



BOROUGH OF NORTH WALES

300 School Street, North Wales, PA 19454

Phone: 215-699-4424 • Fax: 215-699-3991

<http://northwalesborough.org>

COUNCIL MEETING

Tuesday, August 9, 2022 – 7:00 P.M.

Salvatore Amato
Sherwin Collins
Anji Fazio
Alexander Groce
Wendy McClure

Sally Neiderhiser
Eion O'Neill
Mark Tarlecki
Sarah Whelan
Neil McDevitt, Mayor

Call to Order, Date and Time

Roll Call

Pledge of Allegiance

1. Public Comment

2. Consideration: HRC Member Appointment, Term Ending 12/31/2024

3. Consideration: Approval to Advertise Ordinance 821, Amending Chapter 180: Stormwater Management

4. Consideration: Approval of Minutes: July 26, 2022

5. Old Business / Committee & Board Reports / Zoning Applications

6. Solicitor / Mayor / Council / Chief / Public Works / Manager

Adjournment

All interested parties may participate on the date and time noted above and when called upon by the Council President. The public may also submit questions or comments prior to the meeting by e-mail to info@northwalesborough.org; these must be received no later than 12 Noon on August 9, 2022. Persons with disabilities who wish to attend the meeting and require auxiliary aid, service, or other accommodation to participate in the meeting should contact North Wales Borough at 215-699-4424 or by e-mail to info@northwalesborough.org.

Mayor's Office Hours:

2 nd Tuesdays	5:00 P.M. - 7:00 P.M.
3 rd Saturdays	10:00 A.M. - 12:00 P.M.

Monthly Meetings Information:

HARB	3 rd Wednesday of Month
Historic Commission	3 rd Tuesday of Month
Human Relations Commission	3 rd Thursday of Month
Nor-Gwyn Pool Commission	2 nd Thursday of Month – 7:30 P.M.
Park & Recreation Board	2 nd Thursday of Month
Planning Commission	1 st Wednesday of Month
Shade Tree Commission	2 nd Thursday of Month
Zoning Hearing Board	1 st Tuesday of Month, as needed

All above meetings begin at 7 P.M. at Borough Hall, unless noted otherwise.

North Wales Water Authority	3 rd Wednesday of Month 5:00 P.M., 200 W. Walnut Street
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Please note: The meeting is being digitally recorded.

Brittany Kohler

138 W Walnut St.
North Wales, PA 19454
July 21, 2022

Dear North Wales Borough Council in care of the Borough Manager,

My name is Brittany Kohler, and I am submitting this letter of interest for the board member position for the Human Relations Commission with the term expiration of 12/31/2024. I have attached my Resume as a reference of the many positions that I have held throughout my career that have afforded me the opportunity to work alongside with many people from all walks of life.

I am a resident of North Wales. My wife Dana and I purchased our first home a little less than a year ago and love our home. I am currently the President of the LGBT Business Council of Montgomery County, which is an organization/ chamber of commerce that elevates, supports, and provides resources to all LGBTQ+ owned and allied businesses throughout Montco that welcome and support Diversity and the LGBTQ+ community. In addition, I am a volunteer for the Human Rights Campaign and plan to be more involved as time moves on. In the spring and early summer, I am the League Commissioner for the Abington Area Women's Softball League, where I also Coach and play full time. During the week, I am a full time Service Manager for Cima. This past June I was nominated and presented an award for being one of the Top LGBTQ+ leaders of Pennsylvania for the year 2022.

I have a passion for Human relations quite simply because I am a people person and enjoy getting to know as many people as I can. I have the utmost passion for Equality. Being an open member of the LGBTQ+ community, I have been in several situations throughout my life that were not ideal for growth, whether it be being exposed to open discrimination or having been declined opportunities. I was born and raised into a wonderful family who has always supported me and my goals, for that I am grateful, however, I have seen the dark side of this world and realize that many are not as fortunate as I have been. I believe that no one should ever be discriminated against and or prevented resources based off their race, color, age, religious creed, ancestry, sex, sexual orientation, gender identity or gender expression, national origin, or any physical handicap. Everyone in this country and quite frankly the world, should be afforded equal opportunities for employment, fair and affordable housing, and human rights.

I'd like to learn more about the Human Relations Commission and to discuss how I can be of service to the Commission in the future.

I am looking forward to hearing back.

Thank you,

Brittany Kohler

Brittany L. Kohler

138 W Walnut St. North Wales, PA 19454

Effective communicator with high level of customer service skills, leader, quick, proactive, and self-motivated learner, passionate about equality and a love of nature seeking a meaningful leadership position.

Work History

President

Montgomery County LGBT Business Council, Ambler PA

September 2021 – Present

- Chief Executive officer of the council which oversees general supervision of the business and Council.
- Provide support to the Montgomery County business community through education, training, professional development, policy advocacy and adaptation to ensure that workplace environments are welcoming and inclusive regardless of sexual orientations and gender identities.
- Be the leading voice in Montgomery County advocating for the interests and protections of LGBT owned and operated businesses, LGBT workers, and customers.
- Manage all affairs of the Council and ensures that all orders and resolutions are carried into effect, authorized by the Board of Directors.
- Educate and enable businesses in Montgomery County to recognize the benefits of inclusive and equal workplaces and how to adopt policy and culture shifts needed to attract, welcome, and support LGBT professionals and customers.
- Partner with local business & commerce, legislative and government, social & nonprofit, and educational leaders to advance our mission

Service Manager

Cima, Chalfont PA

January 2021 – Present

- Lead, support, and manage a team of service representatives on day-to-day processes of individual maintenance projects for signage and lighting across 29 clients nationwide to ensure all client deliverables are met on time and are delivered profitably for the department and company.
- Create estimates for customer if “Not to Exceed” price will not cover the cost of repair.
- Track overall profitability for each project and confirm that all information for customer invoicing is accurate and completed on a timely basis to continue to ensure cash flow.
- Maintain consistent updating of the company's ERP system and milestone tracking and provide proactive updates to all clients.
- Source, qualify, select, negotiate, and manage vendor partnerships both nationally and internationally.
- Maintain geographic vendor list with data to track vendor performance in each area.
- Create and communicate daily, weekly, and quarterly reports for open sales orders, outstanding invoices, and client expectations.
- Prepare and present QBR's with all clients to review expectations and current metrics.
- Provide continuous on the job training to further expand and encourage knowledge of the current economic environment and industry standards.
- Solve all and any escalations that may arise on job site, while communicating to all stakeholders involved.

Project Manager

Cima, Chalfont PA

May 2019- January 2021

- Create scopes of works and purchase orders per the SOP. Scheduling, following up, and collecting all the project close out required documents to present to our client in real time.
- Great attention to detail, required to identify any escalations from specific sites, followed by a proactive approach of communicating with the Client, Vendor, and internal team; to ensure that the site is ready for conversion/completion which is imperative for the success of the program.
- Create, maintain, and communicate a weekly outlook schedule for the week ahead presented to both our client and our internal Team.
- Proactively creating Pick lists, distributing, and submitting a delivery request for signage. Collecting the correct information for each specific site in a way that the shipments arrive in a timely manner to save on costs and positively affect the overall margin.
- Reliable and dedicated Team member, positive in purpose, passionate in drive, ready to help in anyway. Teamwork is at the center of every great Team, together the possibilities are endless.

Clinical Administrator

- Managing Respiratory Patient care and provide high level customer service
- Assist patients with questions about their DME/ Respiratory equipment.
- Liaison for multiple referrals, responsible for setting up quarterly meetings regarding patient progress.
- Responsible for updating patient health records, including admissions and insurance data.
- Maintain relationships with doctors and all clinical staff.
- Monitor and ensure compliance is up to date with current healthcare regulations for all patients.
- Input all new patient setups and oversee the schedule for the Respiratory Department.
- Manage and facilitate multiple out of office patient programs that benefit patient therapy.
- Created and manage a company-wide database with all product, company and department information, including patient & company forms, product information, insurance information, online department schedule.

Respiratory Customer Service Specialist

2015 - 2016

QMES LLC- Montgomery Medical Equipment Company, Oaks, PA

- Responsible for customer experience throughout the reordering/ pickup process of supplies for current medical equipment and input of those orders into Brightree system.
- Check all prescriptions and clinical notes received to be certain qualifications through the insurance companies.
- Set up new patients and ensure proper paperwork is received from referrals and or facilities.
- Document all conversations and issues with patients, Insurance companies and deliveries.
- Assist patients over the phone to troubleshoot equipment problems.
- Verify and submit for authorization through Insurance companies using Insurance company portals as well as Navinet and Zirmed.
- Proficient in Order Confirmation while following up with all the steps necessary to ensure payment from the Insurance companies.
- Collect all copays and credit card information required to be kept on file.
- Assume the role of the On-Call Manager as needed. Oversee office staff and drivers working on the weekends and after normal business hours. Handling all patient calls from 6:00 pm- 8:00 am Saturday-Saturday. Duties included hospital discharges and hospice setup, dispatched on-call driver and created routes for all the drivers strategically in a timely manner to save on labor.

Customer Service Rep/Investment Counselor

2014-2015

TransAmerica Retirement Solutions, St. Petersburg, FL

- Assisted participants in enrolling in retirement plans.
- Researched and responded to participant inquiries (i.e. fund transfers, withdrawals, and loans).
- Documenting all actions taken to ensure updated service history for each caller.
- Educating customers on plan/contract provisions and identifying asset retention opportunities along with present product and investment alternatives.
- Documenting all participant complaints and resolutions, problem solving issues as presented by the participant while providing professional service to participants.

Customer Service Rep/Trainer

2013-2014

Kelly Services/Salon Centric, Largo, FL

- Ensured delivery of excellent customer service through fast and accurate processing of orders, coordinating with other departments to resolve inquiries utilizing SAP and SIMS.
- Trained new employees efficiently in utilizing SAP and SIMS.
- Ran daily reports resolving SPIN notes, LDE and YLCD holds in SAP and reports resolving cancelled orders and orders that missed shipping cut off time.

Price Manager

2011-2013

Toys R Us, Saint Petersburg, FL

- Trained and developed team members on guest services, cash handling procedures, product knowledge, safe merchandising techniques, and use of equipment for the front end and guest service counter.
- Set and achieved weekly sales goals as determined by senior managers.
- Evaluated team member's performance and coached them on performance-related problems dealing with guest services and cashiering.
- Cultivated best-selling practices, actively engaging guests and ensured team members were doing the same.
- Drove sales through activities such as guest engagement and product demonstrations to maximize the value of each guest visit.

Server/Trainer

2009-2011

Landry's Restaurants, Orlando, FL

Rainforest Cafe/ Downtown Disney/Disney's Animal Kingdom

- Provided quick and fast problem solving to any guest service situation while still providing the Disney magical experience.
- Ensured guest meals were accurate and to the guest's standards and special requests were met.
- Trained new crew members on high standards and expectations of Guest service

Guest Service Manager, Attractions Hostess

2006-2009

Walt Disney Company, Orlando, FL Magic

Kingdom/ Tomorrowland

- Supervised attractions in Tomorrowland with over 300 cast members.
- Monitored staffing levels to meet budget hours and save on labor when possible.
- Member of the Safety Committee assist in finding ways to improve both guest and cast member safety.
- Dealt with guest problems and special requests.
- Participated in orientation of new cast members and trained staff with priority on efficiency and safety.

Skills

Proficient in Microsoft Word, Microsoft Excel, Microsoft Powerpoint, KeyedIn, Smartsheet, Egnyte, ProTrack, Brighttree, Transport Manager, SAP, SIMS, Data Line, Navinet, Zirmed, EncoreAnywhere, Airview, Epic, M1, Verisae, Corrigo, FM Pilot, Service Channel.

Volunteer

President - Abington Area Woman's Softball League

Coach - Abington Area Woman's Softball League

Awards

Top 100 LGBTQ Most Influential Leaders of 2022.

Education

Pursuing an Associate Degree in Business

ADVERTISEMENT NOTICE

NOTICE IS HEREBY GIVEN that the Borough Council of the Borough of North Wales, Montgomery County, at its regular meeting on September 13, 2022, at 7:00 p.m. in the Borough Hall, located at 300 School Street, North Wales, Pennsylvania, will consider the enactment of an Ordinance, the title and summary of which are as follows:

NORTH WALES BOROUGH ORDINANCE 821: AN ORDINANCE AMENDING THE NORTH WALES BOROUGH CODE TO REPEAL AND REPLACE IN ITS ENTIRETY CHAPTER 180: WISSAHICKON CREEK STORMWATER MANAGEMENT ORDINANCE TO CONFORM WITH THE 2022 PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION MODEL ORDINANCE TO MEET THE STORMWATER MANAGEMENT PROGRAM MINIMUM CONTROL MEASURES

The proposed Ordinance repeals and replaces the existing Borough Stormwater Management provisions found at Chapter 180 of the Code of Ordinances which implements the requirements of the Wissahickon Creek Watershed Stormwater Management Plan. A synopsis of the proposed Ordinance is as follows: Section 102.A was revised to replace “flood flows” with “runoff volumes.” Section 102.C was revised to replace “erosion” with “runoff.” Section 102.H was added to include green infrastructure and low impact development (LID). Section 112, Waivers, has been added to address approval exceptions. The following definitions have been revised or added to Section 202: “Floodplain,” “Green Infrastructure,” “Low Impact Development (LID),” and “Pervious Area.” Section 301, SWM Site Plan Contents has been revised to address Subdivision and Land Development criteria and approval. Section 301.E has been revised to include numerous other criteria for project approval, including a stormwater management site plan. Section 306, “Authorization to Construct and Term of Validity” has been added to address the length of validity for SWM Site Plans. Section 307, As-Built Plans, Completion Certificate, and Final Inspection has been added. Section 401 was amended to include Subsection G.4. Section 401.J has been replaced entirely to describe the time period for storage facility drainage. Section 406 was revised to include green infrastructure. Section 408.A has been amended to include areas not shown on release rate maps. Section 602.C was amended to include attendance at meetings. Section 701.C was amended to require applicant financial guarantee to the Borough. Section 702.C and 702.F were amended to address permanent real estate appurtenances and maintenance responsibilities. Sections 704.A-704.C were revised and relettered to include a signed O&M agreement. Section 801.A has been revised to include discharges from water sources. Section 902.D was revised to meet the O&M agreement. Sections 903.A-903.C were revised to prohibit violating the ordinance.

A complete copy of the text of the proposed Ordinance is available for inspection at the North Wales Borough Hall, 300 School Street, North Wales, Pennsylvania, during the office hours from 8:00 a.m. to 4:00 p.m. and on the North Wales Borough website: northwalesborough.org.

By Order of the Borough Council
Christine Hart, Secretary

SUMMARY OF REVISIONS

I. Section 102.A has been revised to read as following:

Inadequate management of accelerated stormwater runoff resulting from development throughout a watershed increases runoff volumes and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of existing 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 groundwater recharge, and threatens public health and safety. *(This section was revised to replace “flood flows” with “runoff volumes”)*

II. Section 102.C has been revised to read as follows:

A comprehensive program of stormwater management, including minimization of impacts of development, redevelopment, and activities causing accelerated runoff and loss of natural infiltration, is fundamental to the public health, safety, welfare, and the protection of the people of the Municipality and all of the people of the Commonwealth, their resources, and the environment. *(This section was revised to replace “erosion” with “runoff”)*

III. The following text has been added as Subsection H to Section 102, Statement of Findings:

The use of green infrastructure and low impact development (LID) 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 and LID contribute to the restoration or maintenance of pre-development hydrology.

IV. Section 112, Waivers has been added with the following subsections.

- A. If the Municipality determines that any requirement under this Ordinance cannot be achieved for a particular regulated activity, the Municipality may, after an evaluation of alternatives, approve measures other than those in this Ordinance, subject to Section 110, paragraphs B and C.
- B. Waivers or modifications of the requirements of this Ordinance may be approved by the Municipality if enforcement will exact undue hardship because of peculiar conditions pertaining to the land in question, provided that the modifications will not be contrary to the public interest and that the purpose of the Ordinance is preserved. Cost or financial burden shall not be considered a hardship. Modification may be considered if an alternative standard or approach will provide equal or better achievement of the purpose of the Ordinance. A request for modifications shall be in writing and accompany the Stormwater Management Site Plan submission. The request shall provide the facts on which the request is based, the provision(s) of the Ordinance involved and the proposed modification.
- C. No waiver or modification of any regulated stormwater activity involving earth disturbance greater than or equal to one acre may be granted by the Municipality unless that action is approved in advance by the Department of Environmental Protection (DEP) or the delegated county conservation district.

V. The following definitions in Section 202, Definitions have been revised or added as follows.

SUMMARY OF REVISIONS

- A. The following language has been added to the definition of Floodplain: Also includes areas that comprise Group 13 Soils, as listed in Appendix A of the Pennsylvania DEP Technical Manual for Sewage Enforcement Officers (as amended or replaced from time to time by DEP).
 - B. The following definition has been added for Green Infrastructure – Systems and practices that use or mimic natural processes to infiltrate, evapotranspire, or reuse stormwater on the site where it is generated.
 - C. The following definition has been added for 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, evaporate, 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.
 - D. The following definition has been added for Pervious Area – “Any area not defined as impervious.”
- VI. Section 301, SWM Site Plan Contents has been revised to include the following additional subsections. The existing subsections have been re-lettered accordingly.
- A. Appropriate sections from the municipal’s Subdivision and Land Development Ordinance, and other applicable local ordinances, shall be followed in preparing the SWM Site Plans. In instances where the Municipality lacks Subdivision and Land Development regulations, the content of SWM Site Plans shall follow the county’s Subdivision and Land Development Ordinance.
 - B. The Municipality shall not approve any SWM Site Plan that is deficient in meeting the requirements of this Ordinance. At its sole discretion and in accordance with this Article, when a SWM Site Plan is found to be deficient, the municipality may either disapprove the submission and require a resubmission, or in the case of minor deficiencies, the Municipality may accept submission of modifications.
 - C. Provisions for permanent access or maintenance easements for all physical SWM BMPs, such as ponds and infiltration structures, as necessary to implement the Operation and Maintenance (O&M) Plan discussed in paragraph E.9 below.
 - D. The following signature block for the municipality:

“(Municipal official or designee), on this date (Signature date), has reviewed and hereby certifies that the SWM Site Plan meets all design
- VII. Section 301.E (previous 301.A) has been revised to include the following items 8 through 15.
- 8. The overall stormwater management concept for the project.
 - 9. A determination of site conditions in accordance with the BMP Manual⁴. A detailed site evaluation shall be completed for projects proposed in areas of carbonate geology

SUMMARY OF REVISIONS

or karst topography, and other environmentally sensitive areas, such as brownfields.

10. Stormwater runoff design computations and documentation as specified in this Ordinance, or as otherwise necessary to demonstrate that the maximum practicable measures have been taken to meet the requirements of this Ordinance, including the recommendations and general requirements in Section 301.
11. Expected project time schedule.
12. The effect of the project (in terms of runoff volumes, water quality, and peak flows) on surrounding properties and aquatic features and on any existing stormwater conveyance system that may be affected by the project.
13. Plan and profile drawings of all SWM BMPs, including drainage structures, pipes, open channels, and swales.
14. SWM Site Plan shall show the locations of existing and proposed on-lot wastewater facilities and water supply wells.
15. The SWM Site Plan shall include an O&M Plan for all existing and proposed physical stormwater management facilities. This plan shall address long-term ownership and responsibilities for O&M as well as schedules and costs for O&M activities.

- VIII. Section 306, Authorization to Construct and Term of Validity has been added and includes the following text.

The Municipality's approval of an SWM Site Plan authorizes the regulated activities contained in the SWM Site Plan for a maximum term of validity of 5 years following the date of approval. The Municipality may specify a term of validity shorter than 5 years in the approval for any specific SWM Site Plan. Terms of validity shall commence on the date the Municipality signs the approval for an SWM Site Plan. If an approved SWM Site Plan is not completed according to Section 407 within the term of validity, then the Municipality may consider the SWM Site Plan disapproved and may revoke any and all permits. SWM Site Plans that are considered disapproved by the Municipality shall be resubmitted in accordance with Section 405 of this Ordinance.

- IX. Section 307, As-Built Plans, Completion Certificate, and Final Inspection has been added with the following subsections.

- A. The developer shall be responsible for providing as-built plans of all SWM BMPs included in the approved SWM Site Plan. The as-built plans and an explanation of any discrepancies with the construction plans shall be submitted to the Municipality.
- B. The as-built submission shall include a certification of completion signed by a qualified professional verifying that all permanent SWM BMPs have been constructed according to the approved plans and specifications. The latitude and longitude coordinates for all permanent SWM BMPs must also be submitted, at the central location of the BMPs. If any licensed qualified professionals contributed to the construction plans, then a licensed qualified professional must sign the completion certificate.

SUMMARY OF REVISIONS

- C. After receipt of the completion certification by the Municipality, the Municipality may conduct a final inspection.
- X. Subsection G.4 has been added to Section 401, General Requirements with the following text.
 - G. All Regulated Activities shall include such measures as necessary to:
 - 4. Incorporate methods described in the Pennsylvania Stormwater Best Management Practices Manual (BMP Manual4).

