**cc:** David N. Leh, P.E.

**Reference:** 415 N High St (West Chester Friends School)  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

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On July 18, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground seepage bed, which captures asphalt area and roof flow via piping, a yard drain and inlets.

### Immediate Corrections

1. Leaves and sticks were observed inside some inlets. The property owner should clean all leaves and sticks out of the yard drains and inlets.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All yard drains and inlets should be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

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**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 417 S Church Street (Blanton Custom Homes)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On July 15, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an infiltration bed. Yard drains and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. A fire pit and a pond feature (with a pump) are located on top of where the yard drains and infiltration bed are shown on the plans.

### Recommendations

1. The property owner should inspect their system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

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**Date:** August 17, 2022

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** MaryLou Lowrie, P.E.

**Reference:** 510 E. Barnard Street (Sophisticated Way)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

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On July 15, 2022 and August 8, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of soil amendment areas, a rain garden, an underground detention bed and water quality control inlets. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. The rain garden area is not per the plan, which should be corrected.
2. The water quality inlet in front corner of Lot 14, at S Adams and E Union Streets, is actually a storm manhole, and the water quality device is installed over the incoming pipe (i.e., incorrect). The device should be relocated to be over the discharge pipe as soon as possible.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets and storm manholes, especially those with water quality devices, shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

-  
Reference: 107 East Chestnut Street (Arthur Hall Insurance)  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 15-08026T

November 9, 2018

If you have any questions, please don't hesitate to contact me.



GILMORE & ASSOCIATES, INC.  
ENGINEERING & CONSULTING SERVICES

## MEMORANDUM

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**Date:** August 17, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**Reference:** 613 Sharpless St. (Lot 3)  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 15-08026T

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On August 4, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground seepage bed.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system once a month (at least) to ensure that there is no standing water.
2. All stormwater facilities should be inspected and cleaned by the property owner on a bi-monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

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BUILDING ON A FOUNDATION OF EXCELLENCE

184 West Main Street | Suite 300 | Trappe, PA 19426  
Phone: 610-489-4949 | Fax: 610-489-8447  
[www.gilmore-assoc.com](http://www.gilmore-assoc.com)



**GILMORE & ASSOCIATES, INC.**  
ENGINEERING & CONSULTING SERVICES

## **MEMORANDUM**

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**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**cc:** David N. Leh, P.E.

**Reference:** 615 Sharpless St. (Lot 2)  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

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On July 15, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground seepage bed.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system once a month (at least) to ensure that there is no standing water.
2. All stormwater facilities should be inspected and cleaned by the property owner on a bi-monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

BUILDING ON A FOUNDATION OF EXCELLENCE

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GILMORE & ASSOCIATES, INC.  
ENGINEERING & CONSULTING SERVICES

## MEMORANDUM

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**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**cc:** David N. Leh, P.E.

**Reference:** 620 West Strasburg Road  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

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On July 15, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an infiltration trench which captures overland flow.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system once a month (at least) to ensure that there is no standing water.
2. The stormwater facility should be inspected and cleaned by the property owner on a bi-monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

BUILDING ON A FOUNDATION OF EXCELLENCE

184 West Main Street | Suite 300 | Trappe, PA 19426  
Phone: 610-489-4949 | Fax: 610-489-8447  
[www.gilmore-assoc.com](http://www.gilmore-assoc.com)



## MEMORANDUM

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**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** MaryLou Lowrie, P.E.

**cc:** David N Leh, P.E.

**Reference:** 632 S Matlack Street (Dulin/Matlack Village)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

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On July 18, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of an underground infiltration bed in the center courtyard area. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

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**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**cc:** David N. Leh, P.E.

**Reference:** Eli Kahn Office Building (313 W Market St)  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

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On July 18, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of a rain garden, a vegetative swale, a trench drain, and landscaped areas.

### Immediate Corrections

1. There was no trench drain at the entrance to the underground parking facility as shown on the plans.
2. There does not appear to be any grading for the vegetative swale or the rain garden along the building. These areas should be regrading to capture and filter runoff more efficiently.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets should be kept free of sediment and debris. All stormwater facilities should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

184 West Main Street | Suite 300 | Trappe, PA 19426 | Phone: 610-489-4949 | Fax: 610-489-8447

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GILMORE & ASSOCIATES, INC.  
ENGINEERING & CONSULTING SERVICES

## MEMORANDUM

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**Date:** July 26, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement  
West Chester Borough

**From:** MaryLou Lowrie, P.E.

**cc:** David N Leh, P.E.

**Reference:** KFC  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

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On July 14, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of a collection system consisting of inlets and pipes.

