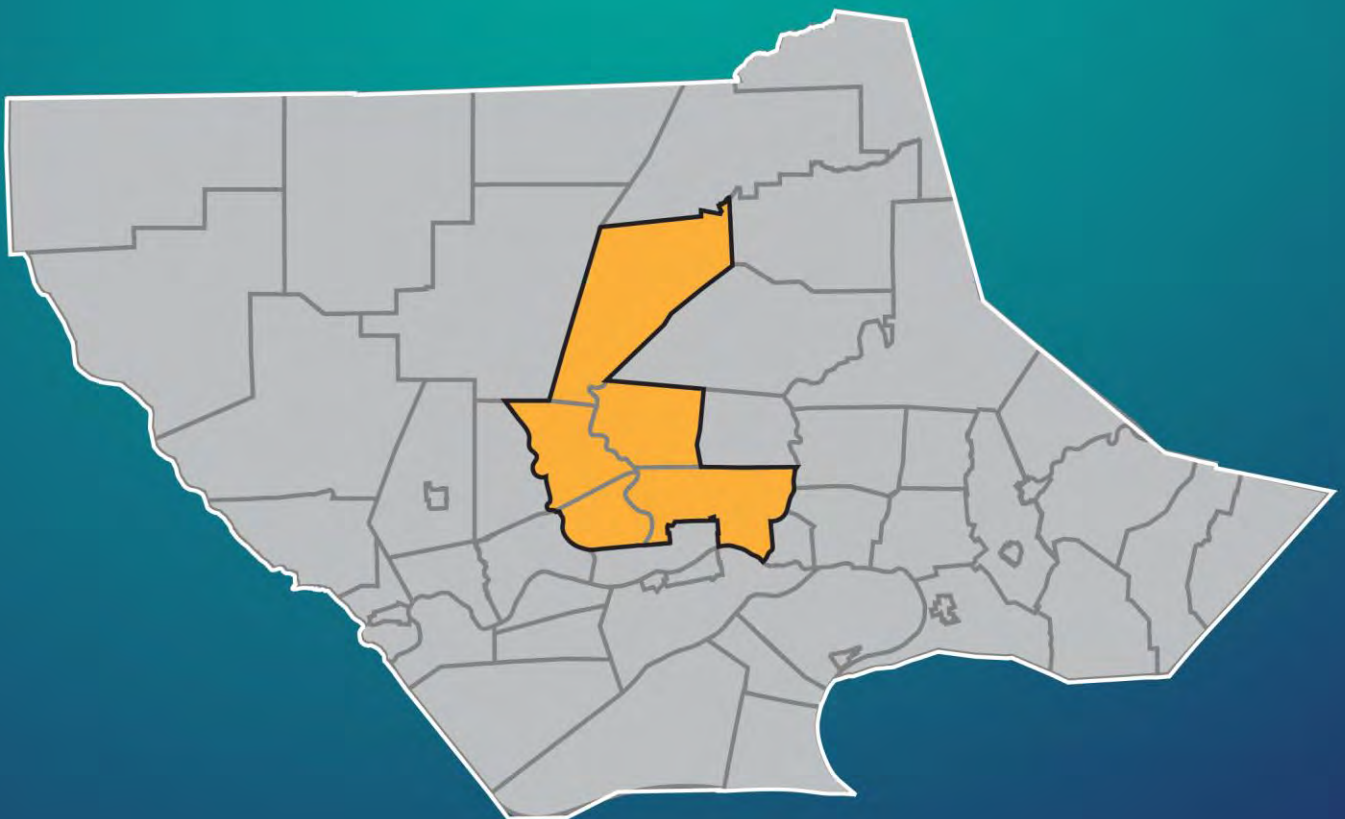




**2017 MULTI-MUNICIPAL  
COMPREHENSIVE PLAN REVIEW  
AND  
IMPLEMENTATION STRATEGY**  
Lower Lycoming Creek Planning Area  
Lycoming County, Pennsylvania