- XI. Section 401.J currently reads, Storage facilities should completely drain both the volume control and rate control capacities over a period of time not less than 24 and not more than 72 hours from the end of the design storm.

Section 401.J has been replaced in its entirety with the following language

Normally dry, open top, storage facilities should completely drain both the volume control and rate control capacities over a period of time not less than 24 and not more than 72 hours from the end of the design storm.

- XII. Section 406 has been revised to read as follows:

The green infrastructure and low impact development practices provided in the BMP Manual shall be utilized for all regulated activities to the maximum extent practicable. Water Volume Controls shall be implemented using the Design Storm Method in Subsection A or the Simplified Method in Subsection B below. For regulated activity areas equal to or less than one (1) acre that do not require hydrologic routing to design the stormwater facilities, this Ordinance establishes no preference for either methodology; therefore, the applicant may select either methodology on the basis of economic considerations, the intrinsic limitations on applicability of the analytical procedures associated with each methodology, and other factors. All regulated activities greater than one (1) acre must use the Design Storm Method. ***(This section was revised to include green infrastructure)***

- XIII. The following text has been added to Section 408.A:

For any areas not shown on the release rate maps, the post-development discharge rates shall not exceed the pre-development discharge rates.

- XIV. The following text has been added as Subsection G under Section 602, Expenses Covered by Fees

Attendance at meetings.

- XV. The following text has been added as Subsection C under Section 701, Performance Guarantee

For all SWM Site Plans , the applicant shall provide a financial guarantee to the Municipality for the timely installation and proper construction of all stormwater management controls as required by the approved SWM Site Plan and this Ordinance in accordance with the provisions of Sections 509, 510, and 511 of the Pennsylvania

SUMMARY OF REVISIONS

Municipalities Planning Code.

XVI. The following language has been added as Subsections C and F under Section 702, Responsibilities for Operation and Maintenance (O&M) of Stormwater Facilities and Best Management Practices (BMPs). The existing subsections have been re-lettered accordingly.

C. Facilities, areas, or structures used as SWM BMPs shall be enumerated as permanent real estate appurtenances and recorded as deed restrictions or conservation easements that run with the land.

F. The Municipality shall make the final determination on the continuing maintenance responsibilities prior to final approval of the SWM Site Plan. The municipality may require 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 municipality will accept the facilities. The municipality reserves the right to accept or reject the ownership and operating responsibility for any portion of the stormwater management controls.

XVII. The following language has been added as Subsections A, B, and C under Section 704, Operation and Maintenance (O&M) Agreement for Privately Owned Stormwater Controls and BMPs. The existing subsections have been re-lettered accordingly.

A. Prior to final approval of the SWM Site Plan, the property owner shall sign and record an Operation and Maintenance (O&M) Agreement (see Appendix E) covering all stormwater control facilities which are to be privately owned.

B. The owner shall convey to the Municipality conservation easements to assure access for periodic inspections by the Municipality and maintenance, as necessary.

C. The owner shall keep on file with the Municipality the name, address, and telephone number of the person or company responsible for maintenance activities; in the event of a change, new information shall be submitted by the owner to the Municipality within ten (10) working days of the change.

XVIII. Section 801.A has been revised to include additional language as shown in ***bold italics*** below.

- <i>Non-contaminated</i> discharges from fire fighting activities	- Flows from riparian habitats and wetlands
- <i>Discharges from</i> potable water <i>sources</i> including water line flushing <i>and fire hydrant flushing, if such discharges do not contain detectable concentrations of Total Residual Chlorine (TRC).</i>	- Uncontaminated water from foundations or from footing drains
- <i>Non-contaminated irrigation water and flows from riparian habitats and wetlands.</i>	- <i>Non-contaminated</i> lawn watering

SUMMARY OF REVISIONS

- <i>Non-contaminated HVAC condensation and water from geothermal systems.</i>	- Dechlorinated swimming pool discharges
- <i>Diverted stream flows and springs.</i>	- Uncontaminated groundwater
- Water from crawl space pumps	- Water from individual residential car washing
- 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	- Routine external building wash down (which does not use detergents or other compounds)

- XIX. The following language has been added as Subsection D under Section 902, Inspection

As specified in the O&M agreement.

Inspections should be conducted during or immediately following precipitation events. 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, 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.

- XX. The following text has been added as Subsections A, B and C under Section 903, Enforcement. The existing subsections have been re-lettered accordingly.

A. It shall be unlawful for a person to undertake any regulated activity except as provided in an approved SWM Site Plan, unless specifically exempted in Section 302.

B. It shall be unlawful to violate Section 703 of this Ordinance.

C. Inspections regarding compliance with the SWM Site Plan are a responsibility of the Municipality.

WISSAHICKON CREEK WATERSHED STORMWATER MANAGEMENT ORDINANCE

**Implementing the Requirements of the Wissahickon Creek
Watershed Stormwater Management Plan**

ORDINANCE NO. _____

**NORTH WALES BOROUGH
MONTGOMERY COUNTY,
PENNSYLVANIA**

Adopted at a Public Meeting held on

_____, 20____

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ARTICLE I- GENERAL PROVISIONS

Section 101. Short Title

This Ordinance shall be known and cited as the “Wissahickon Creek Stormwater Management Ordinance”.

Section 102. Statement of Findings

The governing body of the Municipality finds that:

- A. Inadequate management of accelerated stormwater runoff resulting from development throughout a watershed increases runoff volumes and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of existing 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 groundwater recharge, and threatens public health and safety.
- B. Inadequate planning and management of stormwater runoff resulting from land development throughout a watershed can also harm surface water resources by changing the natural hydrologic patterns, accelerating stream flows (which increase scour and erosion of streambeds and streambanks, thereby increasing sedimentation), destroying aquatic habitat, and increasing 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 development, redevelopment, and activities causing accelerated runoff and loss of natural infiltration, is fundamental to the public health, safety, welfare, and the protection of the people of the Municipality and all of the people of the Commonwealth, their resources, and the environment.
- D. Stormwater is an important resource by providing groundwater recharge for water supplies and baseflow of streams, which also helps to protect and maintain surface water quality.
- E. Impacts from stormwater runoff can be minimized by using project designs that maintain the natural hydrologic regime and sustain high water quality, groundwater recharge, stream baseflow, and aquatic ecosystems.
- F. Federal and state regulations require certain municipalities to implement a program of stormwater controls. These municipalities are required to obtain a permit for stormwater discharges from their separate storm sewer systems under the National Pollutant Discharge Elimination System (NPDES).
- G. Nonstormwater discharges to municipal separate storm sewer systems can contribute to pollution of waters of the Commonwealth.
- H. The use of green infrastructure and low impact development (LID) 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 and LID contribute to the restoration or maintenance of pre-development hydrology.

Section 103. Purpose

The purpose of this Ordinance is to promote the public health, safety, and welfare within the Wissahickon Creek Watershed by maintaining the natural hydrologic regime and by minimizing the harms and maximizing the benefits described in Section 102 of this Ordinance, through provisions designed to:

- A. Meet legal water quality requirements under state law, including regulations of 25 Pa. Code 93 to protect, maintain, reclaim, and restore the existing and designated uses of the waters of the Commonwealth.
- B. Preserve the natural drainage systems as much as possible.
- C. Manage stormwater close to the source.
- D. Provide procedures and performance standards for stormwater planning and management.
- E. Maintain groundwater recharge to prevent degradation of surface and groundwater quality and to otherwise protect water resources.
- F. Prevent scour and erosion of streambanks and streambeds.
- G. Provide proper operation and maintenance of all Stormwater Best Management Practices (BMPs) that are implemented within the Municipality. Provide standards to meet National Pollutant Discharge Elimination System (NPDES) requirements.
- H. Meet legal water quality requirements under state law, including regulations at 25 Pennsylvania Code Chapter 93.4.a requiring protection and maintenance of “existing uses” and maintenance of the level of water quality to support those uses in all streams, and the protection and maintenance of water quality in “special protection” streams.
- I. Address the quality and quantity of stormwater discharges.
- J. Provide standards necessary to meet NPDES permit requirements.
- K. Implement an illegal discharge detection and elimination program that addresses non-stormwater discharges into the Municipality’s separate storm sewer system.
- L. Preserve and restore the flood-carrying capacity of streams.
- M. Prevent scour and erosion of streambanks and streambeds.
- N. Provide proper operation and maintenance of all stormwater management facilities and BMPs that are implemented in the Municipality.

Section 104. Statutory Authority

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

- A. Primary Authority. The Municipality is empowered to regulate land use activities that affect runoff and surface and groundwater quality and quantity by the authority of the Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. Section 680.1, et seq., as amended, the “Storm Water Management Act” and the (appropriate municipal code).
- B. Secondary Authority. The municipality also is empowered to regulate land use activities that affect runoff by the authority of the Act of July 31, 1968, P.L. 805, No. 247, The Pennsylvania Municipalities Planning Code, as amended.

Section 105. Applicability

All Regulated Activities and all activities that may affect stormwater runoff, including Land Development and Earth Disturbance Activities, are subject to regulation by this Ordinance. This Ordinance shall apply to those portions of the Municipality that lie within the Wissahickon Creek Watershed, in accordance with the Stormwater Management Districts established in Section 408.

Regulated Activities include the following:

- a) Land development,
- b) Subdivisions,
- c) Alteration of the natural hydrologic regime,
- d) Construction or reconstruction (see definition in Section 202.B) of or addition of new impervious or semi-pervious surfaces (i.e., driveways, parking lots, roads, etc.),
- e) Construction of new buildings or additions to existing buildings,
- f) Redevelopment,
- g) Diversion piping or encroachments in any natural or man-made channel,
- h) Stormwater BMPs or appurtenances thereto,
- i) Earth disturbance activities of equal to or greater than five thousand (5,000) square feet,
- j) Any of the above regulated activities which were approved more than five (5) years prior to the effective date of this Ordinance and resubmitted for municipal approval.

Section 106. Exemptions

- A. Table 106.1a summarizes the exemptions from certain requirements in this Ordinance. “Proposed Impervious Surface” in Tables 106.1a includes new, additional, or replacement impervious surface/cover. “Repaving” existing surfaces without reconstruction (see Section 202) does not constitute replacement.

Table 106.1a
Exemptions for the Montgomery County Portion of the
Watershed

Article or Section	Type of Project	Proposed New Impervious Cover						
		<1000 sq. ft.			≥1000 to <5,000 sq. ft.		>5,000 sq. ft.	
		Earth Disturbance <5,000 sq. ft.	Earth Disturbance ≥5,000 sq. ft. - 1 acre*	Earth Disturbance > 1 acre	Earth Disturbance <5,000 sq. ft.*	Earth Disturbance ≥5,000 sq. ft. - 1 acre*	Earth Disturbance > 1 acre	All Earth Disturbance Categories
Article III SWM Site Plan Requirements	Development and Redevelopment	Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt
Section 404 Nonstructural Project Design	Development and Redevelopment	Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt
Section 405 Groundwater Recharge	Development and Redevelopment	Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt
Section 406 Water Volume Control Requirements	Development and Redevelopment	Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt
Section 407 Stream Bank Erosion Requirements	Development	Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt	Not Exempt
	Redevelopment		Exempt		Exempt	Exempt		
Section 408 Stormwater Peak Rate Control and Management Districts	Development and Redevelopment	Exempt	Exempt	Not Exempt	Exempt	Exempt	Not Exempt	Not Exempt
Erosion and Sediment Pollution Control Plan	Earth Disturbance	See Earth Disturbance Requirements	See Earth Disturbance Requirements	See Earth Disturbance Requirements	See Earth Disturbance Requirements	See Earth Disturbance Requirements	See Earth Disturbance Requirements	See Earth Disturbance Requirements
		(Refer to municipal earth disturbance requirements, as applicable)						

Notes:

Exempt – Exempt unless a determination is made by the municipality that the project is subject to Section 106.C. Not Exempt – Not exempt. All provisions apply.

*Not exempt, but if a municipality has adopted the ordinance for the Small Project SWM Site Plan for Residential Development in Appendix B, such a plan may be submitted in lieu of the SWM Site Plan for residential development.

B. Exemptions for Land Use Activities

(Note: Appendix B contains guidance for preparation of Small Project SWM Site Plans. *This guidance provides property owners who propose such small regulated activities the opportunity to submit SWM Site Plans without having to hire Qualified Persons.*)

1. Disconnected Regulated Activities (Regulated Activities that create Disconnected Impervious Areas) smaller in area than 1000 square feet are exempt from the SWM Site Plan (Section 301) preparation requirements of this Ordinance, except when the associated earth disturbance area is equal to or greater than 5,000 square feet.
2. Disconnected Regulated Activities (Regulated Activities that create Disconnected Impervious Areas), having an area equal to or greater than 1000 square feet and less than 5,000 sq. ft., and with an associated earth disturbance area of less than 5,000 square feet, are exempt only from the peak rate control(Section 408) requirements of this Ordinance in the case of new development, and are exempt from peak rate control (Section 408) and streambank erosion (Section 407) requirements in the case of re-development.
3. Agricultural plowing and tilling are exempt from the rate control and SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 Pa. Code Chapter 102.
4. Forest management and timber operations are exempt from the rate control and SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 Pa. Code Chapter 102.

C. Infiltration Exemptions

1. Depth to Limiting Zone: A minimum of two (2) feet of soil suitable for infiltration must exist between the invert of the infiltration BMP and the top of the nearest limiting zone. Otherwise, the Rev requirement shall not be applied to the development site, and the entire WQv must be treated.
2. Stormwater Hotspots – Below is a list of types of hotspots that may be recognized by the Municipality. If a site is a potential hotspot, it has important implications for how stormwater is managed. First and foremost, untreated stormwater runoff from hotspots concentrated into a collection system, shall not be recharged into groundwater where it may contaminate water supplies. Therefore, the Rev requirement shall NOT be applied to development sites that lie within a hotspot (the entire WQv must still be treated). Second, a greater level of stormwater treatment shall be applied at hotspot sites to prevent pollutant washoff after construction. The Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) stormwater program requires some industrial sites to prepare and implement a stormwater pollution prevention plan.
 - a. List of potential 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 Codes
 7. Marinas (service and maintenance)
 8. Outdoor liquid container storage
 9. Commercial/industrial facilities
 10. Public works storage areas
 11. Facilities that generate, transfer, store, or dispose hazardous materials
 12. Commercial container nursery
- b. The following land uses and activities are not normally considered hotspots:
1. Residential streets and rural highways
 2. Residential development
 3. Institutional development
 4. Office developments
 5. Nonindustrial rooftops
 6. Pervious areas, except golf courses and nurseries (which may need an integrated pest management (IPM) plan).
3. Rate of Infiltration: When infiltration is not feasible due to poor infiltration rates or hotspot, the water quality volume must be treated by an approved SMP.

D. Additional Exemption Criteria:

1. Exemption Responsibilities – An exemption shall not relieve the Applicant from implementing such measures as are necessary to protect public health, safety, property, water quality, and the environment.
2. Drainage Problems – Where drainage problems exist downstream of the proposed activity, then the Municipality may deny exemptions.
3. Exemptions are limited to specific portions of this Ordinance.
4. HQ and EV Streams – The Municipality shall deny exemptions in High Quality (HQ) or Exceptional Value (EV) waters and Source Water Protection Areas (SWPA).
5. For a development taking place in stages, the entire development plan must be used in determining compliance with these exemption criteria. The starting point from which to consider tracts as “parent tracts” in which future subdivisions and respective impervious area computations are cumulatively considered shall be the date of the municipal ordinance adoption of the original Wissahickon Creek Watershed Stormwater Management Plan Ordinance [Watershed Plan Date].

For example: If a property owner in Montgomery County proposes a 300-square-foot shed after adoption of the municipal stormwater management ordinance, that property owner would be exempt from site plan and peak rate control requirements. If, at a later date, the property owner proposes to construct a garage and driveway adding an additional 1,300 square feet of impervious surface, the applicant would be required to

submit a SWM Site Plan or Small Project SWM Site Plan demonstrating the stormwater control requirements for the total impervious surface of 1,600 square feet.

- E. The municipality may deny or revoke any exemption pursuant to this Section at any time for any project that the municipality believes may pose a threat to public health, safety, property or the environment.

Section 107. Repealer

Any other Ordinances, provisions or regulations of the Municipality inconsistent with any of the provisions of this Ordinance are hereby repealed to the extent of the inconsistencies only. Municipalities with land area in more than one watershed may enact a single ordinance provided that its provisions are at least as restrictive as the provisions herein. The specific peak rate controls and management districts in Section 408 shall be included in the ordinance.

Section 108. Severability

In the event that a court of competent jurisdiction declares any section or provision of this Ordinance invalid, such decision shall not affect the validity of any of the remaining provisions of this Ordinance.

Section 109. Compatibility with Other Ordinances or Legal Requirements

Approvals issued pursuant to this Ordinance do not relieve the Applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act, or Ordinance, including Title 25PA Code, Chapter 92, 102 & 105.

Section 110. Duty of Persons Engaged in the Development of Land

Notwithstanding any provision(s) of this Ordinance, including exemptions, any landowner or any person engaged in the alteration or development of land that 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 that otherwise adequately protects health, safety, property, and water quality.

Section 111. 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.

Section 112. Waivers

- A. If the Municipality determines that any requirement under this Ordinance cannot be achieved for a particular regulated activity, the Municipality may, after an evaluation of alternatives, approve measures other than those in this Ordinance, subject to Section 110, paragraphs B and C.

- B. Waivers or modifications of the requirements of this Ordinance may be approved by the Municipality if enforcement will exact undue hardship because of peculiar conditions pertaining to the land in question, provided that the modifications will not be contrary to the public interest and that the purpose of the Ordinance is preserved. Cost or financial burden shall not be considered a hardship. Modification may be considered if an alternative standard or approach will provide equal or better achievement of the purpose of the Ordinance. A request for modifications shall be in writing and accompany the Stormwater Management Site Plan submission. The request shall provide the facts on which the request is based, the provision(s) of the Ordinance involved and the proposed modification.
- C. No waiver or modification of any regulated stormwater activity involving earth disturbance greater than or equal to one acre may be granted by the Municipality unless that action is approved in advance by the Department of Environmental Protection (DEP) or the delegated county conservation district.

ARTICLE II-DEFINITIONS

Section 201. Interpretation

For the purposes of this Ordinance, 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 words “shall” and “must” are mandatory; the words “may” and “should” are permissive.

Section 202. Definitions

Accelerated Erosion – The removal of the surface of the land through the combined action of man’s activity and the natural processes at a rate greater than that which would occur because of natural process alone.

Agricultural Activities – Activities associated with agriculture such as agricultural cultivation, agricultural operation, and animal heavy use areas. This includes the work of producing crops including tillage, land clearing, plowing, disking, harrowing, planting, 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.

Alteration – As applied to land, a change in topography as a result of the moving of soil and rock from one location or position to another; also the changing of surface conditions by causing the surface to be more or less impervious; land disturbance.

Applicant – A landowner, developer or other person who has filed an application to the Municipality for approval to engage in any Regulated Activity at a project site in the Municipality.

As-built Drawings – Engineering or site drawings maintained by a developer to show the actual locations of building components and changes from the original contract documents. These documents, or a copy of same, are turned over to the Municipality at the completion of the project.

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.

Bioretention – A stormwater retention area that utilizes woody and herbaceous plants and soils to remove pollutants before infiltration occurs.

BMP (Best Management Practice) – Activities, facilities, designs, measures or procedures used to manage stormwater impacts from Regulated Activities, to meet State Water Quality Requirements, to promote groundwater recharge and to otherwise meet the purposes of this Ordinance. Stormwater BMPs are commonly grouped into one of two broad categories or measures: “structural” or “non-structural.” In this Ordinance, non-structural BMPs or measures refer to operational and/or behavior-related practices that attempt to minimize the contact of pollutants with stormwater runoff, or to provide other environmental or aesthetic benefits such as low impact designs, riparian or forested buffers; whereas structural BMPs or measures are those that consist of a physical device or practice that is installed 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, sand filters, detention basins, and manufactured devices. Structural Stormwater BMPs are permanent appurtenances to the project site.

BMP Manual- *Pennsylvania Stormwater Best Management Practices Manual*, No. 363-0300-002 (December 2006).

Buffer – The area of land immediately adjacent to any stream, measured perpendicular to and horizontally from the top-of-bank on both sides of a stream (see Top-of-bank).

Channel – An open drainage feature 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.

Channel Erosion – The widening, deepening, or headward cutting of channels and waterways caused by stormwater runoff or bankfull flows.

Cistern – An underground reservoir or tank for storing rainwater.

Conservation District – A conservation district, as defined in section 3(c) of the Conservation District Law (3 P. S. § 851(c)), that has the authority under a delegation agreement executed with DEP to administer and enforce all or a portion of the regulations promulgated under 25 Pa. Code 102.

Conveyance – A facility or structure used for the transportation or transmission of something from one place to another.