### Immediate Corrections

1. None.

### Recommendations

1. All inlets and drain basins should be kept free of sediment and debris. All inlets and drain basins should be inspected and cleaned by the property owner on a bi-monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

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BUILDING ON A FOUNDATION OF EXCELLENCE

184 West Main Street | Suite 300 | Trappe, PA 19426  
Phone: 610-489-4949 | Fax: 610-489-8447  
[www.gilmore-assoc.com](http://www.gilmore-assoc.com)

## **MEMORANDUM**

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**Date:** August 17, 2022

**To:** Kevin Gore, CFM, Director of Building, Housing, and Code Enforcement West Chester Borough

**From:** Mary Lou Lowrie, P.E.

**Reference:** Paxson Park  
Post-Construction Stormwater Management Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On July 15, 2022 and August 4, 2022, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of under-ground beds with yard drains (on each of 12 lots), which captures roof runoff, and an above-ground detention basin (on Lot 12) which captures overland flow via inlets as well as roof runoff via piping.

### Immediate Corrections

1. Lots 6 and 7 were inaccessible. Lot 4 inlet was not found.

### Recommendations

1. The property owners should inspect the system(s) located on their property on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets and yard drains should be kept free of sediment and debris. The stormwater facilities should be inspected and cleaned by each property owner on a monthly basis (at least).
3. The above-ground basin should be inspected once a month (at least) to ensure that the endwalls are free of debris, vegetation remains healthy, and that there is no erosion in the basin.

If you have any questions, please don't hesitate to contact me.

## **MEMORANDUM**

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**Date:** December 1, 2021

**To:** Kevin Gore, CFM, Director – Building, Housing, and Code Enforcement  
West Chester Borough

**From:** Gregory Magulak

**cc:** David N Leh, P.E.  
MaryLou Lowrie, P.E.

**Reference:** 510 E. Barnard Street (Sophisticated Way)  
Post-Construction Best Management Practices Inspection  
West Chester Borough, Chester County, PA  
File No. 21-01125T

---

On November 24, 2021, Gilmore & Associates performed a post-construction stormwater management inspection at the above-referenced property. The following is a summary of this inspection and recommendations for the property owner for future maintenance.

### Site Conditions

The stormwater management system for the site consists of soil amendment areas, a rain garden, an underground detention bed and water quality control inlets. Inlets and roof drains capture roof runoff and overland runoff into the underground facility.

### Immediate Corrections

1. None.

### Recommendations

1. The property owner should inspect the system on a monthly basis (at least) to ensure that there is no standing water.
2. All inlets shall be kept free of sediment and debris. The stormwater facility should be inspected and cleaned by the property owner on a monthly basis (at least).

If you have any questions, please don't hesitate to contact me.

Address	Address Number	Address Street	Aftercare	City	Common Name	Latitude	Longitude	Tideland Garden	Pleasant Run	Coles	Water Cress	Harmony Hills	Hammell
Hoopes Park					Acer rubrum					195	220	185	250
615 Pennsylvania 842	615	Pennsylvania 842		West Chester	Baldcypress	39.95317928	75.61292933			195	190	185	
Everhart Park					Baldcypress					195	190	185	
Everhart Park					Baldcypress					195	190	185	
503 North High Street	503	North High Street		West Chester	Black tupelo	39.96485708	75.60810953	145			250	185	190
503 North High Street	503	North High Street		West Chester	Black tupelo	39.96480774	75.60822084	145			250	185	190
				West Chester	Black tupelo	39.96477074	75.60829997	145			250	185	190
408 South Walnut Street	408	South Walnut Street		West Chester	Black tupelo	39.95675172	75.59972381	145			250	185	190
400 South Walnut Street	400	South Walnut Street		West Chester	Black tupelo	39.95681494	75.59979154	145			250	185	190
2-8 Chestnut Street	8-Feb	Chestnut Street		West Chester	Black tupelo	39.96158939	75.60577835	145			250	185	190
2-8 Chestnut Street	8-Feb	Chestnut Street		West Chester	Black tupelo	39.96164865	75.60565705	145			250	185	190
2-8 Chestnut Street	8-Feb	Chestnut Street		West Chester	Black tupelo	39.96161247	75.60573944	145			250	185	190
101 South Church Street	101	South Church Street		West Chester	Black tupelo	39.95803263	75.60465417	145			250	185	190
Mosteller Park					Bottle Brush Buckeye						103		
Mosteller Park					Bottle Brush Buckeye						103	x	
Mosteller Park					Bottle Brush Buckeye						103	x	
Mosteller Park					Bottle Brush Buckeye						103	x+K15:K20	

