

Chapter 7: Utilities and Stormwater Management

Utilities are essential services that affect future land use and growth areas, stormwater management, and energy use. Chapter 7 of this Comprehensive Plan will focus on the existing and planned utility investment within Exeter Borough to evaluate appropriate ways to improve services, expand service to support future growth and development in planned growth areas, and policies to limit expansion to designated conservation areas. Much of this information was utilized to develop the recommendations contained within this Comprehensive Plan.

Section 7.A: Sewage Disposal Facilities and Services

The existing land uses or developed areas of Exeter Borough are connected to and are serviced by the Wyoming Valley Sanitary Authority (WVSA), which provides sanitary sewage disposal and treatment services to several municipalities within Luzerne County. The WVSA provides all sanitary sewer services and wastewater treatment services for Exeter Borough as part of an inter-municipal agreement. Under this agreement, Exeter Borough grants WVSA the right to collect, transport, deliver, and discharge wastewater from Exeter Borough in accordance with the provisions established by the Commonwealth of Pennsylvania under Permit PA0026107.

The sanitary sewer system is adequately managed and maintained by the WVSA. The customers within the WVSA system are billed on a quarterly basis based upon the authorized rates designated by WVSA in accordance with Permit PA0026107. Exeter Borough should maintain current agreements with WVSA or possibly explore additional options with the other municipalities within the regional service area. All uses within the future or planned growth areas should be connected to the sanitary sewer system.

The Pennsylvania Sewage Facilities Act (PA Act 537, as amended), requires that every municipality within the Commonwealth of Pennsylvania develop and maintain an up-to-date Sewage Facilities Plan. PA Act 537 requires that the municipality review its Official Sewage Plan every five (5) years to determine effectiveness and/or to determine the need for revisions. The WVSA maintains compliance with the provisions established by the Pennsylvania Sewage Facilities Act on behalf of Exeter Borough. All future uses within the future growth or planned growth areas shall be serviced by WVSA.

Exeter Borough does have a few uses that are dependant upon on-lot sewage disposal systems, which are planned, designed and permitted under the provisions established by Luzerne County and the Pennsylvania Department of Environmental Protection. These areas or uses are located within the conservation areas or outside of the planned growth areas of Exeter Borough. Based upon on-lot sewage disposal limitations associated with high water tables, flooding, depth to bedrock and/or steep slopes, there will be very few on-lot sewage disposal facilities within Exeter Borough.

Section 7.B: Water Supply Facilities and Services

The existing land uses or developed areas of Exeter Borough are connected to and serviced by the Pennsylvania American Water Company (PAWC), which provides public and/or bulk water to several municipalities within Luzerne County. The PAWC operates under the provisions established by the Commonwealth of Pennsylvania. Exeter Borough grants PAWC the right to connect, transport, deliver, and distribute water to its customers located within Exeter Borough.

The areas currently served by PAWC are located within the designated growth areas of Exeter Borough. All uses within the future or planned growth areas should be connected to the public water supply systems. The areas designated as conservation areas may utilize private wells or on-lot water supply systems provided that it is in compliance with the guidelines and agreements established by Exeter Borough, the PAWC and the Commonwealth of Pennsylvania.

Exeter Borough should continue to support water conservation practices through municipal ordinances that establish requirements for the types of fixtures required for water closets, urinals and associated flushing mechanisms, showerheads, and faucets.

Section 7.C: Stormwater Management

The water that runs off the land into low land, valleys and surface waters during and immediately following a rainfall event is referred to as stormwater. In a developing watershed, the volume of stormwater resulting from a particular rainfall event increases due to the amount of impervious surface that is required to support the improvements. The conversion of natural land and topography to residential, commercial, industrial, institutional, and even agricultural and recreational uses, results in decreased infiltrations of rainfall and an increased rate and volume of stormwater. As subdivision and land development activity occurs, the increased quantity of stormwater must be properly addressed. Failure to do so can result in greater flooding, stream channel erosion, sedimentation and reduced groundwater recharge. Provisions for stormwater management must be addressed in every subdivision and land development application in Exeter Borough. Past efforts to manage stormwater have usually focused upon controlling the rate of discharge on a municipal basis, but this focus is changing to consider stormwater impacts on a watershed-wide basis.