Culvert – A structure with its appurtenant works which carries water under or through an embankment or fill.

Dam – A man-made barrier, together with its appurtenant works, constructed for the purpose of impounding or storing water or another fluid or semifluid. A dam may include a refuse bank, fill, or structure for highway, railroad, or other purposes that impounds or may impound water or another fluid or semifluid.

DEP (or PADEP) - The Pennsylvania Department of Environmental Protection.

Design Storm – The magnitude and temporal distribution of precipitation from a storm event measured in probability of occurrence that such magnitude will be equaled or exceeded in any one year (e.g., the 20% chance, or so-called 5-year (recurrence interval) storm), and duration (e.g., twenty-four (24) hours), used in the design and evaluation of stormwater management systems. Also see Return Period.

Detention Volume- The volume of runoff that is captured and released into the waters of the Commonwealth at a controlled rate.

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 soon after a rainfall event, and to become dry until the next rainfall event.

Developer – A person who seeks to undertake any regulated earth disturbance activities at a project site in the Municipality.

Development – Any human-induced change to improved or unimproved real estate, whether public or private, including, but not limited to, land development, construction, installation, or expansion of a building or other structure, land division, street construction, and site alteration such as embankments, dredging, grubbing, grading, paving, parking or storage facilities, excavation, filling, stockpiling, or clearing.

Development Site (Site) – See Project Site.

Diameter at Breast Height (DBH) – The outside bark diameter at breast height which is defined as four and one half (4.5) feet (1.37m) above the forest floor on the uphill side of the tree.

Diffused Drainage Discharge – Drainage discharge that is not confined to a single point location or channel, including sheet flow or shallow concentrated flow.

Directly Connected Impervious Area(DCIA) – An impervious or impermeable surface that is directly connected to a stormwater drainage or conveyance system, leading to direct runoff, decreased infiltration, decreased filtration, and decreased time of concentration.

Disconnected Impervious Area (DIA) – An impervious or impermeable surface that is disconnected from any stormwater drainage or conveyance system, and is redirected or directed to a pervious area, which allows for infiltration, filtration, and increased time of concentration.

Disturbance – See Earth Disturbance.

Disturbed Area – An unstabilized land area where an earth disturbance activity is occurring or has occurred.

Ditch – A man-made waterway constructed for irrigation or stormwater conveyance purposes.

Downslope Property Line – That portion of the property line of the lot, tract, or parcels of land being developed, located such that overland or pipe flow from the project site would be directed towards it by gravity.

Drainage Conveyance Facility – A stormwater management facility designed to transport stormwater runoff that includes channels, swales, pipes, conduits, culverts, and storm sewers.

Drainage Easement – A right granted by a landowner to a grantee allowing the use of private land for stormwater management purposes.

Drainage Plan – See Stormwater Management Site Plan.

Earth Disturbance Activity– A construction or other human activity which disturbs the surface of land including, but not limited to, clearing and grubbing, grading, filling, excavations, embankments, land development, agricultural plowing or tilling, timber harvesting activities, road maintenance activities, mineral or fluid extraction, and the moving, depositing, stockpiling, or storing of soil, rock, or earth materials.

Emergency Spillway – A conveyance area that is used to pass peak discharge greater than the maximum design storm controlled by the stormwater facility.

Encroachment – A structure or activity that changes, expands, or diminishes the course, current, or cross-section of a watercourse, floodway, or body of water.

Erosion – The natural process by which the surface of the land is worn away by water, wind or chemical action.

Erosion and Sediment Control Plan – A plan that is designed to minimize accelerated erosion and sedimentation.

Exceptional Value Waters – Surface waters having quality that satisfy one (1) or more of the conditions established in Pennsylvania Code Title 25 Environmental Protection, Chapter 93, Water Quality Standards, §93.4b(b).

Existing Condition – The dominant land cover during the 5-year period immediately preceding a proposed Regulated Activity. If the initial condition of the site is undeveloped land, the land use shall be considered as “meadow” unless the Municipality determines that the natural land cover has a lower Curve Number (CN) or Rational “c” value, such as forested lands.

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 the 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. Included are lands adjoining a river or stream that have been or may be expected to be inundated by a 100 year flow, i.e., the flood of magnitude that has a one (1) percent change of being equaled or exceeded in any given year. Also includes areas that comprise Group 13 Soils, as listed in Appendix A of the Pennsylvania DEP Technical Manual for Sewage Enforcement Officers (as amended or replaced from time to time by DEP).

Floodway – The channel of a watercourse and those portions of the adjoining floodplains that are reasonably required to carry and discharge the 100-year frequency flood. Unless otherwise specified, the boundary of the floodway is as indicated on Flood Insurance Rate Maps (FIRMs) and flood insurance studies provided by FEMA. In an area where no FEMA maps or studies have defined the boundary of the 100-year frequency floodway, it is assumed, absent evidence to the contrary, that the floodway extends fifty (50) feet from the top-of-bank on each side of the stream.

Fluvial Geomorphology – The study of landforms associated with river channels and the processes that form them.

Forest Management/Timber Operations – Planning and associated activities necessary for the management of forest lands. These include timber inventory and 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 elevation of the design high-water and 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.

Grade – 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.

Grassed Waterway – A natural or man-made waterway, usually broad and shallow, covered with erosion-resistant grasses used to convey surface water.

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 beneath the earth's surface that supplies wells and springs and is within the saturated zone of soil and rock.

Groundwater Recharge – The replenishment of existing natural underground water supplies from precipitation or overland flow.

HEC-HMS – The U.S. Army Corps of Engineers, Hydrologic Engineering Center (HEC) - Hydrologic Modeling System (HMS). This model was used to model the Wissahickon Creek Watershed during the Act 167 plan development and is the basis for the standards and criteria of this Ordinance.

High Quality Waters – Surface waters having quality that satisfy one (1) or more of the conditions established by Pennsylvania Code Title 25 Environmental Protection, Chapter 93, Water Quality Standards, § 93.4b(a).

Hotspots – Areas where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

Hydrograph – A graph representing the discharge of water versus time at a selected point in the drainage system.

Hydrologic Regime – The hydrologic cycle or balance that sustains quality and quantity of stormwater, baseflow, storage, and groundwater supplies under natural conditions.

Hydrologic Soil Group (HSG) – Infiltration rates of soils vary widely and are affected by subsurface permeability as well as surface intake rates. Soils are classified into four HSGs (A, B, C, and D) according to their minimum infiltration rate, which is obtained for bare soil after prolonged wetting. The NRCS defines the four groups and provides a list of most of the soils in the United States and their group classifications. The soils in the area of the development site may be identified from a soil survey report that can be obtained from local NRCS offices or conservation district offices. Soils become less pervious as the HSG varies from A to D (NRCS).

Impervious Surface (Impervious Area) – A surface that prevents the infiltration of water into the ground. Impervious surfaces (or areas) shall include, but not be limited to, roofs, additional indoor living spaces, patios, garages, storage sheds and similar structures, swimming pools, and any new streets or sidewalks. Decks, parking areas, and driveway areas are not counted as impervious areas if they do not prevent infiltration.

Impoundment – A retention or detention basin designed to retain stormwater runoff and release it at a controlled rate.

Infill – Development that occurs on smaller parcels that has remained undeveloped, but is within or in very close proximity to urban or densely developed areas. Infill development usually relies on existing infrastructure and does not require an extension of water, sewer, or other public utilities.

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 basin- A shallow impoundment that is designed to infiltrate stormwater into the soil. Infiltration basins are believed to have a high pollutant removal efficiency, and can also help recharge the groundwater, thus restoring baseflows to stream systems. Infiltration basins can be problematic at many sites because of stringent soil requirements.

Infiltration Structures – A structure designed to direct runoff into the underground water (e.g., French drains, seepage pits, seepage trenches, or infiltration galleries).

Inflow – The flow entering the stormwater management facility and/or BMP.

Inlet – The upstream end of any structure through which water may flow.

Intermittent Stream – A stream that flows only part of the time. Flow generally occurs for several weeks or months in response to seasonal precipitation or groundwater discharge.

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

Karst -A type of topography or landscape characterized by surface depressions, sinkholes, rock pinnacles/uneven bedrock surface, underground drainage and caves. Karst is formed on carbonate rocks, such as limestone or dolomite.

Land Development – Any of the following activities:

- (i) The improvement of one (1) lot or two (2) or more contiguous lots, tracts, or parcels of land for any purpose involving:
 - a. A group of two (2) 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
 - b. The division or allocation of land or space, whether initially or cumulatively, between or among two (2) or more existing or prospective occupants by means of, or for the purpose of, streets, common areas, leaseholds, condominiums, building groups, or other features;
- (ii) A subdivision of land;
- (iii) Development in accordance with Section 503(1.1) of the PA Municipalities Planning Code.

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, evaporate, 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.

Limiting Zone – A soil horizon or condition in the soil profile or underlying a stratum that includes one of the following:

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

Lot – A designated parcel, tract, or area of land established by a plat or otherwise as permitted by law and to be used, developed, or built upon as a unit.

Main Stem (Main Channel) – Any stream segment or other runoff conveyance used as a reach in the Wissahickon Creek Watershed hydrologic model.

Manning Equation (Manning Formula) – A method for calculation of velocity of flow (e.g., feet per second) and flow or discharge rate (e.g., cubic feet per second) in open channels based upon channel shape, roughness, depth of flow, and slope. “Open channels” may include closed conduits so long as the flow is not under pressure.

Maximum Design Storm – The maximum (largest) design storm that is controlled by the stormwater facility.

Municipal Engineer – A professional engineer (PE) licensed as such in the Commonwealth of Pennsylvania, duly appointed as the Engineer for a Municipality, planning agency, or joint planning commission.

Municipality – North Wales Borough, Montgomery County, Pennsylvania.

Natural Condition – Pre-development condition.

Natural Hydrologic Regime – See Hydrologic Regime.

Natural Recharge Area – Undisturbed surface area or depression where stormwater collects and a portion of which infiltrates and replenishes the underground and groundwater.

Nonpoint Source Pollution – Pollution that enters a waterbody 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 are not the result of a rainfall event or snowmelt.

Nonstructural Best Management Practice (BMPs) – Methods of controlling stormwater runoff quantity and quality, such as innovative site planning, impervious area and grading reduction, protection of natural depression areas, temporary ponding on site, and other techniques.

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

NRCS – Natural Resource Conservation Service of the U.S. Department of Agriculture (previously the Soil Conservation Service (SCS)).

Open Channel – A conveyance channel that is not enclosed.

Outfall – “Point source” as described in 40 CFR § 122.2 at the point where the Municipality's storm sewer system discharges to Surface Waters of the Commonwealth.

Outflow – The flow exiting the stormwater management facility and/or BMP.

Outlet – Points of water disposal to a stream, river, lake, tidewater, or artificial drain.

Parent Tract – The parcel of land from which a land development or subdivision originates, determined from the date of municipal adoption of this Ordinance.

Parking Lot Storage – Involves the use of parking areas as temporary impoundments with controlled release rates during rainstorms.

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

Pervious Area – Any area not defined as impervious.

Pipe – A culvert, closed conduit, or similar structure (including appurtenances) that conveys stormwater.

Post-construction – Period after construction during which disturbed areas are stabilized, stormwater controls are in place and functioning, and all proposed improvements in the approved land development plan are completed.

Pre-construction – Prior to commencing construction activities.

Pre-development Condition – Undeveloped/natural condition.

Pretreatment – Techniques employed in stormwater BMPs to provide storage or filtering to trap coarse materials and other pollutants before they enter the system, but not necessarily designed to meet the water quality volume control requirements (WQ_v) of Section 406. For example, any inlets draining to an infiltrating system should be sumped and trapped to prevent the system from becoming clogged with excess sediment.

Project Site – The specific area of land where any regulated activities in the Municipality are planned, conducted, or maintained.

Qualified Person- Any person licensed by the Pennsylvania Department of State or otherwise qualified by law to perform the work required by the Ordinance.

Rational Formula – A rainfall-runoff relation used to estimate peak flow; $Q = CiA$

Reach – Any stream segment or other runoff conveyance used in the Wissahickon Creek Watershed hydrologic model.

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

Recharge Volume (Re_v) – The volume of stormwater, in cubic feet, required to be infiltrated on site, where practicable and appropriate.

Reconstruction – Demolition and subsequent rebuilding of impervious surface.

Record Drawings – Construction drawings revised to represent the as-built conditions.

Recurrence Interval– See Return Period.

Redevelopment – Any development that requires demolition or removal of existing structures or impervious surfaces at a site and replacement with new impervious surfaces. Maintenance activities such as top-layer grinding and re-paving are not considered to be redevelopment. Interior remodeling projects and tenant improvements are also not considered to be redevelopment.

Regulated Activities – Any Earth Disturbance Activities or any activities that involve the alteration or development of land in a manner that may affect stormwater runoff.

Regulated Earth Disturbance Activity–Activity involving earth disturbance subject to regulation under 25 PA Code 92, 25 PA Code 102, or the Clean Streams Law.

Release Rate – The percentage of existing conditions peak rate of runoff from a site or subarea to which the proposed conditions peak rate of runoff must be reduced to protect downstream areas.

Repaving – Replacement of an impervious surface that does not involve reconstruction of an existing paved (impervious) surface (e.g., addition of a new layer of asphalt over an existing paved surface).

Replacement Paving – Reconstruction of and full replacement of an existing paved (impervious)

surface (e.g., demolition and removal of surface layer, foundation, and base course; and subsequent reconstruction of the entire sequence).

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 or greater magnitude can be expected to recur. For example, the 25-year return period rainfall would be expected to recur on the average of once every twenty-five (25) years, or conversely would have a four (4) percent chance of occurrence or exceedance in any given year.

Riparian Buffer – An area of land adjacent to a body of water and managed to maintain the integrity of stream channels and shorelines to 1) reduce the impact of upland sources of pollution by trapping, filtering, and converting sediments, nutrients, and other chemicals, and 2) supply food, cover and thermal protection to fish and other wildlife.

Riparian Forest Buffer – A type of riparian buffer that consists of permanent vegetation that is predominantly native trees, shrubs, and forbs along surface waters that is maintained in a natural state or sustainably managed to protect and enhance water quality, stabilize stream channels and banks, and separate land use activities from surface waters.

Riser – A vertical pipe extending from the bottom of a pond that is used to control the discharge rate from the pond for a specified design storm.

Road Maintenance – Earth disturbance activities within the existing road cross-section, such as grading and repairing existing unpaved road surfaces, cutting road banks, cleaning or clearing drainage ditches, and other similar activities.

Roof Drains – A drainage conduit or pipe that collects water runoff from a roof and leads it away from the structure.

Rooftop Detention – The temporary ponding and gradual release of stormwater falling directly onto flat roof surfaces using controlled-flow roof drains in building designs.

Runoff – Any part of precipitation that flows over the land surface.

SALDO – Subdivision and Land Development Ordinance.

Sediment -Soils or other materials transported by surface water as a product of erosion.

Sediment Basin – A barrier, dam, or retention or detention basin located and designed in such a way as to retain rock, gravel, sand, silt, clay or other material transported by water during construction.

Sediment Pollution – The placement, discharge, or any other introduction of sediment into the waters of the Commonwealth.

Sedimentation – The process by which mineral or organic matter is accumulated or deposited by the movement of water or air.

Seepage Pit/Seepage Trench – An area of excavated earth filled with loose stone or similar coarse material into which surface water is directed for infiltration into the underground water.

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.

Shallow Concentrated Flow – Stormwater runoff flowing in shallow, defined ruts prior to entering a defined channel or waterway.

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

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).

Source Water Protection Areas (SWPA) – The zones through which contaminants, if present, are likely to migrate and reach drinking water wells or surface water intakes.

Spillway – A conveyance that is used to pass the peak discharge of the maximum design storm that is controlled by the stormwater facility.

Standard Grading Permit - The permit required to be issued by the Municipality before any grading activities are allowed to commence on a site within the Municipality. Such permits typically require information including, but not limited to, a contour map of the site showing existing and proposed contours, a plot plan showing streams and drainage courses on or within fifty (50) feet of the site, drainage structures, neighboring streets and alleys, trees, and floodplain zones on or within fifty (50) feet of the site, soil classifications.

State Water Quality Requirements – The regulatory requirements to protect, maintain, reclaim, and restore water quality under Title 25 of the Pennsylvania Code and the Clean Streams Law.

Storage Indication Method – A reservoir routing procedure based on solution of the continuity equation (inflow minus outflow equals the change in storage) with outflow defined as a function of storage volume.

Storm Frequency – The number of times that a given storm “event” occurs or is exceeded on average in a stated period of years (see Return Period).

Storm Sewer – A system of pipes and/or open channels that convey intercepted runoff and stormwater from other sources but exclude domestic sewage and industrial wastes.

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

Stormwater Management District – Those subareas of a watershed in which some type of detention is required to meet the plan requirements and the goals of Act 167.

Stormwater Management Facility (SMF) – Any structure, natural or man-made, that, due to its condition, design, or construction, conveys, stores, or otherwise affects stormwater runoff quality, rate, or quantity. Typical stormwater management facilities include, but are not limited to, detention and infiltration basins, open channels, storm sewers, pipes, and infiltration structures.

Stormwater Management Plan – The watershed plan, known as the “Wissahickon Creek Watershed Act 167 Stormwater Management Plan,” for managing those land use activities that will influence stormwater runoff quality and quantity, and that would impact the Wissahickon Creek Watershed adopted by Montgomery and Philadelphia Counties as required by the Act of October 4, 1978, P.L. 864 (Act 167).

Stormwater Management Site Plan (SWM Site Plan) –The plan prepared by the Applicant or the Applicant’s representative indicating how stormwater runoff will be managed a project site to meet the requirements of this Ordinance. Small Project SWM Site Plans may be prepared for certain projects.

Stream – A natural watercourse.

Stream Buffer – The land area adjacent to each side of a stream essential to maintaining water quality (see Buffer).

Stream Enclosure – A bridge, culvert, or other structure in excess of one hundred (100) feet in length upstream to downstream, which encloses a regulated water of the Commonwealth.

Subarea (Subwatershed) – The smallest drainage unit of a watershed for which stormwater management criteria have been established in the stormwater management plan.

Subdivision – The division or redivision of a lot, tract, or parcel of land by any means into two (2) or more lots, tracts, parcels, or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs or devisees, transfer of ownership, or building or lot development; provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than ten (10) acres not involving any new street or easement of access or any residential dwelling shall be exempted. As defined in The Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247.

Surface Waters – Perennial and intermittent streams, rivers, lakes, reservoirs, ponds, wetlands, springs, natural seeps, and estuaries, excluding water at facilities approved for wastewater treatment, such as wastewater treatment impoundments, cooling water ponds, and constructed wetlands used as part of a wastewater treatment process.

Swale – A low-lying stretch of land that gathers or carries surface water runoff.

Timber Operations – See Forest Management.

Time-of-concentration (Tc) – The time required for surface runoff to travel from the most remote point of a watershed to the watershed outlet.

Top-of-bank – Highest point of elevation in a stream channel cross-section at which a rising water level just begins to flow outside of the channel and over the floodplain.

Undeveloped Condition – Natural condition (see also Pre-development Condition).

USDA - United States Department of Agriculture.

Vernal Pond – Seasonal depressional wetlands that are covered by shallow water for variable periods from winter to spring but may be completely dry for most of the summer and fall.

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

Water Volume Control (see Section 406) – The storage capacity, in acre-feet, required to capture and treat a portion of stormwater runoff from the developed or redeveloped areas of the site.

Waters of the Commonwealth – Rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, ponds, springs and 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.

Watershed – Region or area drained by a river, watercourse or other surface water of the Commonwealth.

Wellhead – 1. A structure built over a well, 2. The source of water for a well.

Wellhead Protection Area – The surface and subsurface area surrounding a water supply well, well field, or spring supplying a public water system through which contaminants are reasonably likely to move toward and reach the water source.

Wet Basin – Pond for urban runoff management that is designed to detain urban runoff and always contains water.

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, including swamps, marshes, bogs, and similar areas.

Woods – A natural groundcover with more than one (1) viable tree of a DBH of six (6) inches or greater per fifteen hundred (1,500) square feet which existed for a minimum of three (3) consecutive years.

ARTICLE III-STORMWATER MANAGEMENT (SWM) SITE PLAN REQUIREMENTS

Section 301. SWM Site Plan Contents

The SWM Site Plan shall consist of a general description of the project, including calculations, maps, and plans. A note on the maps shall refer to the associated computations and Erosion and Sediment (E&S) Control Plan by title and date. The cover sheet of the computations and E&S Control Plan shall refer to the associated maps by title and date. All SWM Site Plan materials shall be submitted to the Municipality in a format that is clear, concise, legible, neat, and well organized; otherwise, the Municipality may not accept the SWM Site Plan for review.