Mosteller Park					Bottle Brush Buckeye					103	x	
439 Sharpless Street	439	Sharpless Street		West Chester	Bur oak	39.95108282	75.60807426	168		310	x	190
510 South Church Street	516	South Church Street		West Chester	Bur oak	39.95454535	75.60177496	168		310	x	190
				West Chester	Bur oak	39.96333801	75.60766932	168		310	x	190
304 South Walnut Street	300	South Walnut Street		West Chester	Bur oak	39.95763705	75.60067658	168		310	x	190
5 West Gay Street	5	West Gay Street		West Chester	Bur oak	39.95834385	75.61024795	168		310	x	190
341 Pennsylvania 52	341	Pennsylvania 52		West Chester	Bur oak	39.95293252	75.60675541	168		310	x	190
Hoopes Park					Burr Oak			168		310	x	190
Everhart Park					Burr Oak			168		310	x	190
Everhart Park					Burr Oak			168		310	x	190
Barlcay Park					Burr Oak			168		310	x	190
Hoopes Park					Carpinus caroliniana					242	185	
Everhart Park					Carya sp				210		x	
Everhart Park					Carya sp				210		x	
1 North High Street	1	North High Street		West Chester	Chinkapin oak	39.96013572	75.60476897				x	
Everhart Park					Chinkapin oak						x	
Hoopes Park					Chioanthus virginicus				195	150	x	
Hoopes Park					Chioanthus retitus				200	210	x	
Hoopes Park					Cladrastis lutea				205	275	215	
Hoopes Park					Cornus "Appalachian Snow"						185	

Hoopes Park					Cornus alterniflora						145		
308 South Darlington Street	308	South Darlington Street		West Chester	Crabapple harvest gold	39.95557676	75.60499328		135	190		x	
102 North New Street	102	North New Street		West Chester	Crabapple harvest gold	39.95914211	75.60936413		135	190		x	
524 South Church Street	524	South Church Street		West Chester	Eastern redbud	39.95422653	75.60133112		185	235		185	
524 South Church Street	524	South Church Street		West Chester	Eastern redbud	39.95427159	75.60136704		185	235		185	
518 South Church Street	518	South Church Street		West Chester	Eastern redbud	39.95431071	75.60140235		185	235		185	
518 South Church Street	518	South Church Street		West Chester	Eastern redbud	39.95435806	75.60144363		185	235		185	
518 South Church Street	518	South Church Street		West Chester	Eastern redbud	39.95439307	75.60147775		185	235		185	
518 South Church Street	518	South Church Street		West Chester	Eastern redbud	39.95444453	75.60152141		185	235		185	
535 South Church Street	535	South Church Street		West Chester	Eastern redbud	39.95447817	75.60155434		185	235		185	
203 West Chestnut Street	203	West Chestnut Street		West Chester	English oak	39.96042591	75.60862755	168		390			
Everhart Park					Gordlinia							x	
Barlcy Park					Gordlinia							x	
16 U.S. 322 Business	16	U.S. 322 Business		West Chester	Hackberry	39.96105549	75.60669114		195			x	190
Hoopes Park					Halesia caroliniana				185			x	
Hoopes Park					Magnolia " Elizabeth"				175			x	

343 Sharpless Street	343	Sharpless Street		West Chester	Northern catalpa	39.95207224	- 75.606615 91		265		x	
Hoopes Park					Nyssa sylv.			145		250	185	190
313 East Barnard Street	313	East Barnard Street		West Chester	Oak	39.96068071	- 75.598258 49	168			185	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
Greenfields Park					Oakleaf Hydraenga				21.95	64	28	
601 West Niels Street	601	West Niels Street		West Chester	Okame cherry	39.94974413	- 75.609391 29		160	286	205	
Hoopes Park					Ostrya virginiana				195		185	
Hoopes Park					Platanus "Ovation "- or- "Exclamation"				195	310	205	
25 Marshall Street	25	Marshall Street		West Chester	Red Buckeye	39.96513754	- 75.607458 22		210		x	
23 East Marshall Street	23	East Marshall Street		West Chester	Red Buckeye	39.96509951	- 75.607548 07		210		x	



Everhart Park					White Oak			168		185
Everhart Park					White Oak			168		185
500 West Union Street	500	West Union Street		West Chester	Willow oak	39.95348361	- 75.610280 75	168	200	185
518 South Church Street	518	South Church Street		West Chester	Willow oak	39.95430831	- 75.601543 62	168	200	185
518 South Church Street	518	South Church Street		West Chester	Willow oak	39.95437165	- 75.601604 57	168	200	185
220 West Gay Street	228	West Gay Street		West Chester	Willow oak	39.95902937	- 75.608445 8	168	200	185
42 Pennsylvania 3	42	Pennsylvania 3		West Chester	Willow oak	39.96100884	- 75.604208 05	168	200	185
Hoopes Park					Willow Oak			168	200	185