Pennsylvania Act 167

The Pennsylvania General Assembly enacted Act 167, the Pennsylvania Stormwater Management Act in order to comprehensively address stormwater management and flooding. The following statements of legislative findings sum up the critical issues and general provisions of Act 167:

- Inadequate management of stormwater runoff from development increases flood flows and velocity, contributes to erosion and sedimentation, overloads the carrying capacity of streams and storm sewers, generally increases the cost of public stormwater facilities, undermines floodplain management and floodplain control efforts in downstream communities, reduces groundwater recharge, and threatens public health and safety.
- A comprehensive stormwater management program including reasonable regulation of development and activities causing accelerated runoff, is fundamental to the public health, safety, and general welfare.

Act 167 changed the local stormwater management theories to a watershed-based, comprehensive program of regional stormwater management. Act 167 requires all counties within Pennsylvania to prepare and adopt stormwater management plans for each watershed within the county, as designated by the Pennsylvania Department of Environmental Protection (DEP). The Luzerne County Act 167 Plan does comply with this requirement. Most importantly, the Luzerne County Act 167 Plan has been prepared in consultation with the municipalities of Luzerne County through a Watershed Plan Advisory Committee. The Act 167 Plan does contain stormwater controls to manage stormwater runoff from proposed subdivision and land development applications.

Federal Clean Water Act and Municipal Separate Stormwater Systems (MS4s)

In October of 1999, the National Pollution Elimination Discharge System (NPDES) Phase II Stormwater Permitting Regulations were signed into law. The Environmental Protection Agency's objective for Phase II regulations includes the following:

- Provide a comprehensive stormwater program that designates and controls additional sources of stormwater discharges to protect water quality;
- Address discharges of stormwater activities including: construction activities disturbing between 1 and 5 acres; light industrial activities not exposed to stormwater; municipal separate storm sewer systems (MS4s); and municipally owned industrial facilities previously exempt under Phase I; and
- Facilitate and promote watershed planning as a framework for implementing water quality programs whenever possible.

While certain activities and facilities are easily defined, MS4s are defined as stormwater conveyance or system of conveyances owned by the state, county or municipality that discharges into the water of the United States of America and is not a combined sewer or part of a publicly owned treatment works. The Phase II regulations identify 20 urban areas encompassing more than 700 municipalities. In addition, there are over 200 municipalities that will be evaluated by the Pennsylvania Department of Environmental Protection (EPA) on a case-by-case basis to determine if permits are required.

The Wyoming Valley Sanitary Authority (WVSA) serves as the Regional MS4 Permit Administrator for 36 municipalities (including Exeter Borough) within Luzerne County. The Regional MS4 Area encompasses 6 watersheds within the Susquehanna River Basin, which part of the Regional Chesapeake Bay Pollution Reduction Plan. It is expected that the region will experience additional savings as economies of scale are realized in tackling minimal control measures and fixed administrative costs are spread over a larger number of property owners. Over time, a regional approach to existing infrastructure operation, maintenance and improvements will yield even more cost savings.