The following items shall be included in the SWM Site Plan:

- A. Appropriate sections from the municipal's Subdivision and Land Development Ordinance, and other applicable local ordinances, shall be followed in preparing the SWM Site Plans. In instances where the Municipality lacks Subdivision and Land Development regulations, the content of SWM Site Plans shall follow the county's Subdivision and Land Development Ordinance.
- B. The Municipality shall not approve any SWM Site Plan that is deficient in meeting the requirements of this Ordinance. At its sole discretion and in accordance with this Article, when a SWM Site Plan is found to be deficient, the municipality may either disapprove the submission and require a resubmission, or in the case of minor deficiencies, the Municipality may accept submission of modifications.
- C. Provisions for permanent access or maintenance easements for all physical SWM BMPs, such as ponds and infiltration structures, as necessary to implement the Operation and Maintenance (O&M) Plan discussed in paragraph E.9 below.
- D. The following signature block for the municipality:
“(Municipal official or designee), on this date (Signature date), has reviewed and hereby certifies that the SWM Site Plan meets all design
- E. General
 - 1. General description of the project.
 - 2. All stormwater management facilities must be located on a plan and detailed description of proposed stormwater management techniques, including drainage and construction specifications of the materials to be used for the stormwater management facilities.
 - 3. Complete hydrologic, hydraulic, and structural computations for all stormwater management facilities.
 - 4. An erosion and sediment control plan. The applicant is required to obtain a letter of approval or adequacy from the Conservation District for the Erosion and Sediment

Control Plan.

5. A general description of proposed nonpoint source pollution controls.
 6. The SWM Site Plan Application and completed fee schedule form and associated fee.
 7. The SWM Site Plan Checklist.
 8. The overall stormwater management concept for the project.
 9. A determination of site conditions in accordance with the BMP Manual. A detailed site evaluation shall be completed for projects proposed in areas of carbonate geology or karst topography, and other environmentally sensitive areas, such as brownfields.
 10. Stormwater runoff design computations and documentation as specified in this Ordinance, or as otherwise necessary to demonstrate that the maximum practicable measures have been taken to meet the requirements of this Ordinance, including the recommendations and general requirements in Section 301.
 11. Expected project time schedule.
 12. The effect of the project (in terms of runoff volumes, water quality, and peak flows) on surrounding properties and aquatic features and on any existing stormwater conveyance system that may be affected by the project.
 13. Plan and profile drawings of all SWM BMPs, including drainage structures, pipes, open channels, and swales.
 14. SWM Site Plan shall show the locations of existing and proposed on-lot wastewater facilities and water supply wells.
 15. The SWM Site Plan shall include an O&M Plan for all existing and proposed physical stormwater management facilities. This plan shall address long-term ownership and responsibilities for O&M as well as schedules and costs for O&M activities.
- F. Maps. Prepare an Existing Resource and Site Analysis Map (ERSAM) showing environmentally sensitive areas including, but not limited to, steep slopes, ponds, lakes, streams, wetlands, hydric soils, vernal pools, stream buffers, floodplains, hydrologic soil groups, closed topographic depressions and recharge areas. Land development, existing recharge areas, and any other requirements specifically outlined in the municipal SALDO also shall be included.

Map(s) of the project area shall be submitted on 24-inch x 36-inch sheets and/or shall be prepared in a form that meets the requirements for recording at the offices of the Recorder of Deeds of Montgomery County. If the SALDO has more stringent criteria than this Ordinance, then the more stringent criteria shall apply. The contents of the map(s) shall include, but not be limited to:

1. The location of the project relative to highways, municipal boundaries, or other identifiable landmarks.
2. Existing contours at intervals of two (2) feet or less. In areas of slopes greater than 10 percent, 5-foot contour intervals may be used.
3. Existing streams, lakes, ponds, or other waters of the Commonwealth within the project area.
4. Other physical features including flood hazard boundaries, stream buffers, existing drainage courses, areas of natural vegetation to be preserved, and the total extent of the upstream area draining through the site.
5. The locations of all existing and proposed utilities, sanitary sewers, and water lines within fifty (50) feet of property lines.
6. A map, which may be done as an overlay, showing soil names and boundaries.
7. Limits of earth disturbance, including the type and amount of impervious area that is proposed.
8. Proposed structures, roads, paved areas, and buildings.
9. Final contours at intervals of two (2) feet or less. In areas of steep slopes (greater than 10 percent), 5-foot contour intervals may be used.
10. The name of the development, the name and address of the owner of the property, and the name of the individual or firm preparing the plan.
11. The date of submission.
12. A graphic and written scale of one (1) inch equals no more than fifty (50) feet; for tracts of twenty (20) acres or more, the scale shall be one (1) inch equals no more than one hundred (100) feet.
13. A north arrow.
14. The total tract boundary and size with distances marked to the nearest foot and bearings to the nearest degree.
15. Existing and proposed land use(s).

16. A key map showing all existing man-made features beyond the property boundary that would be affected by the project.
17. Location of all open channels.
18. Overland drainage patterns and swales.
19. A 15-foot wide access easement around all stormwater management facilities to provide ingress to and egress from a public right-of-way, where necessary, or appropriate at discretion of the Municipality.
20. The location of all erosion and sediment control facilities.
21. A note on the plan indicating the location and responsibility for maintenance of stormwater management facilities that would be located off site. All off-site facilities shall meet the performance standards and design criteria specified in this Ordinance located within this Municipality.
22. A statement, signed by the Applicant, acknowledging that any revision to the approved drainage plan must be approved by the Municipality, and that a revised erosion and sediment control plan must be submitted to the Municipality and County Conservation District for approval.
23. The following signature block for the Design Engineer:

“I, (Design Engineer), on this date (date of signature); hereby certify that this drainage plan meets all requirements of the Department of Environmental Protection’s (DEP’s) regulations and this Ordinance.”

G. Supplemental Information to be Submitted to the Municipality

1. The following information shall be submitted by the Applicant and shall include:
 - a. The overall stormwater management concept for the project designed.
 - b. Stormwater runoff computations required by this Ordinance.
 - c. Stormwater management techniques to be applied both during and after development.
 - d. Expected project time schedule.
 - e. Development stages or project phases, if so proposed.
 - f. An Operations and Maintenance (O&M) Plan in accordance with Section 702 of this Ordinance.
2. A description of the effect of the project (in terms of runoff volumes and peak flows) on adjacent properties and on any existing municipal stormwater collection system that may receive runoff from the project site.

3. An Approved Highway Occupancy Permit from the Pennsylvania Department of Transportation (PennDOT) District office when drainage towards PennDOT property is proposed.

H. Stormwater Management Facilities

1. When infiltration measures such as seepage pits, beds, or trenches are used, the locations of existing and proposed septic tank infiltration areas and wells must be shown.
2. All calculations, assumptions, and criteria used in the design of the stormwater management facilities must be shown.

Section 302. Plan Submission

The Municipality requires submission of a complete SWM Site Plan, as specified in this Ordinance.

- A. Proof of application or documentation of required permit(s) or approvals for the programs listed below shall be part of the plan:
 1. National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges from Construction Activities, when required.
 2. Any other permit under applicable state or federal regulations.
- B. Six (6) copies of the SWM Site Plan shall be submitted and distributed as follows:
 1. Three (3) copies to the Municipality accompanied by the requisite fees, as specified in this Ordinance.
 2. Two (2) copies to the County Conservation District.
 3. The Montgomery County Planning Commission will be notified by letter regarding submission of the SWM Plan to the municipality and MCCD, and that no SWM Plan need be submitted to MCPC.
- C. If any submissions to the agencies listed above are found to be incomplete, the municipalities have the option of notifying the applicant and requesting specific information missing from the submission. The application review clock will not start until the municipality has determined that the submission is complete.
- D. Additional copies shall be submitted as requested by the Municipality, County Conservation District, or DEP.

Section 303. SWM Site Plan Review

- A. The SWM Site Plan must be consistent with this Ordinance. If any submissions are found to be incomplete, the municipalities have the option of notifying the applicant and requesting

specific information missing from the submission. The application review clock will not start until the municipality has determined that the submission is complete.

- B. The Municipality will notify the applicant in writing within 45 days whether the SWM Site Plan is approved or disapproved. If the SWM Site Plan involves a Subdivision and Land Development Plan, the notification period is 120 days. If a longer notification period is provided by other statute, regulation, or ordinance, the applicant will be so notified by the Municipality. If the Municipality disapproves the SWM Site Plan, the Municipality shall cite the reasons for disapproval in writing.

Section 304. Modification of SWM Site Plans

A modification to a submitted SWM Site Plan that involves a change in BMPs or techniques, or that involves the relocation or redesign of BMPs, or that is necessary because soil or other conditions are not as stated on the SWM Site Plan as determined by the Municipality shall require modification and resubmission of the SWM Site Plan in accordance with this Article.

Section 305. Resubmission of Inconsistent or Noncompliant SWM Plans

A disapproved SWM Site Plan may be resubmitted, with the revisions addressing the municipality's concerns, to the municipality in accordance with this Article. The applicable review fees must accompany a resubmission of a disapproved SWM Site Plan.

Section 306. Authorization to Construct and Term of Validity

The Municipality's approval of an SWM Site Plan authorizes the regulated activities contained in the SWM Site Plan for a maximum term of validity of 5 years following the date of approval. The Municipality may specify a term of validity shorter than 5 years in the approval for any specific SWM Site Plan. Terms of validity shall commence on the date the Municipality signs the approval for an SWM Site Plan. If an approved SWM Site Plan is not completed according to Section 407 within the term of validity, then the Municipality may consider the SWM Site Plan disapproved and may revoke any and all permits. SWM Site Plans that are considered disapproved by the Municipality shall be resubmitted in accordance with Section 405 of this Ordinance.

Section 307. As-Built Plans, Completion Certificate, and Final Inspection

- A. The developer shall be responsible for providing as-built plans of all SWM BMPs included in the approved SWM Site Plan. The as-built plans and an explanation of any discrepancies with the construction plans shall be submitted to the Municipality.
- B. The as-built submission shall include a certification of completion signed by a qualified professional verifying that all permanent SWM BMPs have been constructed according to the approved plans and specifications. The latitude and longitude coordinates for all permanent SWM BMPs must also be submitted, at the central location of the BMPs. If any licensed qualified professionals contributed to the construction plans, then a licensed qualified professional must sign the completion certificate.

- C. After receipt of the completion certification by the Municipality, the Municipality may conduct a final inspection.

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ARTICLE IV - STORMWATER MANAGEMENT

Section 401. General Requirements

- A. For any of the activities regulated by this Ordinance, unless preparation of a Stormwater Management (SWM) Site Plan is specifically exempted, the preliminary or final approval of subdivision and/or land development plans, the issuance of any building or occupancy permit, the commencement of any earth disturbance activity shall not proceed until the Property Owner or Applicant or his/her agent has received written approval from the Municipality of a SWM Site Plan that demonstrates compliance with the requirements of this Ordinance, and a written approval of an adequate Erosion and Sediment (E&S) Control Plan from the Municipality or County Conservation District, when and as required.
- B. SWM Site Plan approved by the municipality shall be on-site throughout the duration of the regulated activity.
- C. The municipality may, after consultation with the Department of Environmental Protection (DEP), approve measures for meeting the state water quality requirements other than those in this Ordinance, provided that they meet the minimum requirements of, and do not conflict with, state law including but not limited to the Clean Streams Law.
- D. For all regulated earth disturbance activities, Erosion and Sediment (E&S) control Best Management Practices (BMPs) shall be designed, implemented, operated and maintained during the Regulated Earth Disturbance activities (e.g., during construction) to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code and the Clean Streams Law.
- E. Impervious areas:
 - 1. The measurement of impervious areas shall include all of the impervious areas in the total proposed development even if development is to take place in stages.
 - 2. For development taking place in stages, the entire development plan must be used in determining conformance with this Ordinance.
 - 3. For projects that add impervious area to a parcel, Sections 403 through 408 shall apply to the total impervious area within the limits of earth disturbance.
- F. Stormwater discharges onto adjacent property shall not be created, increased, decreased, relocated, or otherwise altered without written notification of the adjacent property owner(s) by the applicant. Such stormwater discharges shall be subject to the requirements of this Ordinance.
- G. All Regulated Activities shall include such measures as necessary to:
 - 1. Protect health, safety and property;
 - 2. Meet the water quality goals of this Ordinance by implementing measures to:
 - a. Minimize disturbance to floodplains, wetlands, and wooded areas.

- b. Maintain or extend riparian buffers.
 - c. Avoid erosive flow conditions in natural flow pathways.
 - d. Minimize thermal impacts to waters of the Commonwealth.
 - e. Disconnect impervious surfaces by directing runoff to pervious areas, wherever possible.
- 3. To the maximum extent practicable, incorporate the techniques for Low Impact Development Practices described in the *Pennsylvania Stormwater Best Management Practices Manual* (BMP Manual) or the Philadelphia Stormwater Management Guidance Manual.
 - 4. Incorporate methods described in the Pennsylvania Stormwater Best Management Practices Manual (BMP Manual).
- H. The design of all facilities over karst shall include an evaluation of measures to minimize adverse effects.
 - I. Infiltration BMPs should be dispersed on site, made as shallow as practicable, and located to maximize use of natural onsite infiltration features while still meeting the other requirements of this Ordinance.
 - J. Normally dry, open top, storage facilities should completely drain both the volume control and rate control capacities over a period of time not less than 24 and not more than 72 hours from the end of the design storm..
 - K. Design storm volumes and precipitation intensities to be used in the analysis of discharge or runoff should be obtained from the Precipitation-Frequency Atlas of the United States, Atlas 14, Volume 2, Version 3.0, U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Hydrometeorological Design Studies Center, Silver Springs, Maryland. NOAA's Atlas 14 can be accessed at: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.
 - L. For all regulated activities, SWM BMPs shall be designed, implemented, operated, and maintained to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code, the Clean Streams Law, and the Storm Water Management Act.
 - M. Various BMPs and their design standards are listed in the BMP Manual¹.

Section 402. Permit Requirements by Other Governmental Entities

Approvals issued and actions taken under this Ordinance do not relieve the Applicant of the responsibility to secure required permits or approvals for activities regulated by any other code, law, regulation or ordinance.

Section 403. Erosion and Sediment Control During Regulated Earth Disturbance Activities

- A. Additional erosion and sediment control standards and criteria are recommended to be applied where infiltration BMPs are proposed. They shall include the following:
 - 1. These areas shall be protected from sedimentation and compaction during the construction phase.
 - 2. BMPs shall not be constructed, nor the areas receive runoff, until the entire drainage areas tributary to the infiltration BMPs have achieved final stabilization.

Section 404. Nonstructural Project Design to Minimize Stormwater Impacts

The design of all regulated activities should include the following to minimize stormwater impacts: *(See Appendix C for a Nonstructural Project Design Checklist.)*

- A. The Applicant should find practicable alternatives to the surface discharge of stormwater, the creation of impervious surfaces, and the degradation of waters of the Commonwealth and must maintain as much as possible the natural hydrologic regime of the site.
- B. An alternative is practicable if it is available and capable of implementation after taking into consideration existing technology and logistics in light of overall project purposes and other municipal requirements.

Section 405. Groundwater Recharge Requirements

- A. Infiltration Best Management Practices (BMPs) shall meet the following minimum requirements unless the site qualifies for an exemption from the infiltration requirements of this ordinance as listed in Section 106:
 - 1. Infiltration BMPs intended to receive runoff from developed areas shall be selected based on suitability of soils and site conditions and shall be constructed on soils that have the following characteristics:
 - a. A minimum soil depth of twenty-four (24) inches between the bottoms of the infiltration BMPs and bedrock or other limiting zones.
 - b. An infiltration rate sufficient to accept the additional stormwater load and dewater completely as determined by field tests conducted by the Applicant's Qualified Person.
 - c. All open-air infiltration facilities shall be designed to completely infiltrate the recharge (infiltration) volume (Re_v) within three (3) days (72 hours) from the end of the design storm.
 - d. All subsurface and contained facilities such as capture-and-reuse systems must have storage available equivalent to the Water Volume Control amount within three (3) days (72 hours) from the end of the design storm.
 - e. Pretreatment (See Section 202) shall be provided prior to infiltration.

2. The size of the infiltration facility shall be based upon the following volume criteria:

Where practicable and appropriate the recharge volume shall be infiltrated on site. The recharge volume shall be equal to one (1.0) inch of runoff (I) over all proposed impervious surfaces.

The Re_v required shall be computed as:

$$Re_v = (1/12) * (I)$$

Where:

Re_v = Recharge Volume (cubic feet)

I = Impervious Area within the limits of earth disturbance (square feet)

An asterisk (*) in equations denotes multiplication.

- B. Soils - A detailed soils evaluation of the project site shall be developed by the Applicant to determine the suitability of infiltration facilities. The evaluation shall be performed by a Qualified Person, and, at a minimum, address soil permeability, depth to bedrock, and subgrade stability. The general process for designing an infiltration BMP shall be:
 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 sub-grade stability; infiltration must be implemented if these tests are not completed.
 2. Perform field tests, such as double ring infiltrometer or hydraulic conductivity tests (at the level of the proposed infiltration surface) to determine the appropriate hydraulic conductivity rate. Percolation tests are not accepted for design purposes.
 3. Design the infiltration structure for the required recharge volume (Re_v) based on field tests at the elevation of the proposed infiltration surface.
 4. If on-lot infiltration structures are proposed by the Applicant's Qualified Person, the Applicant must demonstrate to the Municipality that the soils are conducive to infiltrate on the lots identified.
 5. The Applicant must install an impermeable liner in detention basins where the possibility of groundwater contamination exists. A detailed hydrogeologic investigation may be required by the Municipality.

Section 406. Water Volume Control Requirements

The green infrastructure and low impact development practices provided in the BMP Manual shall be utilized for all regulated activities to the maximum extent practicable. Water Volume Controls shall be implemented using the *Design Storm Method* in Subsection A or the *Simplified Method* in Subsection B below. For regulated activity areas equal to or less than one (1) acre that do not require hydrologic routing to design the stormwater facilities, this Ordinance establishes no preference for

either methodology; therefore, the applicant may select either methodology on the basis of economic considerations, the intrinsic limitations on applicability of the analytical procedures associated with each methodology, and other factors. All regulated activities greater than one (1) acre must use the Design Storm Method.

- A. The *Design Storm Method* (CG-1 in the BMP Manual) is applicable to any size of regulated activity. This method requires detailed modeling based on site conditions.
1. The post-development total runoff volume for all storms equal to or less than the 2-year, 24-hour storm event shall not be increased.
 2. For modeling purposes:
 - a. Existing (predevelopment) nonforested pervious areas must be considered meadow.
 - b. Twenty (20) percent of existing impervious area, when present, shall be considered meadow in the model for existing conditions.
- B. The *Simplified Method* (CG-2 in the BMP Manual) provided below is independent of site conditions and should be used if the *Design Storm Method* is not followed. This method is not applicable to regulated activities greater than one (1) acre, or for projects that require design of stormwater storage facilities. For new impervious surfaces:
1. Stormwater facilities shall capture at least the first two (2) inches of runoff from all new impervious surfaces. (*Note: An asterisk (*) in equations denotes multiplication.*)

Volume (cubic feet) = (2/12) * Impervious Surfaces (square feet)
 2. At least the first one (1) inch of runoff from new impervious surfaces shall be permanently removed from the runoff flow-- i.e., it shall not be released into the surface waters of the Commonwealth. Removal options include reuse, evaporation, transpiration, and infiltration.

Volume (cubic feet) = (1/12) * Impervious Surfaces (square feet)
 3. Wherever possible, infiltration facilities should be designed to accommodate infiltration of the entire permanently removed runoff; however, in all cases at least the first half (0.5) inch of the permanently removed runoff should be infiltrated.
 4. This method is exempt from the requirements of Section 408, Peak Rate Controls.

Section 407. Stream Bank Erosion Requirements (Channel Protection)

If a perennial or intermittent stream passes through the site, the Applicant shall create a riparian buffer extending a minimum of fifty (50) feet to either side of the top-of-bank of the channel. The buffer area shall be established and maintained in an undisturbed state. This buffer area may be maintained as a meadow with minimal mowing of the grassed area, or as a forested buffer, being planted with appropriate native vegetation (refer to Appendix B of the BMP Manual for plant lists). If the applicable rear or side yard setback is less than fifty (50) feet, the buffer width may be reduced to twenty-five (25) percent of the setback to a minimum of ten (10) feet. If an existing buffer is legally prescribed (i.e., deed, covenant, easement, etc.) and it exceeds the requirements of this Ordinance, the

existing buffer shall be maintained. This does not include lakes or wetlands.