Hammel Quote

10 - Quercus macrocarpa 2" \$190.00

10 - Nyssa sylvatica 2" \$275.00 or 1.75" \$190.00

2 - Quercus bicolor 2" \$190.00

1 - Acer rub. Red Sunset 2.5" \$250.00

1 - Celtis occidentalis 2" \$190.00

1 - Quercus imbricaria 2" \$190.00



# Water Crest Farms Nursery

190 Woodcrest Road  
 West Grove PA 19390  
 610-869-3883

# Estimate

Date	Estimate #
3/31/2022	ELN-10290E

Name / Address
Finance Department Borough of West Chester 401 East Gay Street West Chester, PA 19380

Description	Qty	Rate	Total
ON YARD/ IN STOCK AT THE MOMENT			
Nyssa sylvatica 'Wildfire' 2-2.5"	5	250.00	1,250.00
Nyssa sylvatica 'Forest Fire' 2-2.5"	5	250.00	1,250.00
Quercus phellos 2"	6	200.00	1,200.00
Prunus x Okame 2-2.5"	1	286.00	286.00
Cercis can. 'Oklahoma' 2"	7	235.00	1,645.00
Malus 'Sugar Tyme' 2"- SUB HARVEST GOLD UNAVAILABLE	2	190.00	380.00
Quercus x warei 'Kindred Spirit' 12-14'	1	390.00	390.00
Quercus bicolor 2.5-3"	2	242.00	484.00
Betula nigra 'Select' 10-12'	1	175.00	175.00
Acer rubrum Brandywine 2-2.5"	1	220.00	220.00
Carpinus caroliniana 2-2.5"	1	242.00	242.00
Chionanthus virg. 5-6'	1	150.00	150.00
Chionanthus ret. Tokyo Tower 2-2.5"	1	210.00	210.00
Taxodium distichum #25	4	190.00	760.00
Aesculus parviflora 3-4'	5	103.00	515.00
Hydrangea q. 'Snow Queen' 3'	10	64.00	640.00
Cornus Red Twig #3	5	26.00	130.00
NEED TO DIG			
Quercus macrocarpa 3-3.5"	6	310.00	1,860.00
Quercus imbricaria 3-3.5"	1	310.00	310.00
Platanus x acerifolia Exclamation 3-3.5"	1	310.00	310.00
Cladrastis kentukea (Yellowwood) 3-3.5"	1	275.00	275.00
		<b>Subtotal</b>	\$12,682.00
		<b>Sales Tax (0.0%)</b>	\$0.00
		<b>Total</b>	\$12,682.00



# Tideland Gardens, Inc

10040 Perkins Hill Road  
Chestertown, MD 21620

410.778.5787  
410.778.0135 (fax)

*West Chester Prince*

## Order

Invoice #: 00017511

**Bill To:**

All Seasons Landscaping  
3915 Market Street  
Aston, PA 19014

**Ship To:**

All Seasons Landscaping  
phone - 610-494-8050  
301 Snyder Avenue  
West Chester, PA 19087  
West Chester

Phone # 610-494-8050  
Fax # 610-494-8054

Tax Expt # 232403996 PA

SALESPERSON	YOUR NO.	SHIP VIA	COL	PPD	SHIP DATE	TERMS	DATE	PG.
Will Peace	WEST	Freight			4/7/22	Net 30	4/1/22	1
QTY.	ITEM NO.	DESCRIPTION	PRICE	UNIT	DISC %	EXTENDED	TX.	
10	TNYSY 1.75	Nyssa sylvatica 2" B&B	\$145.20			\$1,452.00		
10	TQUMA 2.0"	Quercus macrocarpa 2.0 B&B	\$168.00			\$1,680.00		
6	TQUPH 2.0 B&B	Quercus phellos 2"	\$168.00			\$1,008.00		
2	TQUSHUM2.0	Quercus Shumardii 2.0" B&B	\$168.00			\$336.00		
2	TQUBI 2.0 B&B	Quercus bicolor 2" B&B	\$168.00			\$336.00		
7	TQUAL 2 B&B	Quercus alba 2-2.5" B&B	\$168.00			\$1,176.00		
1	TQUREP 2.0"	Quercus 'Regal Prince' 2.0 B&B	\$168.00			\$168.00		
PA Tax # on File, Chg MD if Pick Up						Sale Amt.:	\$6,156.00	
						Freight:	\$0.00	
						Sales Tax:	\$0.00	
						Total Amt.:	\$6,156.00	
						Paid Today:	\$0.00	
						Balance Due:	\$6,156.00	