Stormwater Management Regulations and Strategic Partnerships

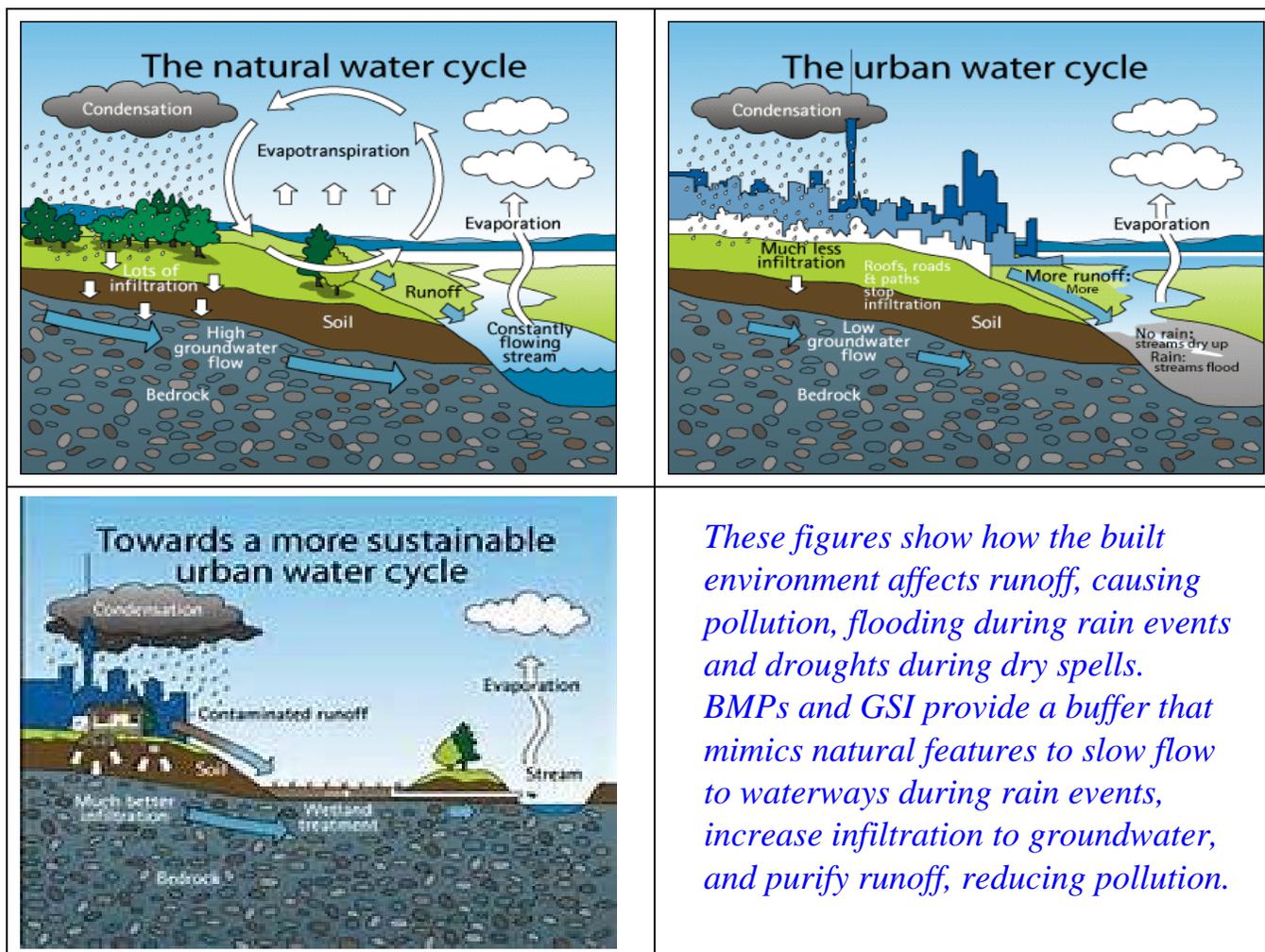
As part of the Regional MS4 Program, Exeter Borough has established comprehensive stormwater management regulations through the WVSA. These requirements are appropriate and adequate, although they should be periodically reviewed by the Exeter Borough Engineer to ensure that they are applying the most appropriate and up-to-date strategies and best practices.

Exeter Borough in conjunction with the WVSA has established partnerships with key stakeholders in the region to implement stormwater solutions at a reduced cost. Initial stakeholders include: Luzerne County Flood Prevention Authority (FPA); the United States Army Corps of Engineers (USACE); and the Pennsylvania Department of Environmental Protection (PADEP).