Applicants shall adhere to the following Stream Bank Erosion/Channel Protection Requirements:

- A. In addition to the control of water quality volume (in order to minimize the impact of stormwater runoff on downstream stream bank erosion), the primary requirement is to design a BMP to detain the proposed conditions 2-year, 24-hour storm event to the existing conditions 1-year flow using the SCS Type II distribution. Additionally, provisions shall be made (such as adding a small orifice at the bottom of the outlet structure or a sand filter) so that the proposed conditions 1-year, 24-hour storm event takes a minimum of twenty-four (24) hours to drain from the facility from a point when the maximum volume of water from the 1-year, 24-hour storm event is captured (i.e., 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 water volume control orifice is at the invert of the facility).
- B. The minimum orifice size in the outlet structure to the BMP shall be three (3) inches in diameter, where possible, and a trash rack shall be installed to prevent clogging. On sites with small drainage areas contributing to this BMP that do not provide enough runoff volume to allow a 24-hour attenuation with the 3-inch orifice, the calculations shall be submitted showing this condition. Orifice sizes less than three (3) inches can be utilized, provided that the design will prevent clogging of the intake. It is recommended that the design, to accommodate maintenance, include a replaceable and/or porous media filter cartridge.

Section 408. Stormwater Peak Rate Control and Management Districts

- A. The Wissahickon Creek Watershed has been divided into stormwater management districts as shown on the Management District Map (Ordinance Appendix A).

The peak rate requirements specified in Table 408.1 below shall be implemented in addition to all other applicable requirements.

Standards for managing peak rates of runoff from each subarea in the Wissahickon Creek Watershed for the 2-, 5-, 10-, 25-, 50-, and 100-year storm events are shown in Table 408.1. Development sites located in each of the management districts must control proposed condition runoff rates to existing condition runoff rates for the design storms in accordance with Table 408.1.

For any areas not shown on the release rate maps, the post-development discharge rates shall not exceed the pre-development discharge rates.

TABLE 408.1

**PEAK RATE CONTROL STANDARDS BY STORMWATER MANAGEMENT DISTRICT
IN THE WISSAHICKON CREEK WATERSHED**

District	Proposed Condition Design Storm		Existing Condition Design Storm
A	2-year	Reduce to	1-year
	5-year		5-year
	10-year		10-year
	25-year		25-year
	50-year		50-year
	100-year		100-year
B	2-year	Reduce to	1-year
	5-year		2-year
	10-year		5-year
	25-year		10-year
	50-year		25-year
	100-year		50-year
C*	Conditional Direct Discharge District		

In District C, development sites that can discharge directly to the Wissahickon Creek Main Channel and to the Schuylkill River main channel without use of City infrastructure may do so without control of proposed conditions peak rate of runoff.

Projects that are required to obtain a NPDES Permit for stormwater discharges associated with construction activities are required to show no increase in peaks from existing conditions.

When adequate capacity in the downstream system does not exist and will not be provided through improvements, the proposed conditions peak rate of runoff must be controlled to the Predevelopment Conditions peak rate as required in District A provisions for the specified Design Storms. The Predevelopment Condition for new development is the existing condition. For redevelopment purposes in Philadelphia County, the Predevelopment Condition shall be determined according to the procedures found in the Philadelphia Stormwater Guidance Manual.

- B. General - Proposed condition rates of runoff from any regulated activity shall not exceed the peak release rates of runoff from existing conditions for the design storms specified on the Stormwater Management District Watershed Map (Ordinance Appendix A).
- C. District Boundaries - The boundaries of the stormwater management districts are shown on an official map that is available for inspection at the municipal and County Planning offices. A copy of the official map at a reduced scale is included as Ordinance Appendix A. The exact location of the stormwater management district boundaries as they apply to a given development site shall be determined by mapping the boundaries using the 2-foot topographic contours (or most accurate data required) provided as part of the drainage plan.
- D. Sites Located in More than One (1) District - For a proposed development site located within two (2) or more stormwater management districts, the peak discharge rate from any subarea shall meet the management district criteria in which the discharge is located.

- E. Off-site Areas - Off-site areas that drain through a proposed development site are not subject to release rate criteria when determining allowable peak runoff rates. However, on-site drainage facilities shall be designed to safely convey off-site flows through the development site.
- F. Site Areas - Where the site area to be impacted by a proposed development activity differs significantly from the total site area, only the proposed impact area utilizing stormwater management measures shall be subject to the management district criteria. In other words, unimpacted areas bypassing the stormwater management facilities would not be subject to the management district criteria.
- G. Alternate Criteria for Redevelopment Sites - For redevelopment sites, one of the following minimum design parameters shall be accomplished, whichever is most appropriate for the given site conditions as determined by North Wales Borough;
 - 1. Meet the full requirements specified by Table 408.1 and Sections 408.A through 408.F.
or
 - 2. Reduce the total impervious surface on the site by at least twenty (20) percent based upon a comparison of existing impervious surface to proposed impervious surface.
- H. Stormwater Control Measures which increase storage or infiltration volume, and which are not associated with new land development or redevelopment activity that increases runoff volume above existing levels, are exempt from the peak rate requirements of this ordinance, so long as peak outflow is not increased.

Section 409. Calculation Methodology

- A. Stormwater runoff from all development sites with a drainage area of greater than 200 acres shall be calculated using a generally accepted calculation technique that is based on the NRCS soil cover complex method. The Qualified Person must consult with the municipality to gain approval of design methods prior to design.

Table 409.1 summarizes acceptable computation methods and the method selected by the Qualified Person shall be based on the individual limitations and suitability of each method for a particular site. The Municipality may allow the use of the Rational Method to estimate peak discharges from drainage areas that contain less than 200 acres. The Soil Cover Complex Method shall be used for drainage areas greater than 200 acres.

TABLE 409.1
Acceptable Computation Methodologies For
Stormwater Management Plans

Montgomery County Portion of the Watershed

<u>METHOD</u>	<u>METHOD DEVELOPED BY</u>	<u>APPLICABILITY</u>
WINTR-20	USDA NRCS	Applicable where use of full hydrology computer model is desirable or necessary.
WINTR-55	USDA NRCS	Applicable for land development plans within limitations described in TR-55.
HEC-HMS	US Army Corps of Engineers	Applicable where use of full hydrologic computer model is desirable or necessary.
Rational Method or commercial computer package based on Rational Method)	Emil Kuichling(1889)	For sites less than 200 acres and with times of concentration less than 60 minutes ($t_c < 60 \text{ min}$), or as approved by the Municipality and/or Municipal Engineer
Other Methods	Varies	Other computation methodologies approved by the Municipality and/or Municipal Engineer.

**Note: Successors to the above methods are also acceptable.*

- B. If a hydrologic computer model such as HydroCAD or HEC-HMS is used for stormwater runoff calculations, then the duration of rainfall shall be 24 hours. The rainfall distribution should reference NRCS Type II.
- C. For the purposes of existing conditions flow rate determination, undeveloped land shall be considered as "meadow", unless the natural ground cover generates a lower curve number or Rational 'C' value (i.e., forest).
- D. Times-of-concentration for overland flow shall be calculated using the methodology presented in Chapter 3 of Urban Hydrology for Small Watersheds, NRCS, TR-55 (as amended or replaced from time to time by NRCS). Times-of-concentration for channel and pipe flow shall be computed using flow velocities as determined by Manning's equation.
- E. The Manning equation is preferred for 1-D, gradually-varied, open channel flow. In other cases, appropriate, applicable methods should be applied, however, early coordination with the municipality is necessary.
- F. Outlet structures for stormwater management facilities shall be designed to meet the performance standards of this Ordinance using the generally accepted hydraulic analysis technique or method of the Municipality.
- G. The design of any stormwater detention facilities intended to meet the performance standards of this Ordinance shall be verified by routing the design storm hydrograph through these facilities using the Storage-Indication Method. For drainage areas greater than 200 acres in size, the design storm hydrograph shall be computed using a calculation method that produces a full hydrograph. The Municipality may approve the use of any generally accepted full hydrograph approximation technique that shall use a total runoff volume that is consistent with the volume from a method that produces a full hydrograph.

ARTICLE V - INSPECTIONS

Section 501. Inspections

- A. The Municipality may inspect all phases of the installation of the Best Management Practices (BMPs) and/or stormwater management facilities as deemed appropriate by the Municipality.
- B. During any stage of the work, if the Municipality determines that the BMPs and/or stormwater management (SWM) facilities are not being installed in accordance with the approved SWM plan, the Municipality, may suspend or revoke, in whole or in part, any existing permits or other approvals and issue a cease and desist order until a revised SWM Site Plan is submitted and approved, as specified in this Ordinance, and until the deficiencies are corrected.
- C. A final inspection of all BMPs and/or SWM facilities may be conducted by the Municipality to confirm compliance with the approved Stormwater Management Site Plan prior to the issuance of any occupancy permit.
- D. The developer shall be responsible for providing as-built plans of all SWM BMPs included in the approved SWM Site Plan. The as-built plans and an explanation of any discrepancies, which were reviewed and received approval by the Municipality, shall be submitted to the Municipality.
- E. The as-built submission shall include a certification of completion signed and sealed by a Qualified Person verifying that all permanent SWM BMPs have been constructed according to the approved plans and specifications. If any licensed Qualified Persons contributed to the construction plans, they must sign and seal the completion certificate.
- F. Final plans based upon the Record Drawings must be submitted to the Municipality for the project to be eligible for the issuance of a Certificate of Occupancy.

ARTICLE VI-FEES AND EXPENSES

Section 601. Municipality SWM Site Plan Review and Inspection Fees

Fees may be established by the Municipality to defray costs incurred by the Municipality. All fees shall be paid by the Applicant. A fee schedule shall be established by resolution of the municipal Governing Body, which may be based on the size of the Regulated Activity or the Municipality's costs for processing SWM Site Plans and conducting inspections. The Municipality may periodically update the fee schedule to ensure that its costs are adequately reimbursed.

Section 602. Expenses Covered by Fees

The fees authorized by this Ordinance may at a minimum cover:

- A. Administrative costs.
- B. Review of the SWM Site Plan by the Municipality.
- C. Site inspections.
- D. Inspection of SWM facilities and drainage improvements during construction.
- E. Final inspection at the completion of the construction of the SWM facilities and drainage improvements presented in the SWM Site Plan.
- F. Any additional work required to enforce any permit provisions, correct violations, and assure proper completion of necessary remedial actions.
- G. Attendance at meetings.

ARTICLE VII-MAINTENANCE RESPONSIBILITIES

Section 701. Performance Guarantee

- A. For subdivisions and land developments, the Applicant shall provide a financial guarantee to the Municipality for the timely installation and proper construction of all stormwater management facilities as required by the approved SWM Site Plan. The amount of the guarantee shall be equal to or greater than the full construction cost of the required controls.
- B. For other regulated activities, the Municipality may require a financial guarantee from the Applicant.
- C. For all SWM Site Plans, the applicant shall provide a financial guarantee to the Municipality for the timely installation and proper construction of all stormwater management controls as required by the approved SWM Site Plan and this Ordinance in accordance with the provisions of Sections 509, 510, and 511 of the Pennsylvania Municipalities Planning Code.

Section 702. Responsibilities for Operation and Maintenance (O&M) of Stormwater Facilities and Best Management Practices (BMPs)

- A. The owner of any land upon which stormwater facilities and BMPs will be placed, constructed, or implemented, as described in an O&M Plan, shall record the following documents in the Office of the Recorder of Deeds for Montgomery County, within ninety (90) days of approval of the O&M plan by the Municipality:
 - 1. The O&M Plan, or a summary thereof;
 - 2. O&M Agreements under Section 704; and
 - 3. Easements under Section 705.
- B. The Municipality may suspend or revoke any approvals granted for the project site upon discovery of failure on the part of the owner to comply with this Ordinance.
- C. Facilities, areas, or structures used as SWM BMPs shall be enumerated as permanent real estate appurtenances and recorded as deed restrictions or conservation easements that run with the land.
- D. The following items shall be included in the O&M Plan:
 - 1. Map(s) of the project area, in a form that meets the requirements for recording at the offices of the Recorder of Deeds of Montgomery County, shall be submitted on 24-inch x-36-inch sheets. The contents of the map(s) shall include, but not be limited to:
 - a. Clear identification of the location and nature of stormwater controls and BMPs,
 - b. The location of the project site relative to highways, municipal boundaries or other identifiable landmarks,
 - c. Existing and final contours at intervals of two (2) feet, or others as appropriate,
 - d. Existing streams, lakes, ponds, or other bodies of water within the project site area,
 - e. Other physical features including flood hazard boundaries, sinkholes, streams,

- existing drainage courses, and areas of natural vegetation to be preserved,
 - f. The locations of existing and proposed utilities, sanitary sewers, and water lines within fifty (50) feet of property lines of the project site,
 - g. Proposed final changes to the land surface and vegetative cover, including the type and amount of impervious area that would be added,
 - h. Proposed final structures, roads, paved areas, and buildings, and
 - i. At the discretion of the Municipality, a 15-foot wide access easement around all stormwater controls and BMPs that would provide ingress to and egress from a public right-of-way.
 - 2. A description of how each stormwater facility and BMP will be operated and maintained, and the identity and contact information associated with the person(s) responsible for operations and maintenance,
 - 3. The name of the project site, the name and address of the owner of the property, and the name of the individual or firm preparing the plan, and
 - 4. A statement, signed by the landowner, acknowledging that the stormwater facilities and BMPs are fixtures that cannot be altered or removed without prior approval by the Municipality.
- E. The O&M Plan for the project site shall establish responsibilities for the continuing O&M of all stormwater facilities and BMPs, as follows:
- 1. If a plan includes structures or lots that are to be separately owned and in which streets, sewers, and other public improvements are to be dedicated to the Municipality, associated stormwater controls and BMPs also may be dedicated to and maintained by the Municipality;
 - 2. If a plan includes operation and maintenance by a single ownership or if sewers and other public improvements are to be privately owned and maintained, the O&M of stormwater controls and BMPs, and inspections required by permits, shall be the responsibility of the owner.
- F. The Municipality shall make the final determination on the continuing maintenance responsibilities prior to final approval of the SWM Site Plan. The municipality may require 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 municipality will accept the facilities. The municipality reserves the right to accept or reject the ownership and operating responsibility for any portion of the stormwater management controls..
- G. The O&M Plan shall be recorded as a restrictive deed covenant that runs with the land.
- H. The municipality may take enforcement actions against an owner for any failure to satisfy the provisions of this Article and this Ordinance.

Section 703. Municipal Review of an O&M Plan

- A. O&M plans shall be consistent with the requirements of this Ordinance.
- B. The Municipality will notify Applicants in writing whether or not O&M plans are approved.
- C. The Municipality's approval letter will indicate whether or not "record drawings" of all stormwater controls and BMPs are required, including a final "as-built" O&M Plan.

Section 704. Operation and Maintenance (O&M) Agreement for Privately Owned Stormwater Controls and BMPs

- A. Prior to final approval of the SWM Site Plan, the property owner shall sign and record an Operation and Maintenance (O&M) Agreement (see Appendix E) covering all stormwater control facilities which are to be privately owned.
- B. The owner shall convey to the Municipality conservation easements to assure access for periodic inspections by the Municipality and maintenance, as necessary.
- C. The owner shall keep on file with the Municipality the name, address, and telephone number of the person or company responsible for maintenance activities; in the event of a change, new information shall be submitted by the owner to the Municipality within ten (10) working days of the change.
- D. Other items may be included in the agreement where determined necessary to guarantee the satisfactory operation and maintenance of all stormwater facilities and BMPs. The O&M Agreement shall be subject to the review and approval of the Municipality.
- E. The owner is responsible for O&M of the SWM BMPs. If the owner fails to adhere to the O&M Agreement, the Municipality may perform the services required and charge the owner appropriate fees. Nonpayment of fees may result in a lien against the property.

Section 705. Stormwater Management Easements

- A. The owner must obtain all necessary real estate rights to install, operate, and maintain all stormwater facilities in the SWM Site Plan and the O&M Plan.
- B. The owner must provide the municipal easements, or other appropriate real estate rights, to perform inspections and maintenance or the preservation of stormwater runoff conveyance, infiltration, and detention areas.

ARTICLE VIII-PROHIBITIONS

Section 801. Prohibited Discharges and Connections

- A. Any drain or conveyance, whether on the surface or subsurface, that allows any non- stormwater discharge, including sewage, process wastewater, or wash water to enter the separate storm sewer system, or otherwise to enter the waters of the Commonwealth is prohibited. Any connections to the storm drain system from indoor drains and sinks also are prohibited.
- B. No person shall allow, or cause to allow, discharges into surface waters of the Commonwealth which are not composed entirely of stormwater, except (1) as provided in subsection C below, and (2) discharges allowed under a state or federal permit.
- C. The following discharges are authorized unless they are determined to be significant contributors to pollution to the waters of the Commonwealth:

- Non-contaminated discharges from fire fighting activities	- Flows from riparian habitats and wetlands
- Discharges from potable water sources including water line flushing and fire hydrant flushing, if such discharges do not contain detectable concentrations of Total Residual Chlorine (TRC).	- Uncontaminated water from foundations or from footing drains
- Non-contaminated irrigation water and flows from riparian habitats and wetlands.	- Non-contaminated lawn watering
- Non-contaminated HVAC condensation and water from geothermal systems.	- Dechlorinated swimming pool discharges
- Diverted stream flows and springs.	- Uncontaminated groundwater
- Water from crawl space pumps	- Water from individual residential car washing
- 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	- Routine external building wash down (which does not use detergents or other compounds)

- D. In the event that the Municipality or DEP determines that any of the discharges identified in Subsection C significantly contribute to pollution of the waters of the Commonwealth, the Municipality or DEP will notify the responsible person(s) to cease the discharge.

Section 802. Roof Drains

In Montgomery County, roof drains shall not be connected to streets, sanitary or storm sewers, or roadside ditches, and shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable, except for already existing developed sites where the onsite stormwater system already is

designed and equipped to accomplish stormwater rate, quality, and quantity mitigation. The applicant shall, in these cases, submit documentation on the existing stormwater system to the municipal engineer, who shall determine if the stormwater system accomplishes comparable stormwater rate, quality, and quantity mitigation.

In the event that an existing developed site is to be redeveloped, existing roof drains that discharge to an existing stormwater system that is designed and equipped to accomplish stormwater rate, quality, and quantity mitigation, those existing roof drains may remain, provided the applicant submits documentation on the existing stormwater system to the municipal engineer, who shall determine if the stormwater system accomplishes comparable stormwater rate, quality, and quantity mitigation.

Section 803. Alteration of BMPs

- A. No person shall modify, remove, fill, landscape, or alter any existing stormwater facility or BMP unless it is part of an approved maintenance program and written approval of the Municipality has been obtained.
- B. No person shall place any structure, fill, landscaping, or vegetation into a stormwater control or BMP or within a drainage easement which would limit or alter the functioning of the stormwater control or BMP without the written approval of the Municipality.

ARTICLE IX - ENFORCEMENT AND PENALTIES

Section 901. Right-of-Entry

The Municipality, or its authorized agents and employees, will provide forty-eight (48) hours written notice when appropriate, at its sole discretion, and may then enter upon any part of the property within the Municipality to inspect and determine the compliance of the implementation, condition, or operation and maintenance (O&M) of the stormwater facilities or Best Management Practices (BMPs) in regard to any aspect governed by this Ordinance. Inspection includes monitoring and sampling to determine proper operation of stormwater facilities and BMPs. The Municipality shall have the right to temporarily locate on any stormwater control or BMP in the Municipality such devices as are necessary to conduct monitoring and/or sampling of the discharges from such stormwater control or BMP.

Section 902. Inspection

BMPs should be inspected for proper operation by the landowner, or the owner's designee (including the municipality for dedicated and owned facilities), according to the following list of minimum frequencies:

- A. Annually for the first 5 years.
- B. Once every 3 years thereafter.
- C. During or immediately after the cessation of a 10-year, 24-hour, or greater storm event.
- D. As specified in the O&M agreement.

Inspections should be conducted during or immediately following precipitation events. 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, 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.

Section 903. Enforcement

All inspections regarding compliance with the Stormwater Management (SWM) Site Plan and this Ordinance shall be the responsibility of the Municipality.

- A. It shall be unlawful for a person to undertake any regulated activity except as provided in an approved SWM Site Plan, unless specifically exempted in Section 302.
- B. It shall be unlawful to violate Section 703 of this Ordinance.
- C. Inspections regarding compliance with the SWM Site Plan are a responsibility of the Municipality.

- D. Whenever the Municipality finds that a person has violated a prohibition or failed to meet a requirement of this Ordinance, the Municipality may order compliance by notifying the responsible person. Such notice may include 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;
 6. Payments to reimburse administrative and remediation costs;
 7. Implementation of stormwater controls and BMPs; and
 8. O&M of stormwater facilities and BMPs.
- E. Such notification shall set forth the nature of the violation(s) and establish a time limit for correction of those violations(s). If the violator fails to take the required action within the established deadline, the work may be done by the Municipality and the expenses may be charged to the violator.
- F. Failure to comply within the time specified may subject a violator to the penalty provisions of this Ordinance. All such penalties shall be deemed cumulative and shall not prevent the Municipality from pursuing other remedies available in law or equity.