# Tideland Gardens, Inc

10040 Perkins Hill Road  
Chestertown, MD 21620

410.778.5787  
410.778.0135 (fax)

## Invoice

Invoice #: 00017601

**Bill To:**

All Seasons Landscaping  
3915 Market Street  
Aston, PA 19014

**Ship To:**

All Seasons Landscaping  
phone - 610-494-8050  
3916 Market Street  
Aston, PA 19014

Phone # 610-494-8050  
Fax # 610-494-8054

Tax Expt # 232403996 PA

SALESPERSON	YOUR NO.	SHIP VIA	COL	PPD	SHIP DATE	TERMS	DATE	PG.
Will Peace		Freight				Net 10	4/6/22	1
QTY.	ITEM NO.	DESCRIPTION	PRICE	UNIT	DISC %	EXTENDED	TX.	
1	FRTLGL	Freight-Tideland Gardens	\$850.00			\$850.00		
		Invoice # 17568,17511						
1	FS	Fuel Surcharge	\$187.00			\$187.00		
<p><i>We pay /</i> <i>Payal Back by</i> <i>W.C. to US</i></p>								
PA Tax # on File, Chg MD if Pick Up						Amt.:	\$1,037.00	
						ight:	\$0.00	
						; Tax:	\$0.00	
						Amt.:	\$1,037.00	
						oday:	\$0.00	
<b>Balance Due:</b>							<b>\$1,037.00</b>	

610.583.3055  
www.mac-hyd.com



Amt.: \$1,037.00  
ight: \$0.00  
; Tax: \$0.00  
Amt.: \$1,037.00  
oday: \$0.00



# Pleasant Run Nursery

PO BOX 247  
ALLENTOWN, NJ 08501  
PHONE: 609-259-8585  
FAX: 609-259-6044

## Acknowledgment

DATE	INVOICE #
6/30/2022	60345

BILL TO
All Seasons Landscaping 3915 Market St. (Rte. 452) Aston, PA 19014

SHIP TO
Customer Pick Up . . . Phone: 610-494-8050

P.O. #	TERMS	SHIP	VIA	F.O.B.	OFFICE	Order Date
Steve	Net 30 **	5/1/2022	Pick Up-F	NJ	NA	03/31/2022

QUANTITY	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
0	AESPZZ0300	WEST CHESTER Aesculus parviflora #3 18-24" (creamy-white) **sold out**	22.95	0.00T
5	COPTCA0300	Cornus sericea (stolonifera) Cardinal #3 24-36"	21.95	109.75T
10	HYDQSQ0300	Hydrangea quercifolia Snow Queen #3 15-18" (white) NJ Sales Tax @ 6.625%	21.95 6.625%	219.50T 21.81

Please review quantity, size and variety carefully. We thank you for your business.

**Total** \$351.06

# COLES Nurseries Inc.

P.O. Box 743, Lahaska, PA 18931  
(215) 794-8863



*Plant America*

## INVOICE

INVOICE DATE	INVOICE NO.	PAGE
03/31/22	0	1

SOLD TO

ALL SEASONS LANDSCAPING  
3915 MARKET STREET  
ASTON, PA 19014

STEVE  
SHIP TO 610-494-8050  
west chester

ORDER NO.	ORDER DATE	CUSTOMER NO.	SALES PERSON	PURCHASE ORDER NO.	SHIP VIA	SHIP DATE	TERMS
25594	03/22/22	AS06	KBC	WEST CHESTER	Our Truck	03/31/22	N30
QUANTITY ORDERED	UNIT	ITEM NO.	ITEM DESCRIPTION	PRICE UNIT	UNIT PRICE		
QUANTITY SHIPPED		QUANTITY BACKORD.		ITEM DISCOUNT	EXTENDED PRICE		
1	EACH	ACRUBB02C	ACER RUBRUM 2-21/2"C	EACH	195.00		
1		0	SWAMP RED MAPLE	0.00	195.00		
			LIME				
4	EACH	TAXODISB06'	TAXODIUM DISTICHUM 6-8'	EACH	195.00		
4		0	BALD CYPRESS	0.00	780.00		
			LIME				
1	EACH	OSVI5	OSTRYA VIRGINIANA 2-21/2"	EACH	195.00		
1		0	EASTERN HOP HORNBEAM	0.00	195.00		
			LIME				
2	EACH	CAOV2.	CARYA OVATA 2-21/2"	EACH	210.00		
2		0	SHAGBARK HICKORY	0.00	420.00		
			BLK STR-3				
1	EACH	CHVI2	CHIONANTHUS VIRGIN 2-21/2"	EACH	195.00		
1		0	FRINGE TREE	0.00	195.00		
			LIME				
1	EACH	CHRE2-	CHIONANTHUS RETUS 2-21/2"	EACH	200.00		
1		0	CHINESE FRINGETREE	0.00	200.00		
			LIME				
			YD				
1	EACH	CLADLUTB02C	CLADRASTIS KENTUK 2-21/2"	EACH	205.00		
1		0	YELLOWWOOD TREE	0.00	205.00		
			LIME				
			1951 SLOPE				
2	EACH	MADOWY2-	MALUS DONALD WYMAN 2-21/2"	EACH	135.00		