The requirements to reduce pollutants are met through Best Management Practices (BMPs). The BMPs are used to protect water quality, enhance water availability and reduce flooding potential through effective stormwater management. Examples of structural BMPs include, but are not limited to, wet ponds, constructed wetlands, permeable pavement, riparian buffers, and stream restoration

Best Management Practices (BMPs) and Green Stormwater Infrastructure

Best Management Practices (BMPs) are a broad series of land and water management strategies designed to minimize the adverse impacts of subdivision and land development activity. Stormwater and watershed management is fundamentally concerned with developing programs to protect the natural resources in order to sustain the diverse needs of our community. BMPs provide opportunities to reduce impacts associated with development activity in a manner that endorses conservation management. In particular, Green Stormwater Infrastructure (GSI) measures are becoming increasingly popular.



These figures show how the built environment affects runoff, causing pollution, flooding during rain events and droughts during dry spells. BMPs and GSI provide a buffer that mimics natural features to slow flow to waterways during rain events, increase infiltration to groundwater, and purify runoff, reducing pollution.

These features include rain gardens, bio-swales, vegetated planting strips, green roofs, tree pits, constructed wetlands, and other green features intended to mimic natural features. In addition to providing improved stormwater management, these features provide aesthetic benefits for the community, increased habitat areas for wildlife, improve air quality, and enhance water quality.

BMPs can be “structural” or “non-structural”. Structural BMPs are measures that require the design and physical constructions of a facility to assist with reducing or eliminating a non-point source of pollution and control stormwater. Non-structural BMPs are approaches to planning, site design or regulations that positively affect water quality and reduce stormwater runoff. Non-structural BMPs are generally implemented through the enactment of municipal ordinances that specify site design and construction activities for all subdivision and land development plan applications.

Section 7.D: Other Utility Providers and Services

The following is a brief description of other utility providers and services that are currently available within Exeter Borough.

Electrical Service

Pennsylvania Power and Light (PP&L) provides electrical service to all uses within Exeter Borough. The majority of existing electrical lines are located above ground on utility poles. Exeter Borough is also home to electrical substations. All applications involving subdivision, land development or other major improvements should notify PP&L to inquire upon service, availability, land use restrictions and/or setback requirements.

Natural Gas

UGI provides natural gas service to most of the developed area within the portions of Exeter Borough. All future uses within the planned growth areas of Exeter Borough should be capable of being served by natural gas.



Telephone and/or Wireless Communication Services

There are several telephone and/or wireless communication providers within Exeter Borough. Most of these services are available within a defined network or service area, which are subject to contract agreements between the customer and the provider.

Cable Service

Comcast and Service Electric Cable Television (SECTV) provide cable, internet and communication service options to its customers within Exeter Borough. These services are subject to franchise agreement between Comcast and SECTV via Exeter Borough and the customers. Other wireless service options may be available via satellite service contracts.

Transmission Lines and Pipelines

In addition to the basic utility service lines, there are several major transmission lines and pipelines that are located within the Wyoming Valley of Luzerne County. Many of these are power transmission lines radiating out from nearby substations or distribution facilities.

Section 7.E: Energy Conservation

Pursuant to Section 301.1 of the Pennsylvania Municipalities Planning Code (MPC), this Comprehensive Plan Update may include an energy conservation element to address the following:

To promote energy conservation and the effective utilization of renewable energy sources, the comprehensive plan may include an energy conservation plan element which systematically analyzes the impact of each other component and element of the comprehensive plan on the present and future use of energy in the municipality, details specific measures contained in the other plan elements designed to reduce energy consumption and proposes other measures that the municipality may take to reduce energy consumption and to promote the effective utilization of renewable energy sources.

In order to meet the objectives of this task on the municipal level, Exeter Borough should develop recommendations for land use, housing and transportation with some degree of emphasis on energy conservation. This could be accomplished by considering the following issues:

- Encourage efficient growth and development in areas that have existing infrastructure with suitable capacities and incorporate Low-Impact Development (LID) practices.
- Develop regulations or codes that encourage or incentivize the use of renewable energy supplies from solar, wind, water and geothermal sources. Some examples would be fast-tracking approvals for developments that would generate at least 50% of their power from renewable resources, density bonuses based on renewable quotas or possibly LEED certification, and not classifying solar panels as “impervious surface,” just to name a few.
- Institute a Tree Replacement Ordinance, which would require the planting of trees cut down or damaged during construction activities. More trees would increase tree canopies, which reduces the urban “heat island” effect and can reduce cooling costs in the summer.
- Continue to develop, enhance, adopt and implement building code requirements that promote energy conservation practices.
- Place a high priority on the enforcement of all housing and property maintenance codes.