Section 904. Suspension and Revocation

- A. Any approval or permit issued by the municipality pursuant to this Ordinance may be suspended or revoked for:
1. Non-compliance with or failure to implement any provision of the approved SWM Site Plan or O&M Agreement.
 2. A violation of any provision of this Ordinance or any other applicable law, ordinance, rule, or regulation relating to the Regulated Activity.
 3. The creation of any condition or the commission of any act during the Regulated Activity which constitutes or creates a hazard, nuisance, pollution, or endangers the life or property of others.
- B. A suspended approval may be reinstated by the municipality when:
1. The municipality has inspected and approved the corrections to the violations that caused

the suspension.

2. The municipality is satisfied that the violation has been corrected.
- C. An approval that has been revoked by the municipality cannot be reinstated. The applicant may apply for a new approval under the provisions of this Ordinance.
 - D. If a violation causes no immediate danger to life, public health or safety, or property, at its sole discretion, the municipality may provide a limited time period for the owner to correct the violation. In these cases, the municipality will provide the owner, or the owner's designee, with a written notice of the violation and the time period allowed for the owner to correct the violation. If the owner does not correct the violation within the allowed time period, the municipality may revoke or suspend any, or all, applicable approvals and permits pertaining to any provision of this Ordinance.

Section 905. Penalties

- A. Anyone violating the provisions of this Ordinance shall be guilty of a summary offense, and upon conviction, shall be subject to a fine of not more than \$1,000 for each violation, recoverable with costs or imprisonment of not more than 30 days, or both. Each day that the violation continues shall be a separate offense and penalties shall be cumulative.
- B. In addition, the municipality may institute injunctive, mandamus, or any other appropriate action or proceeding at law or in equity for the enforcement of this Ordinance. Any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus, or other appropriate forms of remedy or relief.

Section 906. Appeals

- A. Any person aggrieved by any action of the municipality or its designee, relevant to the provisions of this Ordinance, may appeal to the municipality within 30 days of that action.
- B. Any person aggrieved by any decision of the municipality, relevant to the provisions of this Ordinance, may appeal to the County Court of Common Pleas in the county where the activity has taken place within 30 days of the municipality's decision.

Section 907. Enactment

- A. Adoption. This Ordinance No. _____ shall be effective on _____, 2016 and shall remain in force until modified, amended or rescinded by North Wales Borough, Pennsylvania.

ENACTED and ADOPTED by the Borough Council this ____ day of _____ 2016.

(BOROUGH SEAL)

By: _____
President

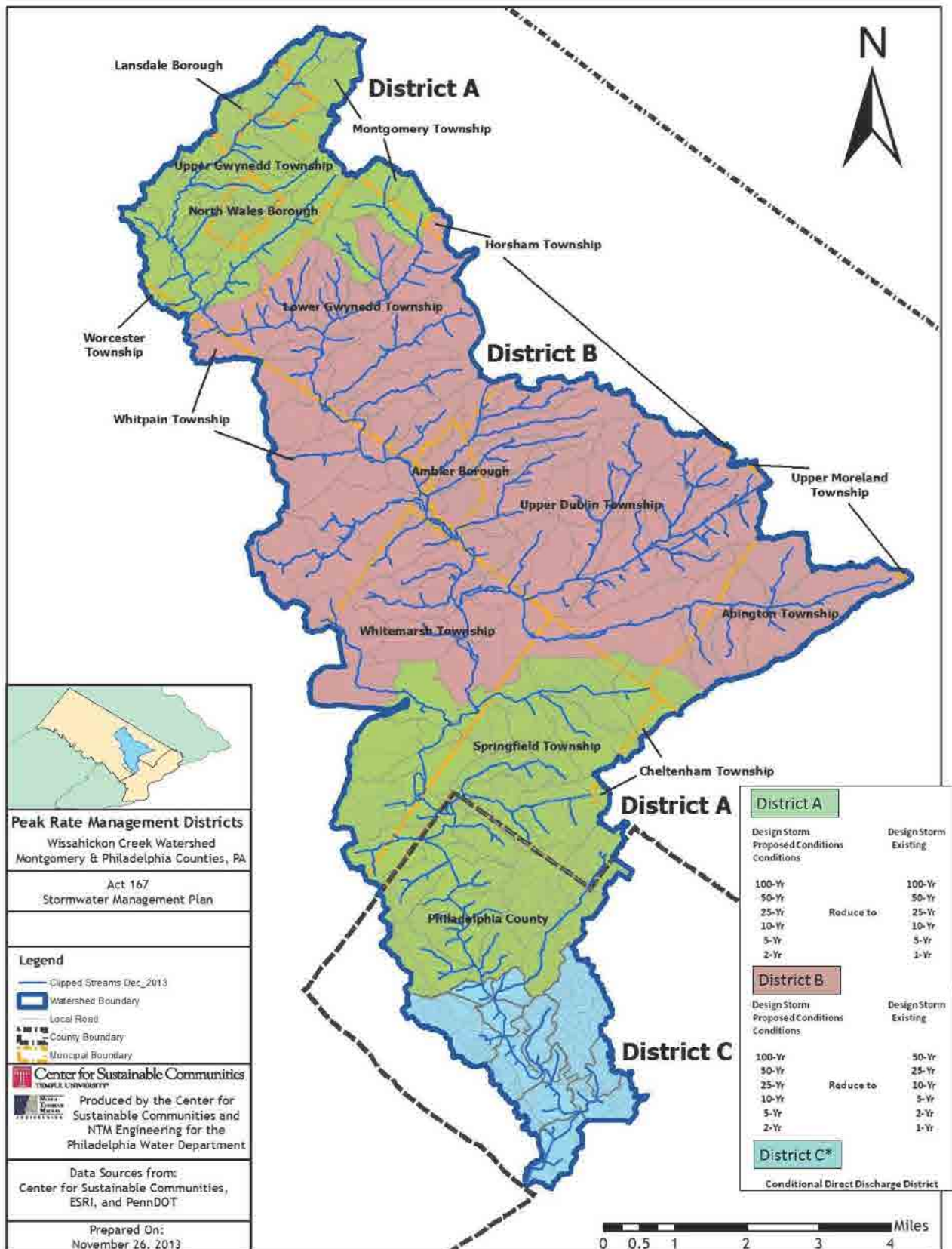
ATTEST: _____
Secretary

APPROVED this ____ day of _____, 2020

By: _____
Mayor

ORDINANCE APPENDIX A

STORMWATER MANAGEMENT DISTRICT WATERSHED MAP



ORDINANCE APPENDIX B
SMALL PROJECT STORMWATER MANAGEMENT (SWM)
SITE PLAN FOR RESIDENTIAL DEVELOPMENT

DRAFT

Small Project Stormwater Management Site Plan

This Small Project SWM Site Plan is included as an option for municipalities to adopt to give small regulated activities the opportunity to submit a non-engineered stormwater management plan. The requirements of this site plan alternative are consistent with the volume control requirements of the *Wissahickon Creek Watershed Stormwater Management Plan (SMP)*. This small project site plan is only permitted for projects identified in Table 106.1.

A. What is an applicant required to submit?

A brief description of the proposed stormwater facilities, including types of materials to be used, total square footage of proposed impervious areas, volume calculations, and a simple sketch plan showing the following information:

- Location of proposed structures, driveways, or other paved areas with approximate surface area in square feet.
- Location of any existing or proposed onsite septic system and/or potable water wells showing proximity to infiltration facilities.
- Montgomery County Conservation District erosion and sediment control “Adequacy” letter as required by Municipal, County or State regulations.

B. Determination of Required Volume Control and Sizing Stormwater Facilities

By following the simple steps outlined below in the provided example, an applicant can determine the runoff volume that is required to be controlled and how to choose the appropriate stormwater facility to permanently remove the runoff volume from the site. Impervious area calculations must include all areas on the lot proposed to be covered by roof area or pavement which would prevent rain from naturally percolating into the ground, including impervious surfaces such as sidewalks, driveways, parking areas, patios or swimming pools. Sidewalks, driveways or patios that are designed and constructed to allow for infiltration are not included in this calculation.

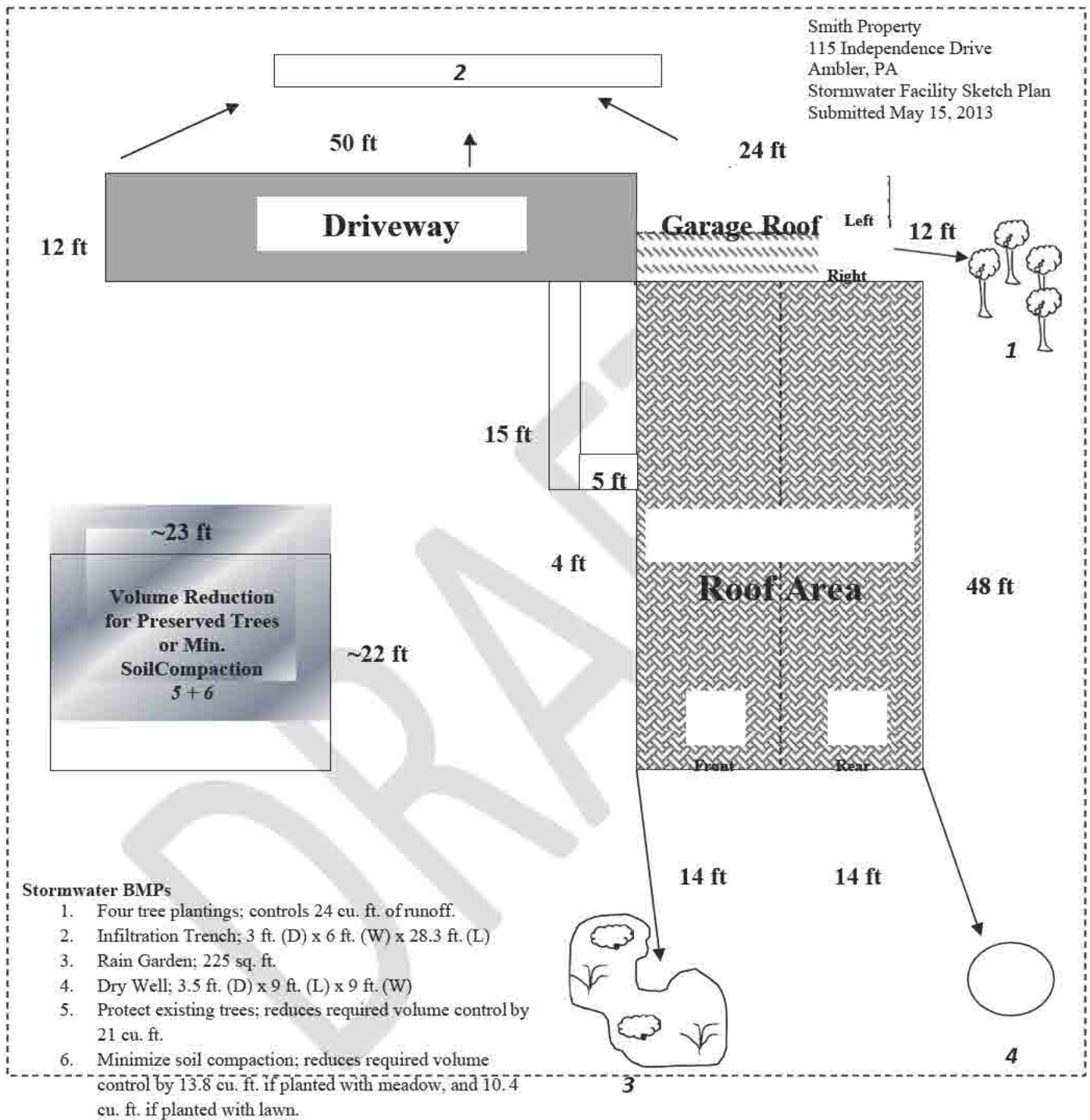
Site Plan Example: Controlling runoff volume from a proposed home site

Step 1: Determine Total Impervious Surfaces

Impervious Surface			Area (sq. ft.)
House Roof (Front)	14 ft. x 48 ft.	=	672 sq. ft.
House Roof (Rear)	14 ft. x 48 ft.	=	672 sq. ft.
Garage Roof (Left)	6ft. x 24 ft.	=	144 sq. ft.
Garage Roof (Right)	6 ft. x 24 ft.	=	144 sq. ft.
Driveway	12 ft. x 50 ft.	=	1,000 sq. ft.
Walkway	4 ft. x 20 ft.	=	80 sq. ft.

	Total Impervious		3,000 sqft
	Total Earth Disturbance		6,000 sqft

Figure 1: Sample Site Sketch Plan



Step 2: Determine Required Volume Control (cubic feet) using the following equation:

Volume (cu. ft.) = (Total impervious area in square feet x 2 inches of runoff) / 12 inches

$$(3,000 \text{ sq. ft.} \times 2 \text{ inches of runoff}) / 12 \text{ inches} = 500 \text{ cu. ft.}$$

Step 3: Sizing the Selected Volume Control BMP

Several Best Management Practices (BMPs), as described below, are suitable for small stormwater management projects. However, their application depends on the volume required to be controlled, how much land is available, and the site constraints. Proposed residential development activities can apply both non-structural and structural BMPs to control the volume of runoff from the site. A number of different volume control BMPs are described below. Note that Figure 1 is an example of how these BMPs can be utilized in conjunction to control the total required volume on one site.

Structural BMPs

1. Infiltration Trench

An Infiltration Trench is a linear stormwater BMP consisting of a continuously perforated pipe at a minimum slope in a stone-filled trench. During small storm events, infiltration trenches can significantly reduce volume and serve in the removal of fine sediments and pollutants. Runoff is stored between the stones and infiltrates through the bottom of the facility and into the soil matrix. Runoff should be pretreated using vegetative buffer strips or swales to limit the amount of coarse sediment entering the trench which can clog and render the trench ineffective. In all cases, an infiltration trench should be designed with a positive overflow.

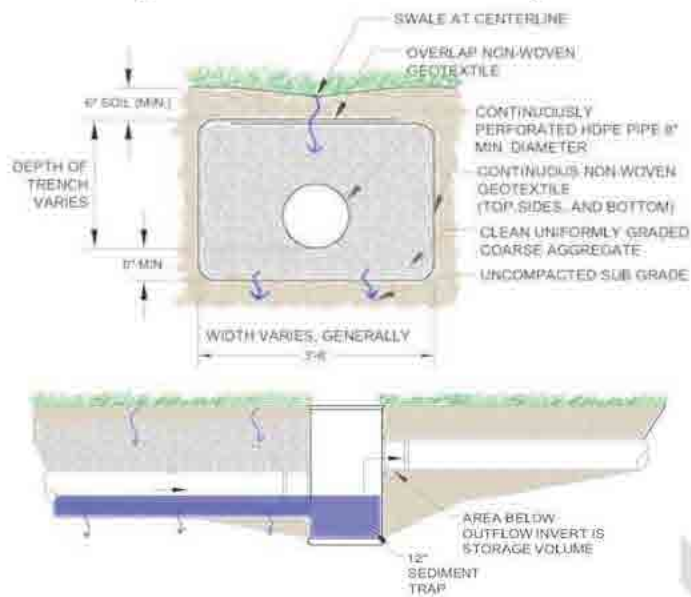
Design Considerations:

- Although the width and depth can vary, it is recommended that Infiltration Trenches be limited in depth to not more than six (6) feet of stone.
- Trench is wrapped in nonwoven geotextile (top, sides, and bottom).
- Trench needs to be placed on uncompacted soils.
- Slope of the Trench bottom should be level or with a slope no greater than 1%.
- A minimum of 6" of topsoil is placed over trench and vegetated.
- The discharge or overflow from the Infiltration Trench should be properly designed for anticipated flows.
- Cleanouts or inlets should be installed at both ends of the Infiltration Trench and at appropriate intervals to allow access to the perforated pipe.
- Volume of facility = Depth x Width x Length x Void Space of the gravel bed (assume 40%).

Maintenance:

- Catch basins and inlets should be inspected and cleaned at least two times a year.
- The vegetation along the surface of the infiltration trench should be maintained in good condition and any bare spots should be re-vegetated as soon as possible.
- Vehicles should not be parked or driven on the trench and care should be taken to avoid soil compaction by lawn mowers.

Figure 2: Infiltration Trench Diagram



Source: PA BMP Guidance Manual, Chapter 6, page 42.

Figure 3: Example of Infiltration Trench Installation



Source: PA BMP Guidance Manual, Chapter 6, Page 46.

Sizing Example for Infiltration Trench

1. Determine Total Impervious Surface to drain to Infiltration Trench:

Garage Roof (Left)	6 ft. x 24 ft.	=	144 sq.ft.
Driveway	12 ft. x 50 ft.	=	1000 sq.ft.
Walkway	4 ft. x 20 ft.	=	80 sq.ft.

2. Determine the required infiltration volume:

$$(1224 \text{ sq. ft.} \times 2 \text{ inches of runoff}) / 12 \text{ ft.} = 204 \text{ cu. ft.} / 0.4^* = 510 \text{ cu. ft.}$$

(*0.4 assumes 40% void ratio in gravel bed)

3. Sizing the infiltration trench facility:

Volume of Facility = Depth x Width x Length

Set Depth to 3 feet and determine required surface area of trench.

$$510 \text{ cu. ft.} / 3 \text{ ft.} = 170 \text{ sqft.}$$

The width of the trench should be greater than 2 times its depth (2 x D), therefore in this example the trench width of 6 feet selected.

$$\text{Determine trench length: } L = 170 \text{ sq. ft.} / 6 \text{ ft.} = 28.3 \text{ ft.}$$

Final infiltration trench dimensions: 3 ft. (D) x 6 ft. (W) x 28.3 ft. (L)

2. Rain Garden

A Rain Garden is a planted shallow depression designed to catch and filter rainfall runoff. The garden captures rain from a downspout or a paved surface. The water sinks into the ground, aided by deep rooted plants that like both wet and dry conditions. The ideal location for a rain garden is between the source of runoff (roofs and driveways) and the runoff destination (drains, stream, low spots, etc).

Design Considerations:

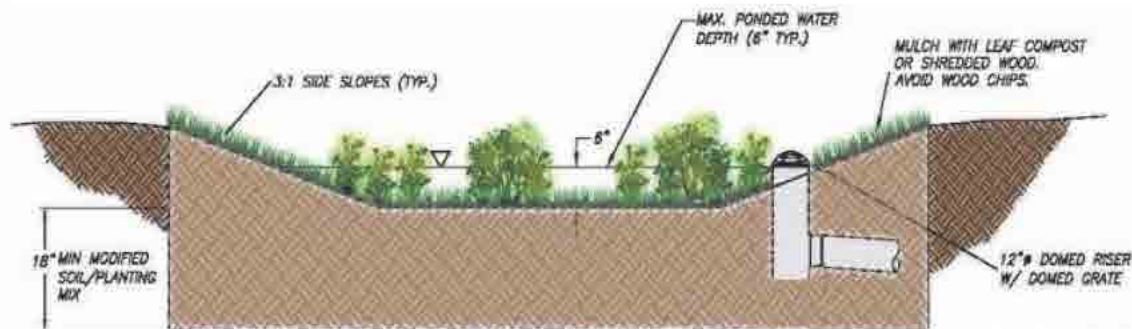
- A maximum of 3:1 side slope is recommended.
- The depth of a rain garden can range from 6 - 8 inches. Ponded water should not exceed 6 inches.
- The rain garden should drain within 72 hours.
- The garden should be at least 10-20 feet from a building's foundation and 25 feet from septic system drainfields and wellheads.
- If the site has clay soils, soil should be amended with compost or organic material.
- Choose native plants. See http://pa.audubon.org/habitat/PDFs/RGBrochure_complete.pdf for a native plant list. To find native plant sources go to www.pawildflower.org.

- At the rain garden location, the water table should be at least 2' below the soil level. If water stands in an area for more than one day after a heavy rain you can assume it has a higher water table and is not a good choice for a rain garden.

Maintenance:

- Water plants regularly until they become established.
- Inspect twice a year for sediment buildup, erosion and vegetative conditions.
- Mulch with hardwood when erosion is evident and replenish annually.
- Prune and remove dead vegetation in the spring season.
- Weed as you would any garden.
- Move plants around if some plants would grow better in the drier or wetter parts of the garden.

Figure 4: Rain Garden Diagram



Source: PA BMP Guidance Manual, Chapter 6 Page 50

Sizing Example for Rain Garden

1. Pick a site for the rain garden between the source of runoff and between a low lying area, a.k.a., a drainage area.
2. Perform an infiltration test to determine the depth of the rain garden:
 - Dig a hole 8' x 8'
 - Fill with water and put a popsicle stick at the top of the water level.
 - Measure how far it drains down after a few hours (ideally 4).
 - Calculate the depth of water that will drain out over 24 hours.
3. Determine total impervious surface area to drain to rain garden:

House Roof (Front)	14 ft. x 48 ft.	=	672 sq.ft.
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4. Sizing the rain garden:

For this example the infiltration test determined 6" of water drained out of a hole in 24 hours. The depth of the rain garden should be set to the results of the infiltration test so 6" is the depth of the rain garden. The sizing calculation below is based on controlling 1" of runoff. First divide the impervious surface by the depth of the rain garden.

$$(672 \text{ sq. ft.} / 6 \text{ ft.}) = 112 \text{ sq. ft.}$$

In order to control 2" of runoff volume, the rain garden area needs to be multiplied by 2.

$$112 \text{ sq. ft.} * 2 = 224 \text{ sq. ft.}$$

The rain garden should be about 225 sq. ft. in size and 6" deep.