SALES AMOUNT	
MISC. CHARGES	
FREIGHT	
SALES TAX	
TOTAL	
PAYMENT REC'D	
BALANCE DUE	

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*Plant America*

## INVOICE

INVOICE DATE	INVOICE NO.	PAGE
03/31/22	0	2

SOLD TO

ALL SEASONS LANDSCAPING  
3915 MARKET STREET  
ASTON, PA 19014

SHIP TO STEVE  
610-494-8050  
west chester

ORDER NO.	ORDER DATE	CUSTOMER NO.	SALES PERSON	PURCHASE ORDER NO.	SHIP VIA	SHIP DATE	TERMS
25594	03/22/22	AS06	KBC	WEST CHESTER	Our Truck	03/31/22	N30
QUANTITY ORDERED	UNIT	ITEM NO.	ITEM DESCRIPTION			PRICE UNIT	UNIT PRICE
QUANTITY SHIPPED		QUANTITY BACKORD.				ITEM DISCOUNT	EXTENDED PRICE
2		0	DONALD WYMAN CRABAPPLE			0.00	270.00
7	EACH	CECA1.5	CERCIS CANADENSIS 2"			EACH	185.00
7		0	EASTERN REDBUD			0.00	1295.00
			LIME				
			BARN SHOP				
1	EACH	CEOC2-	CELTIS OCCIDENTLS 2-21/2"			EACH	195.00
1		0	HACKBERRY			0.00	195.00
			LIME				
			24F				
1	EACH	HJB2-2.5	HALESIA JERSY BELL 2"			EACH	185.00
1		0	JERSEY SILVERBELL			0.00	185.00
1	EACH	MALE5-	MAGNOLIA ELIZABETH 6-8'			EACH	175.00
1		0	ELIZABETH MAGNOLIA			0.00	175.00
			LIME				
			STR				
1	EACH	PRUOKAB02C	PRUNUS OKAME 2-21/2"C			EACH	160.00
1		0	OKAME CHERRY			0.00	160.00
			LIME				
1	EACH	OSVI5	OSTRYA VIRGINIANA 2-21/2"			EACH	195.00
1		0	EASTERN HOP HORNBEAM			0.00	195.00
			LIME				
			YD				
1	EACH	PLATACBGB02	PLATANUS ACERIFO 2-21/2"C			EACH	195.00

SALES AMOUNT	
MISC. CHARGES	
FREIGHT	
SALES TAX	
TOTAL	
PAYMENT REC'D	
BALANCE DUE	

# COLES Nurseries Inc.

P.O. Box 743, Lahaska, PA 18931  
(215) 794-8863



*Plant America*

## INVOICE

INVOICE DATE	INVOICE NO.	PAGE
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SOLD TO

ALL SEASONS LANDSCAPING  
3915 MARKET STREET  
ASTON, PA 19014

SHIP TO STEVE  
610-494-8050  
west chester

ORDER NO.	ORDER DATE	CUSTOMER NO.	SALES PERSON	PURCHASE ORDER NO.	SHIP VIA	SHIP DATE	TERMS
25594	03/22/22	AS06	KBC	WEST CHESTER	Our Truck	03/31/22	N30
QUANTITY ORDERED	UNIT	ITEM NO.	ITEM DESCRIPTION			PRICE UNIT	UNIT PRICE
QUANTITY SHIPPED		QUANTITY BACKORD.				ITEM DISCOUNT	EXTENDED PRICE
1		0	BLOODGOOD LONDON PLANE LIME BRUSH 28			0.00	195.00
6	EACH	AECABR2	AESCULUS 2-21/2"			EACH	210.00
6		0	RED BUCKEYE LIME TRACKS 28			0.00	1260.00
1	EACH	BENIHETRFO2	BETULA NIGRA HERTG 2-21/2"			EACH	180.00
1		0	HERITAGE BIRCH TREE FORM LIME 28			0.00	180.00
2	EACH	AMELABBO2	AMELANCHIER AUT B 2-21/2"			EACH	195.00
2		0	AUTUMN BRILLIANCE SERVICE LIME 28			0.00	390.00
1	EACH	QUIM3	QUERCUS IMBRICARI 2-21/2"			EACH	200.00
1		0	SHINGLE OAK LIME 24R			0.00	200.00
1	EACH	TIAMRE2	TILIA 2-21/2"			EACH	195.00
1		0	LINDEN LIME 28			0.00	195.00
1	EACH	CASP3	CATALPA SPECIOSA 3"			EACH	265.00
1		0	NORTHERN CATALPA			0.00	265.00