Section 7.F: Planning Implications and Issues

Chapter 7 provided a description and analysis of the utility facilities and services within Exeter Borough. The following summary is a list of key planning implications relative to sewage, water, stormwater, energy conservation and other utility providers should be considered by Exeter Borough:

- (1) Exeter Borough has a stable relationship with the Wyoming Valley Sanitary Authority (WVSA), which provides regional sanitary sewage disposal, collection, conveyance and treatment to the municipalities within the Wyoming Valley of Luzerne County.
- (2) Exeter Borough has a stable relationship with Pennsylvania American Water Company (PAWC), which provides potable and bulk water service to customers on a regional scale within the Wyoming Valley of Luzerne County.
- (3) Exeter Borough has strong stormwater management program that is coordinated on a regional scale by the Luzerne County Act 167 Plan and by the WVSA, which provides MS4 compliance opportunity for 36 municipalities within the Wyoming Valley of Luzerne County.
- (4) New flood control and stormwater management techniques should be evaluated on a local and regional scale.
- (5) Policies, regulatory actions and incentives for energy conservation have been previously viewed as a national issue, with the state and federal government has held the lead roles. Municipalities also play a key role, however, and an energy conservation plan should be developed with emphasis on zoning, land use regulations and code enforcement.
- (6) Luzerne County has a number of regional non-profit and volunteer environmental, conservation, and watershed groups. Exeter Borough could partner with these groups to plan and coordinate clean-ups, plantings, and other environmental enhancement projects.



Section 7.G: Utilities and Stormwater Management Plan

The community goals, objectives and policies that are relative to utilities and stormwater management are contained within Chapter 2 of this Comprehensive Plan. Exeter Borough has determined that a strategic plan should be considered for implementation over the next 10 to 20 years. The following plan for utilities and stormwater management has been established for this Comprehensive Plan.

- (1) Exeter Borough should maintain a positive relationship with the Wyoming Valley Sanitary Authority (WVSA) as its regional partner for sanitary sewage disposal, collection, conveyance and treatment. Attend periodic meetings with the WVSA in order to better understand their long-range plans for a comprehensive sewage management program.
- (2) Exeter Borough should maintain a positive relationship with the Pennsylvania American Water Company (PAWC) as its regional partner for potable and bulk water supply. Attend periodic meetings with the PAWC in order to better understand their long-range plans for a comprehensive water supply program.
- (3) Exeter Borough should maintain a positive relationship with the WVSA as its regional partner for stormwater management, flood control and MS4 compliance on a regional scale. Attend periodic meetings with the WVSA in order to better understand their long-range plans for a comprehensive stormwater management and flood control program.
- (4) Update the Zoning Ordinance and the Subdivision and Land Development Ordinance with the following modifications:
 - Incentivize the use of Green Stormwater Infrastructure (GSI) BMPs and other environmental stewardship efforts. This can be accomplished through a number of methods such as providing density bonuses or additional impervious cover for developments that use Green Stormwater measures (such as rain gardens, cisterns, etc.), and/or meet certain environmental standards (such as LEED certification), Low-Impact Development (LID) standards and renewable energy use percentages.
 - Update GSI design standards, include standards and examples in ordinance, and incorporate innovative new measures such as blue roofs and stormwater tree trenches.
 - Examine the ordinance with respect to renewable energy sources to remove any barriers to their installation, such as not classifying solar panels as “impervious surfaces”.
- (5) Use proven programs to continuously track and monitor water and stormwater management measures and features, such as BMPs (particularly municipal rain gardens and other large features), private wells, stormwater outfalls, and sewer conditions.