3. Dry Well (a.k.a., Seepage Pit)

A Dry Well, sometimes called a Seepage Pit, is a subsurface storage facility that temporarily stores and infiltrates stormwater runoff from the roofs of structures. By capturing runoff at the source, Dry Wells can dramatically reduce the increased volume of stormwater generated by the roofs of structures. Roof leaders connect directly into the Dry Well, which may be either an excavated pit filled with uniformly graded aggregate wrapped in geotextile, or a prefabricated storage chamber or pipe segment. Dry Wells discharge the stored runoff via infiltration into the surrounding soils. In the event that the Dry Well is overwhelmed in an intense storm event, an overflow mechanism (surcharge pipe, connection to a larger infiltration area, etc.) will ensure that additional runoff is safely conveyed downstream.

Design Considerations:

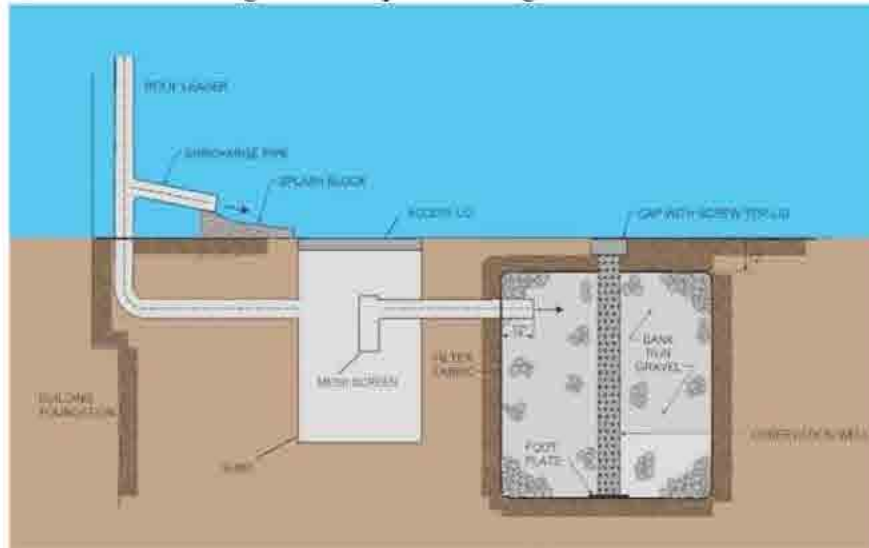
- Dry Wells typically consist of 18 to 48 inches of clean washed, uniformly graded aggregate with 40% void capacity (AASHTO No. 3, or similar). "Clean" gravel fill should average one and one-half to three (1.5 – 3.0) inches in diameter.
- Dry Wells are not recommended when their installation would create a significant risk for basement seepage or flooding. In general, 10 - 20 feet of separation is recommended between Dry Wells and building foundations.
- The facility may be either a structural prefabricated chamber or an excavated pit filled with aggregate.
- Depth of dry wells in excess of three-and-a-half (3.5) feet should be avoided unless warranted by soil conditions.
- Stormwater dry wells must never be combined with existing, rehabilitated, or new septic system seepage pits. Discharge of sewage to stormwater dry wells is strictly prohibited.

Maintenance:

- Dry wells should be inspected at least four (4) times annually as well as after large storm events.
- Remove sediment, debris/trash, and any other waste material from a dry well.
- Regularly clean out gutters and ensure proper connections to the dry well.

- Replace the filter screen that intercepts the roof runoff as necessary.

Figure 5: Dry Well Diagram



Source: PA BMP Guidance Manual, Chapter 6, Page 65.

Sizing Example for Dry Wells:

1. Determine contributing impervious surface area:

House Roof (Rear)	14 ft. x 48 ft.	=	672 sq. ft.
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2. Determine required volume control:

$$(672 \text{ sq. ft.} \times 2 \text{ inches of runoff}) / 12 \text{ inches} = 112 \text{ cu. ft.}$$

$$112 \text{ cu. ft.} / 0.4 = 280 \text{ cu. ft. (assuming the 40\% void ratio in the gravel bed)}$$

3. Sizing the dry well:

Set depth to 3.5 ft; Set width equal to length for a square chamber.

$$280 \text{ cu. ft.} = 3.5 \text{ ft.} \times L \times L; L = 9 \text{ ft.}$$

$$\text{Dimensions} = 3.5 \text{ ft. (D)} \times 9 \text{ ft. (L)} \times 9 \text{ ft. (W)}$$

Non-Structural BMPs

1. Tree Plantings and Preservation

Trees and forests reduce stormwater runoff by capturing and storing rainfall in the canopy and releasing water into the atmosphere through evapotranspiration. Tree roots and leaf litter also create soil conditions that promote the infiltration of rainwater into the soil. In addition, trees and forests reduce pollutants by taking up nutrients and other pollutants from soils and water through their root systems. A development site can reduce runoff volume by planting new trees or by preserving trees which existed on the site prior to development. The volume reduction calculations either determine the cubic feet to be directed to the area under the tree canopy for infiltration or determine a volume reduction credit which can be used to reduce the size of any one of the planned structural BMPs on the site.

Tree Considerations:

- Existing trees must have at least a 4" trunk caliper or larger.
- Existing tree canopy must be within 100 ft. of impervious surfaces.
- A tree canopy is classified as the continuous cover of branches and foliage formed by a single tree or collectively by the crowns of adjacent trees.
- New tree plantings must be at least 6 ft. in height and have a 2" trunk caliper.
- All existing and newly planted trees must be native to Pennsylvania. See <http://www.dcnr.state.pa.us/forestry/commontr/commontrees.pdf> for a guide book titled *Common Trees of Pennsylvania* for a native tree list.
- When using trees as volume control BMPs, runoff from impervious areas should be directed to drain under the tree canopy.

Determining the required number of planted trees to reduce the runoff volume:

1. Determine contributing impervious surface area:

Garage Roof (Right)	6 ft. x 24 ft.	=	144ft
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2. Calculate the required control volume:

$$(144 \text{ sq. ft.} \times 2 \text{ inches of runoff}) / 12 \text{ inches} = 24 \text{ cu. ft.}$$

3. Determine the number of tree plantings:

- A newly planted deciduous tree can reduce runoff volume by 6 cu. ft.
- A newly planted evergreen tree can reduce runoff volume by 10 cu. ft.

$$24 \text{ cu. ft.} / 6 \text{ cu. ft.} = 4 \text{ Deciduous Trees}$$

Determining the volume reduction for preserving existing trees:

1. Calculate approximate area of the existing tree canopy:

$$\sim 22 \text{ sq. ft.} \times \sim 23 \text{ sq. ft.} = 500 \text{ sq. ft.}$$

2. Measure distance from impervious surface to tree canopy: 35 ft.

3. Calculate the volume reduction credit by preserving existing trees:

- For Trees within 20 feet of impervious cover:
Volume Reduction cu. ft. = (Existing Tree Canopy sq. ft. x 1 inch) / 12
- For Trees beyond 20 feet but not farther than 100 feet from impervious cover:
Volume Reduction cu. ft. = (Existing Tree Canopy sq. ft. x 0.5 inch) / 12

$$(500 \text{ sq. ft.} \times 0.5 \text{ inches}) / 12 = 21 \text{ cu. ft.}$$

This volume credit can be utilized in reducing the size of any one of the structural BMPs planned on the site. For example, the 21 cu. ft. could be subtracted from the required infiltration volume when sizing the infiltration trench;

$$510 \text{ cu. ft.} - 21 \text{ cu. ft.} = 489 \text{ cu. ft.}$$

$$489 \text{ cu. ft.} / 3 \text{ ft (Depth)} = 163 / 6 \text{ ft. (Width)} = 27.1 \text{ ft (Length)}$$

Using the existing trees for a volume credit would decrease the length of the infiltration trench to 27.1 ft. instead of 28.3 ft.

2. **Minimize Soil Compaction and Replant with Lawn or Meadow**

When soil is overly compacted during construction it can cause a drastic reduction in the permeability of the soil and rarely is the soil profile completely restored. Runoff from vegetative areas with highly compacted soils similarly resembles runoff from an impervious surface. Minimizing soil compaction and re-planting with a vegetative cover like meadow or lawn, not only increases the infiltration on the site, but also creates a friendly habitat for a variety of wildlife species.

Design Considerations:

- Area shall not be stripped of topsoil.
- Vehicle movement, storage, or equipment/material lay down shall not be permitted in areas preserved for minimum soil compaction.
- The use of soil amendments and additional topsoil is permitted.
- Meadow should be planted with native grasses. Refer to *Meadows and Prairies: Wildlife-Friendly Alternatives to Lawn* at <http://pubs.cas.psu.edu/FreePubs/pdfs/UH128.pdf> for reference on how to properly plant the meadow and for a list of native species.

Determining the volume reduction by minimizing soil compaction and planting a meadow:

1. Calculate approximate area of preserved meadow:

$$\sim 22 \text{ sq. ft.} \times \sim 23 \text{ sq. ft.} = 500 \text{ sq. ft.}$$

2. Calculate the volume reduction credit by minimizing the soil compaction and planting a lawn/meadow:

- For Meadow Areas: Volume Reduction (cu. ft.) = (Area of Min. Soil Compaction (sq. ft.) \times 1/3 inch of runoff) / 12

$$(500 \text{ sq. ft.} \times 1/3 \text{ inch of runoff}) / 12 = 13.8 \text{ cu. ft.}$$

- For Lawn Areas: Volume Reduction (cu. ft.) = (Area of Min. Soil Compaction (sq. ft.) \times 1/4 inch of runoff) / 12

$$(500 \text{ sq. ft.} \times 1/4 \text{ inch of runoff}) / 12 = 10.4 \text{ cu. ft.}$$

This volume credit can be used to reduce the size of any one of the structural BMPs on the site. See explanation under the volume credit for preserving existing trees for details.

Alternative BMP to Capture and Reuse Stormwater

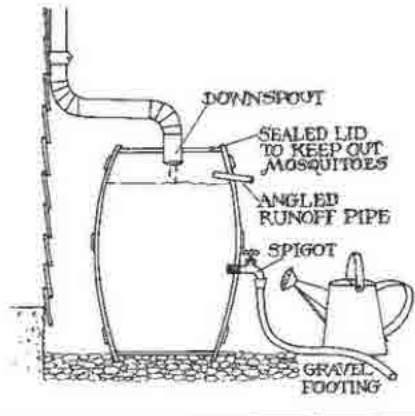
Rain Barrels

Rain barrels are large containers that collect drainage from roof leaders and temporarily store water to be released to lawns, gardens, and other landscaped areas after the rainfall has ended. Rain barrels are typically between 50 and 200 gallons in size. It is not recommended for rain barrels to be used as a volume control BMP because infiltration is not guaranteed after each storm event. For this reason, a rain barrel is not utilized in the site plan example. However, the information is included to provide an alternative for a homeowner to utilize when considering capture and reuse stormwater methods.

Design Considerations:

- Rain barrels should be directly connected to the roof gutter/spout.
- There must be a means to release the water stored between storm events to provide the necessary storage volume for the next storm.
- When calculating rain barrel size, rain barrels are typically assumed to be 25% full because they are not always emptied before the next storm.
- Use screens to filter debris and cover lids to prevent mosquitoes.
- An overflow outlet should be placed a few inches below the top with an overflow pipe to divert flow away from structures.
- It is possible to use a number of rain barrels jointly for an area.
- Are requirements for 15-foot access easements waived?

Figure 6: Rain Barrel Diagram and Examples



Sources: (top picture) <http://www.citywindsor.ca/DisplayAttach.asp?AttachID=12348>
 (bottom picture on left) <http://repurposinglife.blogspot.com/2009/05/rainwater-harvesting.html>
 (bottom picture on right) <http://www.floridata.com/tracks/transplantedgardener/Rainbarrels.cfm>

Sizing Example for a Rain Barrel

1. Determine contributing impervious surface area:

Garage Roof (Right)	6 ft. x 24 ft.	=	144 sqft
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2. Determine the amount of rainfall to be captured by the Rain Barrel. A smaller storm, no more than 2", is recommended to calculate the runoff to be captured. This example chose the 1" storm event.

3. Calculate the volume to be captured and reused:

$$(144 \text{ sq. ft.} \times 1 \text{ inch of runoff}) / 12 \text{ inches} = 12 \text{ cu. ft.}$$

4. Size the rain barrel:

1 cu. ft. = 7.48 gallons

12 cu. ft. x 7.48 = 90 gallons

90 gallons x (0.25*) = 22.5 gallons (*assuming that the rain barrel is always at least 25% full)

90 gallons + 22.5 gallons = 112 gallons

The rain barrel or barrels should be large enough to hold at least 112 gallons of water.

REFERENCES:

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ORDINANCE APPENDIX C

NONSTRUCTURAL PROJECT DESIGN CHECKLIST

The goal of this checklist is to minimize the increases in stormwater runoff and impacts to water quality resulting from the proposed regulated activity:

1. Prepare an Existing Resource and Site Analysis Map (ERSAM, see Section 301.B.)
2. Establish a stream buffer according to Section 407.
3. Prepare a draft project layout avoiding sensitive areas identified in Section 301.
4. Identify site-specific existing conditions drainage areas, discharge points, recharge areas, and hydrologic soil groups A and B (areas conducive to infiltration).
5. Evaluate nonstructural stormwater management alternatives (Section 404):
 - a) Minimize earth disturbance.
 - b) Minimize clearing operations (vegetation removal)
 - c) Minimize impervious surfaces.
 - d) Break up large impervious surfaces.
6. Satisfy the groundwater recharge (infiltration) objective (Section 405) and provide for stormwater pretreatment prior to infiltration.
7. Provide for water quality protection in accordance with Section 406 water volume control requirements.
8. Provide stream bank erosion protection in accordance with Section 407 stream bank erosion requirements.
9. Determine into what management district the site falls (Section 408) and conduct an existing conditions runoff analysis.
10. Prepare final project design to maintain existing conditions drainage areas and discharge points, to minimize earth disturbance and impervious surfaces, and, to the maximum extent possible, to ensure that the remaining site development has no surface or point discharge.
11. Conduct a proposed conditions runoff analysis based on the final design that meets the management district requirements (Section 408).
12. Manage any remaining runoff prior to discharge through detention, bioretention, direct discharge, or other structural control.

ORDINANCE APPENDIX D

RIPARIAN BUFFER TRAIL GUIDELINES

Introduction

Riparian buffers are used as non-structural best management practices (BMPs) for protecting and enhancing water quality. Depending on their size, location, and design, riparian buffers often supply additional environmental, economic, aesthetic, and recreational value. Passive recreational trails can be a compatible use within riparian buffers if the trails are sized and placed appropriately. The trail guidelines below are meant to supplement Section 406, Water Volume Control Requirements, and do not alter or modify the regulations set forth in Section 401, General Requirements. All other applicable rules and requirements should be followed, including all federal, state, permitting, and local stormwater and floodplain ordinances.

Installing a trail does not relieve a developer or municipality of the minimum buffer and vegetation requirements described in Section 407, or infiltration and peak rate controls in Sections 405 and 408. Effort shall be made to mitigate water quality and peak rate adjacent the trail structure to avoid collecting runoff in a large facility and creating a point discharge. This can be accomplished by trail-side stone filtration trenches, vegetative filter strips, small bio-retention facilities, and other mechanisms subject to site constraints and municipal engineer approval. See Figure 1. In situations where site constraints negate the feasibility of trail-side mitigation methods, effort shall be made to collect runoff in multiple stormwater facilities for segmented portions of the trail, in place of detaining stormwater in one large facility. Level spreaders shall be constructed at facility outlets to decrease point-source discharges.

As with all trails, adequate land acquisition, easements, and/or landowner permission should be obtained in advance of any trail placement. Care should be given when designing and installing trails so as not to compromise the buffer's ability to protect water quality. Many factors such as slope, vegetation, and soil type will determine the type, size, and placement of the trail within the riparian buffer. Heavily used trails and trails with wide impervious surfaces should be set back farther from the stream edge to help mitigate the effects of any associated increase in runoff. Note: failure to comply with these guidelines (Installing a trail with inadequate setback from the stream bank) could result in increased stormwater runoff, decreased water quality, stream bank degradation, and damage to the buffer or trail.

Trail Recommendations

Location, Size, and Orientation

All trails should be a reasonable width appropriate for the site conditions. It is not recommended that the width of any paved trail exceed twenty five (25) percent of the total buffer width. All trail designs and specifications are subject to approval by the Municipality.

Natural vegetation must be present throughout the buffer as described in Section 306 of the ordinance. Grassy areas should be managed as meadows or be reforested and should not be mowed as lawn in any part of the buffer. Where existing vegetation is insufficient to protect water quality, additional native species should be planted to enhance the buffer.

Paved trails, if appropriate to the site, are permitted and must be located at least twenty-five (25) feet from the top of the stream bank. In limited instances, paved trails be placed closer to a stream due to topography, or in order to accommodate passive educational and recreational activities, but must always be at least ten (10) feet from the top of the stream bank. Although this can be achieved by diverting the entire trail closer to the stream, more conservative methods should be considered, such as smaller spur trails or loop trails. These smaller trails provide access to the stream, but reduce the total traffic along the sensitive stream bank.

In rare instances where the buffer width is reduced due to zoning setback or geographical constraints, the municipality should strongly consider whether the benefits of a trail outweigh the benefits of a wider buffer.

Signage

The installation of interpretive and educational signage is strongly encouraged along the trail. Signs should point out local natural resources and educate the public on how riparian buffers protect the watershed. There should be minimum disturbance in the vegetated buffer between the trail and the stream. Therefore, all appurtenances (e.g. benches, educational signs, kiosks, fountains, etc.) should be installed on the landward side of the trail, if possible. All appurtenances shall be installed in compliance with federal, state, local, stormwater, floodplain, and other regulations and permitting requirements (e.g. anchoring, etc.)

Parking Areas

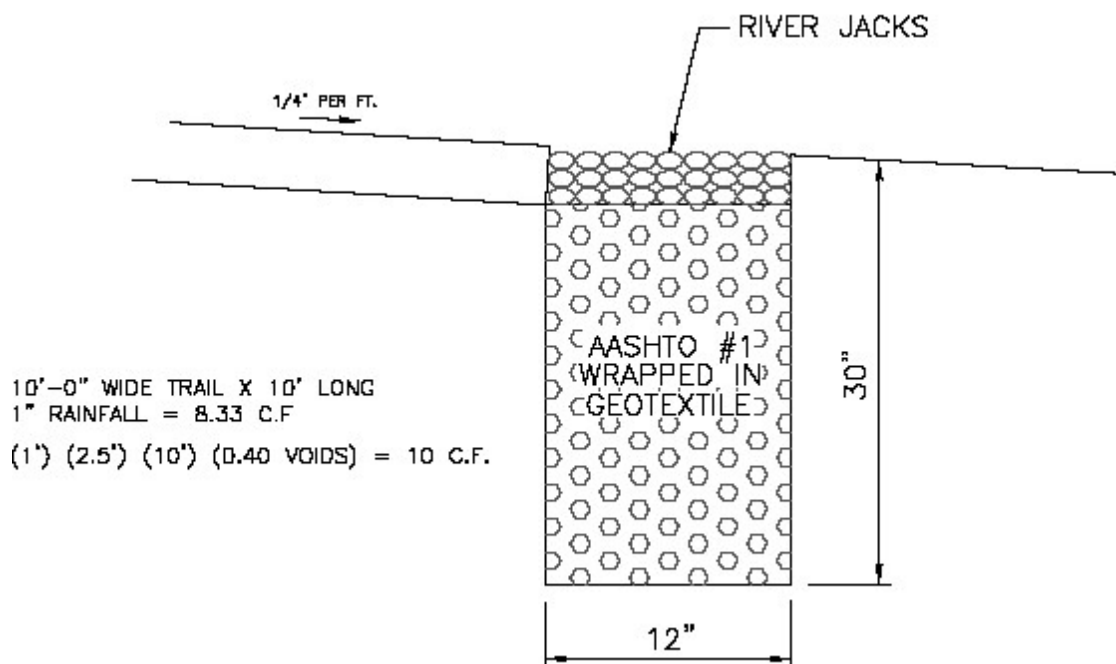
New trailheads and trail parking areas shall meet all the infiltration, rate control, and minimum setback requirements of this ordinance. Every effort should be made to coordinate trail access with existing parking areas. Any new parking areas and trailhead clearings should not encroach on the riparian buffer in any way.

Trail Maintenance

The installation and maintenance of all trails should be performed in a manner that minimizes site disturbance and prevents runoff and erosion. Soil disturbance should be avoided if possible. The

removal of native trees and other native vegetation should also be kept to a minimum. If large or heavy equipment is required for trail installation, special care should be given not to damage existing trees and tree roots.