SALES AMOUNT	
MISC. CHARGES	
FREIGHT	
SALES TAX	
TOTAL	
PAYMENT REC'D	
BALANCE DUE	

# COLES Nurseries Inc.

P.O. Box 743, Lahaska, PA 18931  
(215) 794-8863



*Plant America*

## INVOICE

INVOICE DATE	INVOICE NO.	PAGE
03/31/22	0	4

SOLD  
TO

ALL SEASONS LANDSCAPING  
3915 MARKET STREET  
ASTON, PA 19014

SHIP TO STEVE  
610-494-8050  
west chester

ORDER NO.	ORDER DATE	CUSTOMER NO.	SALES PERSON	PURCHASE ORDER NO.	SHIP VIA	SHIP DATE	TERMS	
25594	03/22/22	AS06	KBC	WEST CHESTER	Our Truck	03/31/22	N30	
QUANTITY ORDERED	UNIT	ITEM NO.	ITEM DESCRIPTION				PRICE UNIT	UNIT PRICE
QUANTITY SHIPPED		QUANTITY BACKORD.					ITEM DISCOUNT	EXTENDED PRICE
			LIME 1951 FRONT					

SALES AMOUNT	7350.00
MISC. CHARGES	0.00
FREIGHT	825.00
SALES TAX	490.50
TOTAL	8665.50
PAYMENT REC'D	
BALANCE DUE	

Ar A Ac C Common Name	1.75-2"	2-2.5"
2E Mi V Red Buckeye	s/o	
2E Ea V Red Buckeye	s/o	
5C Nc V Black tupelo	\$185	\$215
5C Nc V Black tupelo	\$185	\$215
Black tupelo	\$185	\$215
54 Nc V Red Buckeye	s/o	
5C Wl V Willow oak	1.5" \$135	\$205
4E Sh V Bur oak	s/o	
6C Wl V Okame cherry		\$205
61 So V Serviceberry	MS???	
5E U.: V Serviceberry	MS???	
51 So V Willow oak	\$185	\$205
51 So V Willow oak	\$185	\$205
52 So V Eastern redbud	\$185	\$205
52 So V Eastern redbud	\$185	\$205
51 So V Eastern redbud	\$185	\$205
51 So V Eastern redbud	\$185	\$205
51 So V Eastern redbud	\$185	\$205
51 So V Eastern redbud	\$185	\$205
5E So V Eastern redbud	\$185	\$205
51 So V Bur oak	s/o	
V Bur oak	s/o	
31 Ea V Oak	????	
3C So V Bur oak	s/o	
3C So V Crabapple harvest gold	s/o	
5 Wl V Bur oak	s/o	
4C So V Black tupelo	\$185	\$215
4C So V Black tupelo	\$185	\$215
6C So V Shingle oak		\$205
22 Wl V Willow oak	s/o	
2C Wl V English oak	s/o	
2- Ch V Black tupelo	\$185	\$215
1 Nc V Chinkapin oak	s/o	
42 Pe V Willow oak	\$185	\$205
2- Ch V Black tupelo	185	215
2- Ch V Black tupelo	\$185	\$215
1E U.: V Hackberry		205
1C Nc V Crabapple harvest gold	n/a	
34 Sh V Northern catalpa	N/A	
61 Pe V Baldcypress	\$185	\$205
1C So V Swamp white oak	\$185	\$205
1C So V Black tupelo	185	215
7C So V River birch	Clump ok?	
34 Pe V Bur oak	s/o	
Hoopes White Oak	185	
Hoopes Willow Oak	185	