FIGURE 1.
EXAMPLE DESIGN OF A TRAIL-SIDE
STONE FILTRATION TRENCH



Source:

James MacCombie, Herbert E. MacCombie Jr. P.E. Consulting Engineers & Surveyors Inc.

ORDINANCE APPENDIX E
OPERATION AND MAINTENANCE (O&M) AGREEMENT

OPERATION AND MAINTENANCE (O&M) AGREEMENT
STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES (SWM
BMPs)

THIS AGREEMENT, made and entered into this _____ day of _____, 20____, by and between _____, (hereinafter the “Landowner”), and _____, _____ County, Pennsylvania, (hereinafter “Municipality”);

WITNESSETH

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of _____ County, Pennsylvania, Deed Book _____ at page _____, (hereinafter “Property”).

WHEREAS, the Landowner is proceeding to build and develop the Property; and

WHEREAS, the SWM Site Plan approved by the Municipality (hereinafter referred to as the “Plan”) for the property identified herein, which is attached hereto as Appendix E and made part hereof, as approved by the Municipality, provides for management of stormwater within the confines of the Property through the use of BMPs; and

WHEREAS, the Municipality, and the Landowner, his successors 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 on-site SWM BMPs be constructed and maintained on the Property; and

WHEREAS, the Municipality requires, through the implementation of the SWM Site Plan, that stormwater BMPs as required by said Plan and the Municipal Stormwater Management Ordinance be constructed and adequately operated and maintained by the Landowner, successors, and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The Landowner shall construct the BMPs in accordance with the plans and specifications identified in the SWM Site Plan.
2. The Landowner shall operate and maintain the BMPs as shown on the Plan in good working order in accordance with the specific maintenance requirements noted on the approved SWM Site Plan.
3. The Landowner hereby grants permission to the Municipality, its authorized agents and employees, to enter upon the property, at reasonable times and upon presentation of proper credentials, to inspect the BMPs whenever necessary. Whenever possible, the Municipality shall notify the Landowner prior to entering the property.
4. In the event the Landowner fails to operate and maintain the BMPs per paragraph 2, the Municipality or its representatives may enter upon the Property and take whatever action is deemed necessary to maintain said BMP(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.
5. In the event the Municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the Municipality for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from the Municipality.

6. The intent and purpose of this Agreement is to ensure the proper maintenance of the onsite BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create or affect any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
7. The Landowner, its executors, administrators, assigns, and other successors in interests, shall release the Municipality from all damages, accidents, casualties, occurrences, or claims which might arise or be asserted against said employees and representatives from the construction, presence, existence, or maintenance of the BMP(s) by the Landowner or Municipality.
8. The Municipality shall inspect the BMPs at a minimum of once every three years to ensure their continued functioning.

This agreement shall be recorded at the Office of the Recorder of Deeds of _____ County, Pennsylvania, and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Landowner, his administrators, executors, assigns, heirs, and any other successors in interests, in perpetuity.

ATTEST:

WITNESS the following signatures and seals:

(SEAL)

For the Municipality:

For the Landowner:

ATTEST:

_____(City, Borough, Township), County of _____, Pennsylvania

I, _____, a Notary Public in and for the County and state aforesaid, whose commission expires on the _____ day of _____, 20_____, do hereby certify that _____ whose name(s) is/are signed to the foregoing Agreement bearing date of the _____ day of _____, 20_____, has acknowledged the same before me in my said County and State.

GIVEN UNDER MY HAND THIS _____ day of _____, 20_____.

NOTARY PUBLIC

(SEAL)

BOROUGH OF NORTH WALES
300 SCHOOL STREET
NORTH WALES, PENNSYLVANIA

MEETING: July 26, 2022, 7:01 P.M., EST

CALL TO ORDER made by President Amato.

ROLL CALL:	Salvatore Amato	Present
	Sherwin Collins	Present
	Anji Fazio	Present
	Alexander Groce	Present
	Wendy McClure	Present
	Sally Neiderhiser	Present
	Eion O'Neill	Present
	Mark Tarlecki	Absent
	Sarah Whelan	Absent
	Mayor Neil McDevitt	Present

Also, in attendance were John Filice, Borough Solicitor, David Erenius, Chief of Police, Brian Sleicher, Public Works Supervisor and Alan Guzzardo, Assistant Borough Manager.

President Amato led the Pledge of Allegiance.

Public Comment

There was none at this time.

Consideration: Approval to Submit RACP Grant Application

Manager Hart announced that the Borough was awarded \$1,200,000 from the Pandemic Recovery Funds for the North Wales Arts and Cultural Center Renovation Project. She added that it is not enough funding to cover the estimated cost of the entire project; therefore, she is requesting approval to submit a Redevelopment Assistance Capital Program grant application to cover another portion of the project. Member O'Neil asked if there is a possibility the Borough will be awarded additional Pandemic Recovery Funds for the project. Manager Hart answered that it is highly unlikely.

Member Fazio made a motion to approve the submission of a Redevelopment Assistance Capital Program grant application in the amount of \$1,000,000 with a 50 percent match for the North Wales Arts and Cultural Center Renovation Project. Member McClure seconded the motion. Motion passed 7 yes, 0 no.

Consideration: Approval of Minutes: July 12, 2022

Member Fazio requested a note be added thanking the Public Works Department for clearing the fence line of trees and shrubbery in Hess Park as well as removing a deceased deer. Manager Hart explained it would be noted in tonight's minutes.

Member Collins made a motion to approve the minutes of July 12, 2022. Member Fazio seconded the motion. Motion passed 7 yes, 0 no.

Consideration: Approval of Disbursements: \$141,424.36

President Amato asked for clarification on the tax turnover for the North Penn Volunteer Fire Company. Manager Hart reminded Council that they approved a 100 percent tax millage increase for the Fire Company in 2021.

Member McClure made a motion to approve payment of the bills in the amount of \$141,424.36. Member Fazio seconded the motion. Motion passed 7 yes, 0 no.

Old Business / Committee & Board Reports / Zoning Applications

Manager Hart reviewed a draft set of Parks and Recreation Board minutes for their July 14 meeting. She noted the following upcoming events: Summer Scavenger Park Tour and After-School Art Club. She then reviewed a draft set of Human Relations Commission minutes for their July 21 meeting.

Assistant Manager Guzzardo announced he received ZHB Application 22-05, regarding 800 East Montgomery Avenue and he will provide more details at the next Council meeting.

Solicitor / Mayor / Council / Chief / Public Works / Manager

Solicitor Filice announced that an executive session was held after the previous meeting and no action was taken after. He added that there will not be an executive session after tonight's meeting.

Mayor McDevitt made the following announcements: he volunteered at an event hosted by Manna on Main Street, he thanked the Police Department, Borough staff and Montgomery County SWAT Team for assisting with detaining a barricaded suspect on July 22 and announced the 32nd Anniversary of the ADA Act.

Member O'Neil warned everyone of a scam linked to an organization by the name of Sequoia Research LLC that is posing as Montgomery County.

Chief Erenius also thanked Montgomery County Central Region SWAT team and all other emergency services that assisted with an incident on July 22nd in the Borough.

Manager Hart made the following announcements: Community Day on September 24, a QR code survey regarding public participation will be mailed out to the residents in the Fall-Winter newsletters during the week of September 8th and she also announced the Boards and Commissions Vacancies.

Member Neiderhiser made a motion to adjourn. Member Fazio seconded the motion. Motion passed 7 yes, 0 no. Meeting adjourned at 7:31 P.M.

Attest: _____

Christine A. Hart
Borough Manager

North Wales Borough Planning Commission

August 03, 2022 Meeting Minutes

The North Wales Borough Planning Commission Meeting of August 03, 2022 was conducted in person at North Wales Borough Hall.

The meeting information was advertised in The Reporter on December 21, 2021, as part of the meeting schedule for 2022.

The meeting was called to order by Chair Greta Martin Washington at 7:03 P.M. The following members were present: Greta Martin Washington, Greg D'Angelo, Lillian Higgins and Jocelyn Tenney. Member Mark Tarlecki was absent.

Assistant Borough Manager/Zoning Officer Alan Guzzardo was in attendance.

Tim Konetchy, Montgomery County Planning Commission Planner participated in the meeting.

Member Greg D'Angelo led the members in the Pledge of Allegiance.

1. Public Comment

There was no general public in attendance and no questions or comments were received from the public prior to the meeting.

2. Presentation: Rebecca Swanson, Montgomery County Redevelopment Authority

Ms. Swanson had been invited to the Commission to speak about possible financial assistance for redevelopment in North Wales Borough. She provided the Commission with information on available grants and low-interest loans, specifically highlighting C-Pace. It is a financial tool for property owners considering energy efficient, renewable energy and water conservation projects. At this time the program is available for commercial, industrial, agricultural and non-profit properties. Government buildings are not currently eligible. However, the McKeever's property could be.

Mr. Guzzardo suggested that he could put the information on the North Wales Borough website as well as email the information to the Borough businesses. Ms. Swanson noted that she is available to speak at a meeting of the businesses and can answer their questions at the same time.

3. Discussion: Zoning Map and Ordinance Updates

Tim provided the Commission members with a copy of the updated zoning map and ordinances. Reviewing sign ordinances will be the next topic for the commission. It was suggested that the Commission also check with the North Wales Historic Architecture Review Board (HARB) since they also have requirements for signs in the North Wales historic district.

North Wales Borough Planning Commission

August 03, 2022 Meeting Minutes

The Commission plans to present the revised zoning map and ordinance updates to North Wales Borough Council in November and December, 2022 for review and approval.

4. Adjournment

Member Lillian Higgins made the motion to adjourn the meeting. Member Greg D'Angelo seconded the motion. All members voted in agreement.

Respectfully submitted,
Jocelyn Tenney, Secretary

DRAFT

AUG



SEP

For complete and updated 2022 event listings, including sponsors and registration information, visit www.chambergmc.org. Pre-registration is required for all events.

TUE — AUG 2

12:00 p.m. — 1:00 p.m.

BUSINESS CONNECTORS

Building relationships through education and networking with a presentation and 30-second commercials. Topic: Videos: The Evolution of Social Media presented by Gummi Sigurdarson, RedKnight. BYO Lunch. Free; members only.

TUE — AUG 9

8:00 a.m. — 9:00 a.m.

ALLIANCE OF WOMEN IN BUSINESS

A great forum for small business owners and staff to network, learn, and share business strategies. Work Life Balance discussion led by Liz Herman, Sherpa Financial. Free; members only.

TUE — AUG 16

12:00 p.m. — 1:00 p.m.

BUSINESS CONNECTORS

Building relationships through education and networking. A continued discussion on Videos: The Evolution of Social Media. BYO lunch. Free; members only.

THU — AUG 18

5:00 p.m. — 7:30 p.m.

LOCAL & ON TAP

Meet with a diverse group of business professionals throughout the region in person to network and support a local nonprofit. Location: Round Guys Brewing Company and Main Street Pizzeria & Grille. Nonprofit recognition: North Penn Valley Boys & Girls Club. Free.

WED — AUG 24

9:00 a.m. — 10:00 a.m.

STRATEGIES FOR ACHIEVING THE NEXT LEVEL OF BUSINESS GROWTH (VIRTUAL)

Monthly Members Connect meeting that includes event updates and a presentation followed by a Q&A session. Presented by Tony Moore, SCORE Mentors Bucks County. Free for members.

SAT — AUG 27

10:00 a.m. — 2:00 p.m.

COMMUNITY HEALTH & WELLNESS FAIR

Join us at the 9th Annual Community Health & Wellness Fair during Lansdale's Founder's Day. A day full of food, fun and entertainment with vendors centered around overall wellness. Free.



Saturday, Aug. 27, 2022

10:00 AM - 2:00 PM

Railroad Plaza, Lansdale



TUE — SEP 6

12:00 p.m. — 1:00 p.m.

BUSINESS CONNECTORS

Building relationships through education and networking with a presentation and 30-second commercials. Presented by TD Bank. BYO Lunch. Free; members only.

TUE — SEP 13

8:00 a.m. — 9:00 a.m.

ALLIANCE OF WOMEN IN BUSINESS

A great forum for small business owners and staff to network, learn, and share business strategies. Planning for the 4th quarter and 2023 discussion led by Cathy Carroll, Payroll Vault. Free; members only.

THU — SEP 15

5:00 p.m. — 7:30 p.m.

LOCAL & ON TAP

Meet with a diverse group of business professionals throughout the region in person to network and support a local nonprofit. Location: Well Crafted Beer Co. Nonprofit Recognition: Big Brothers Big Sisters.

TUE — SEP 20

12:00 p.m. — 1:00 p.m.

BUSINESS CONNECTORS

Building relationships through education and networking. A continued discussion presented by TD Bank. Free; members only.

WED — SEP 21

9:00 a.m. — 10:00 a.m.

MARKETING YOUR WAY TO A STRONGER 4TH QUARTER (VIRTUAL)

Monthly Members Connect meeting that includes event updates and a presentation followed by a Q&A session. Presented by Adriana Motto, Motto Marketing. Free for members.

FRI — SEP 30

8:00 a.m. — 9:30 a.m.

MEET THE CANDIDATES

Join fellow business leaders in getting to know the candidates in the 2022 election. Invited guests include candidates for PA governor, US Senate, Congress and PA House of Representatives whose districts include the Chamber's service area in Montgomery County.

POWER
Your POTENTIAL
Montgomery County Women's Conference

NETWORKING • EDUCATION • INSPIRATION

THURSDAY, OCTOBER 27, 2022

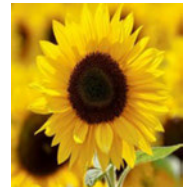
**NORMANDY FARM HOTEL
& CONFERENCE CENTER**



SUMMER SCAVENGER PARK TOUR

#NWSELFIE TOUR

Between 8/1/22-8/31/22, every park in North Wales Borough will have one laminated image posted somewhere within it. Write down what unique picture you find at each park below. For extra fun, take photos in the parks and post on Instagram or Facebook using the hashtag #nwselfietour. To be eligible for a raffle prize, a paper copy of this form must be completed correctly & returned. **Drop off your completed forms at Borough Hall (300 School Street) or North Wales Library (233 S. Swartley St.) before 9/6/22.** Seven correctly completed forms will be drawn at random for gift cards to local businesses.



LIST OF PARKS

PICTURE FOUND AT PARK



WEINGARTNER

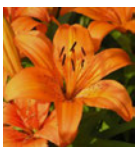
HESS

WEE WHALERS



2ND STREET

9TH STREET



BRYANT MEMORIAL

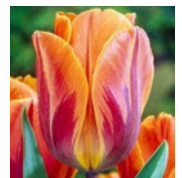
(8TH ST)

A CHILD'S GARDEN

(4TH ST)

MONTGOMERY AVE.

WALNUT SQUARE



PARKS AND RECREATION

North Wales Borough
300 School Street
North Wales, PA 19454
www.northwalesborough.org

Name: _____ Phone number or email: _____



North Wales Parks and Open Space

1. Weingartner Park
2. Hess Park
3. Wee Whalers Park
4. Second Street Park
5. Ninth Street Park
6. Bryant Memorial Park
7. A Child's Garden
8. 311 W Montgomery Avenue
9. Walnut Square



SKIPPACK
PHARMACY
COVID-19
VACCINATION
CLINIC



FAMILY COVID-19 VACCINE CLINIC

INCLUDING VACCINES FOR OUR YOUNGEST AGE GROUP



FIGHT COVID-19

NORTH WALES BOROUGH HALL

300 SCHOOL STREET, NORTH WALES, PA 19454

THURSDAY AUGUST 11, 2022

5PM - 7PM

CLINIC WILL HAVE BABY,
TODDLER, PIDS, AND ADULT
DOSES OF PFIZER &
MODERNA

WWW.SKIPPACKPHARMACY.COM



Montgomery County
Office of Public Health



NORTH WALES COMMUNITY SATURDAY SEPT 24TH DAY



FREE
KID ZONE
11AM - 3PM

LIVE MUSIC
FOOD TRUCKS
BEER GARDEN
VENDORS

11:00AM - 5:00PM

DOWNTOWN NORTH WALES

[FACEBOOK.COM/NORTHWALESCOMMUNITYDAY](https://www.facebook.com/northwalescommunityday)

Tuesday Morning Kid's Club!

Weekly themed Arts & Crafts with follow-up activities

Contact: Lauren Gers (215)-603-2330 LaurenGersEDU@gmail.com

Come join us in North Wales for a fun, teacher-lead activity where your kids will complete a weekly themed arts & crafts project followed by a play-based activity that fits the theme of the week. Our themes will include Labor Day, leaves, camping, apples, squirrels, and other fall things! Some fun crafts we will do include a sensory bin to take home, sun catcher leaves, fluffy fire cloud dough, and more! Come ready to practice fine and gross motor skills while laughing, playing, and making friends too! We hope to see you there!



Details:

- *6 forty-five minute sessions*
- *Cost: \$80 for residents/\$90 for non-residents*
 - *Cash or check payable to Lauren Gers*
- *Dates: September 6- October 11*
- *Time: Tuesdays at 10:00am*
- *Ages: 2 years – 6 years*
- *Parents stay for the duration of each session*

Ms. Lauren

Ms. Lauren is a former teacher and current stay-at-home-mom who completed her undergrad for special education, early childhood, and elementary education at Gwynedd Mercy University and her Master's in education at West Chester University.

Contact Lauren by phone or email to register!

Location: North Wales Arts and Cultural Center

125 N. Main Street

Parking is located behind the building

Original Perspective, LLC is happy to present,

After-School Art Club! 2022/23

2nd - 6th Grade at the North Wales Arts and Cultural Center

125 N. Main Street, North Wales, PA 19454



Owner, Renée K. Williams-Erwin

(215) 939-6892

www.original-perspective.com

After-School Art Club is an after-school art program for students in grades 2nd-6th who love art. Each session we will work with a variety of materials including air-dry clay, paint, pencil, markers, oil pastel, printmaking & more! New projects each year! We hope you can join us as we have a great time creating art & making new friends!



Session 1: Fall into Art!

Saturday 9-10:30am 6 Weeks

Dates: Sept.: 3, 10, 17, Oct.: 1, 8, 15.

Sign-Up Deadline: Aug. 27

Bright blue skies, leaves ablaze with autumn colors! Get inspired by the brilliance of fall!

Session 2: Warm-up with Art!

Saturday 9-10:30am 6 Weeks

Dates: Nov.: 5, 12, 19, Dec.: 3, 10, 17.

Sign-Up Deadline: Oct. 29

Winter's stark beauty, thick crisp snow, cozy sweaters! Warm up to new art projects!

Session 3: A New Year with Art!

Saturday 9-10:30am 6 Weeks

Dates: Jan.: 21, 28, Feb.: 4, 11, 18, 25.

Sign-Up Deadline: Jan. 14

Silhouettes of trees stretch across the snow! Sharpen your skills this New Year!

Session 4: Chill-Out with Art!

Saturday 9-10:30am 6 Weeks

Dates: March: 4, 11, 18, 25, April: 1, 15.

Sign-Up Deadline: February 25

Paper quilts, animal tracks in the snow! Thaw out your artistic side this winter!

Session 5: Spring into Art!

Saturday 9-10:30am 6 Weeks

Dates: May: 6, 13, 20, 27, June: 3, 10.

Sign-Up Deadline: April 29

Radiant colors and cool rains; Spring inspiration is here as nature comes alive again!

----Cut Here-----

Mrs. Erwin is an award-winning local teaching artist and has taught After-School Art Club since 2014.

Mrs. Erwin graduated with distinction from Tyler School of Art, Temple University in 1991, and is currently pursuing her teaching certification and M.Ed. in Art Education.

- ☐ Session 1
- ☐ Session 2
- ☐ Session 3
- ☐ Session 4
- ☐ Session 5

Please indicate choice of session(s).

Fee per six-week session (includes all materials):

Residents of North Wales Borough
\$110

Non-North Wales Borough Residents
\$130

Please, make check payable to:
Original Perspective, LLC

Mail registration and payment to:
Original Perspective, LLC
c/o Renée Erwin
360 S. 8th Street
North Wales, PA 19454-3055



Student's Name: _____

Grade: _____ Age: _____

Allergies and Insurance Information: _____

Parent/Guardian Name: _____

Parent/Guardian Phone Number: _____

Parent/Guardian Email (Please, print neatly. Thank you!): _____



Boards & Commissions Vacancies

- Civil Service Commission – Term Expires: 12/31/2025
- Historical Architectural Review Board – Term Expires: 12/31/2023
- Historical Architectural Review Board – Term Expires: 12/31/2023
***Must be a licensed real estate broker.**
- Human Relations Commission – Term Expires: 12/31/2024
- Shade Tree Commission – Term Expires: 12/31/2026
- Uniform Construction Code Board of Appeals – Term Expires: 12/31/2026

Please submit a letter of interest for any one or more of the above listed openings, addressed to the North Wales Borough Council in care of the Borough Manager. Letters can be submitted electronically to chart@northwalesborough.org.