Hoopes Swamp White Oak	185	
Hoopes Burr Oak	s/o	
Hoopes Tillia		205
Hoopes Acer rubrum	185	205
Hoopes Platanus "Ovation "- or- "Exclamation"		205 Bloodgood
Hoopes Ostrya virginiana	185	205
Hoopes Carpinus caroliniana	185	205
Hoopes Nyssa sylv.	185	215
Hoopes Cladrastis lutea		215
Hoopes Halesia caroliniana	s/o	bae root 1" \$85
Hoopes Magnolia " Elizabeth"		Clump?
Hoopes Cornus alterniflora	6-8' \$145	
Hoopes Cornus "Appalachian Snow"	185	215
Hoopes Chioanthus virginicus		
Hoopes Chioanthus retitsus		205
Hoopes Taxodium disticum		205
Everhart White Oak	185	
Everhart White Oak	185	
Everhart White Oak	185	
Everhart White Oak	185	
Everhart White Oak	185	
Everhart Burr Oak	s/o	
Everhart Burr Oak	s/o	
Everhart Chinkapin oak	s/o	
Everhart Water Oak	s/o	
Everhart Baldcypress	185	205
Everhart Baldcypress	185	205
Everhart Carya sp	N/A	
Everhart Carya sp	n/a	
Everhart Gordlinia	n/a	
Everhart Red Buckeye	s/o	
Everhart Red Buckeye	s/o	
Everhart Red Buckeye	s/o	
Mostell Bottle Brush Buckeye	s/o	
Mostell Bottle Brush Buckeye	s/o	
Mostell Bottle Brush Buckeye	s/o	
Mostell Bottle Brush Buckeye	s/o	
Mostell Bottle Brush Buckeye	s/o	
Mostell Red Twig Dogwood	#3 \$24	
Mostell Red Twig Dogwood	#3 \$24	
Mostell Red Twig Dogwood	#3 \$24	
Mostell Red Twig Dogwood	#3 \$24	
Mostell Red Twig Dogwood	#3 \$24	
Greenfi Oakleaf Hydraenga	#3 \$28	
Greenfi Oakleaf Hydraenga	#3 \$28	
Greenfi Oakleaf Hydraenga	#3 \$28	
Greenfi Oakleaf Hydraenga	#3 \$28	

Greenfi Oakleaf Hydraenga	#3 \$28
Greenfi Oakleaf Hydraenga	#3 \$28
Greenfi Oakleaf Hydraenga	#3 \$28
Greenfi Oakleaf Hydraenga	#3 \$28
Greenfi Oakleaf Hydraenga	#3 \$28
Greenfi Oakleaf Hydraenga	#3 \$28
Barlca   Gordlinia	
Barlca   Burr Oak	



**From:** Kathy Brooks <KBrooks@west-chester.com>  
**Sent:** Wednesday, March 30, 2022 3:35 PM  
**To:** Wendy Mecke  
**Cc:** MaryLou Lowrie  
**Subject:** RE: WC Employee Education

Hi Wendy

You email will suffice.

**Kathy Brooks**  
**Borough of West Chester**  
**Public Works Department**  
**610-696-5282**

---

**From:** Wendy Mecke <[WMecke@west-chester.com](mailto:WMecke@west-chester.com)>  
**Sent:** Wednesday, March 30, 2022 2:42 PM  
**To:** Kathy Brooks <[KBrooks@west-chester.com](mailto:KBrooks@west-chester.com)>  
**Subject:** RE: WC Employee Education

Hi Kathy,

All read. Should the Acknowledgement form be signed and returned?

*Wendy Mecke*  
*West Chester Borough*  
*Building and Housing*  
*Phone - 610-696-1773*  
[Email-wmecke@west-chester.com](mailto:Email-wmecke@west-chester.com)



---

**From:** Kathy Brooks <[KBrooks@west-chester.com](mailto:KBrooks@west-chester.com)>  
**Sent:** Wednesday, March 30, 2022 2:12 PM  
**To:** Jaspuret Kaur <[jkaur@west-chester.com](mailto:jkaur@west-chester.com)>; Dan Miller <[DMiller@west-chester.com](mailto:DMiller@west-chester.com)>; Hector Mojica <[HMOjica@west-chester.com](mailto:HMOjica@west-chester.com)>; Wendy Mecke <[WMecke@west-chester.com](mailto:WMecke@west-chester.com)>  
**Cc:** Sean Metrick <[SMetrick@west-chester.com](mailto:SMetrick@west-chester.com)>  
**Subject:** FW: WC Employee Education

Hi

Please read the attached employee training and email me once you have completed. This is part of the Borough's MS4 Educational Requirement.

Hector – can you have your new employees read this and sign form or email me they completed.

Please contact me with any questions.

Kathy

**Kathy Brooks**  
**Borough of West Chester**  
**Public Works Department**  
**610-696-5282**