## **Plan Adoptions**

**HEPBURN TOWNSHIP BOARD OF SUPERVISORS** – Adopted September 12, 2017

**LEWIS TOWNSHIP BOARD OF SUPERVISORS** – Adopted September 5, 2017

**LOYALSOCK TOWNSHIP BOARD OF SUPERVISORS** – Adopted August 22, 2017

**LYCOMING TOWNSHIP BOARD OF SUPERVISORS** – Adopted September 6, 2017

**OLD LYCOMING TOWNSHIP BOARD OF SUPERVISORS** – Adopted September 12, 2017

\*Please refer to Appendix F for the Adopted Municipal Resolutions

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## Chapter 1: Plan Overview

### Introduction

*This 2017 Lower Lycoming Creek Planning Area Comprehensive Plan Review and Implementation Strategy has been shaped by the issues currently identified as priorities within this multi-municipal planning area.*

**THIS 2017 LOWER LYCOMING CREEK COMPREHENSIVE PLAN REVIEW AND IMPLEMENTATION STRATEGY** is the culmination of months of planning, information, and data gathering, trend analysis, collaboration, deliberation, task coordination, visioning, and prioritization that teamed dozens of public- and private-sector leaders and stakeholders from across the Lower Lycoming Creek Planning Area and beyond. Their skill sets, expertise, and institutional and individual insights have resulted in this focused, collaborative blueprint for both growing and preserving quality of life in this area of Lycoming County, Pennsylvania. The municipal governments in the Lower Lycoming Creek Planning Area are:

- Hepburn Township
- Lewis Township
- Lycoming Township
- Loyalsock Township
- Old Lycoming Township

The Lower Lycoming Creek Planning Area is one of the most diverse planning areas in Lycoming County--from densely developed portions of suburban Williamsport to rural expanses of forest. Made up of the five municipalities listed above, the planning area's focus and commonality has been Lycoming Creek and the impacts of increasing development throughout the watershed, especially within the last 10 years, with the ebb and flow of Marcellus Shale gas extraction activities. The Planning Area offers intimate neighborhoods, rural homes sites, and sizeable woodland and agricultural homesteads. The nearby city and rich natural environment provide real-life settings for learning that supplement the high-quality educational facilities of the local school districts. Small businesses provide personal services in locations along common travel corridors. Finally, the Planning Area is home to scenic view after scenic view along the Lycoming Creek corridor and from the many points looking on the Susquehanna Valley.

An exhaustive comprehensive planning effort for the Lower Lycoming Creek Planning Area was last conducted more than 10 years ago and resulted in a multi-municipal plan that was completed and adopted in 2005. During the review process conducted in 2016, the issues, priorities, and key recommendations in the 2005 document were reviewed and revalidated as a planning baseline for the 2017 update. The 2017 Plan translates the adopted 2005 plan into a set of achievable goals by providing a succinct implementation strategy to address the current priorities of the Lower Lycoming Creek area.

The 2005 adopted comprehensive plan was successfully able to:

- Provide guidance for conducting infrastructure improvements
- Assist in planning for population increase.

Change is inevitable but not always completely anticipated. Perhaps the most visual and highly publicized unexpected change within this Planning Area over the last 10 years has been the development of Marcellus Shale gas extraction and the social implications associated this activity. From a positive perspective, the area witnessed an employment bump and a reduction in building vacancy created by development of infill gas drilling support companies, new or expanded hotels and restaurant establishments, and new or expanded service industries. Yet, these economic benefits have not been realized without a cost. The area has seen scarred landscapes, higher housing rents, and an accelerated need for road infrastructure replacement.

Some of the most vexing problems identified in the 2005 Comprehensive Plan continue to challenge the Lower Lycoming Creek municipalities today, such as:

- Exodus of the younger generation
- Changing economy vs. labor force skills
- Loss of industrial opportunities
- Increasing crime rates
- Stormwater issues
- Unprotected cultural resources
- Lack of usable land outside the floodplain
- Failing septic systems
- Water quality and the need for a regional water system.

More recently, there has been increasing concern with a number of additional issues, including:

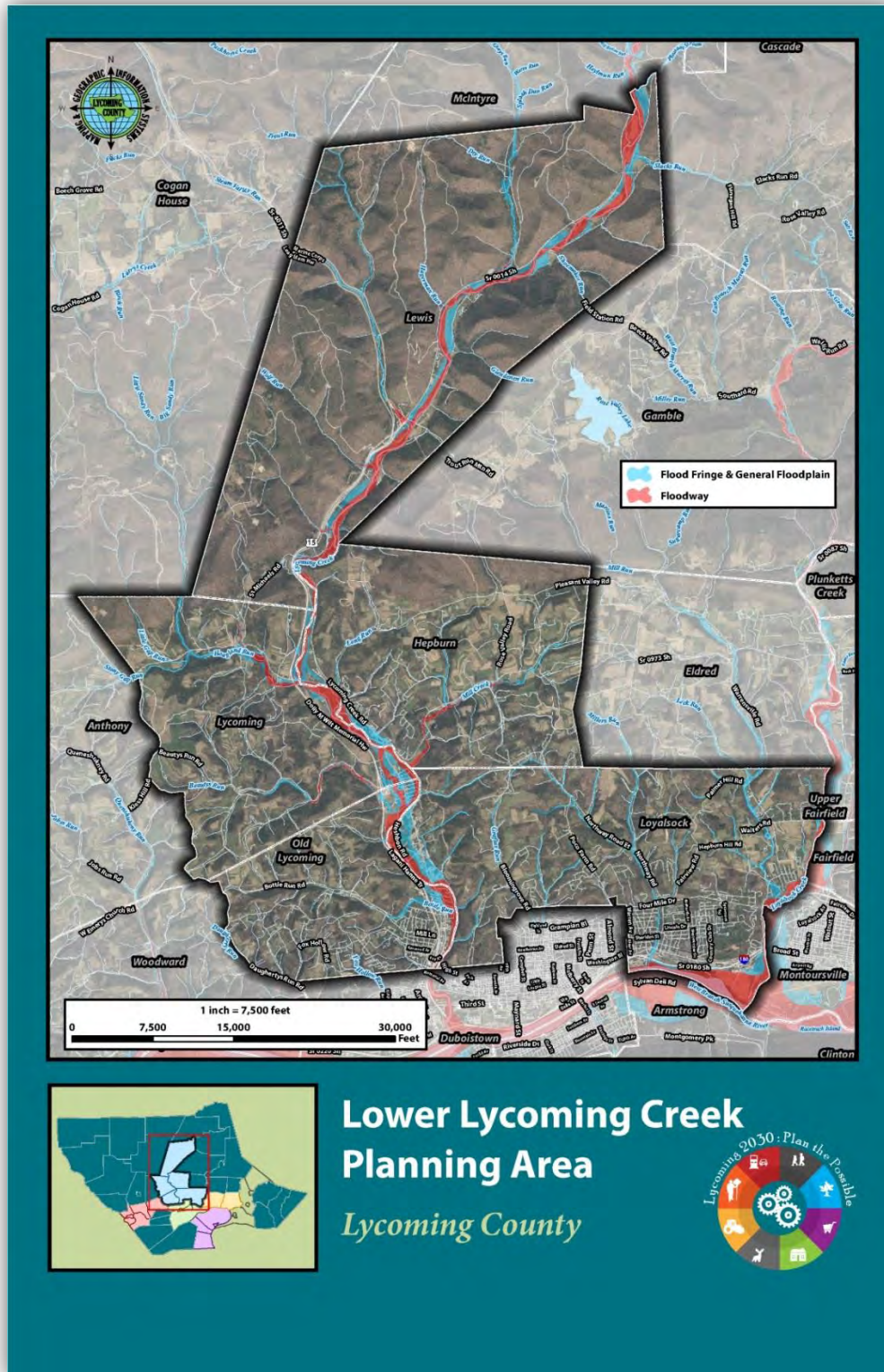
- Emergency services
- Sanitary sewer capacity
- Natural gas to domestic and business users
- Flood buyout property use limitations
- MS4 program.

The 2017 Lower Lycoming Creek Comprehensive Plan Review and Implementation Strategy considered each of the problems and concerns noted above and developed a list of seven priority issues. The 2017 document is a dynamic instrument, inasmuch as it is meant to capture the current desires of these five municipalities and provide targeted implementation strategies to achieve those goals. It satisfies the Pennsylvania Municipalities Planning Code (PAMPC - Act of 1968, P.L. 805, No. 247, as reenacted and amended) requirement for reviewing the existing, adopted comprehensive plan every decade.

A key feature of this 2017 document is the set of well-defined priority issues and the key projects that best address those issues.



Lower Lycoming Creek Planning Area Map



## Lower Lycoming Creek Planning Area Summary Profile

### GEOGRAPHY

**Location:** Lycoming County, Northcentral Pennsylvania, USA

**Total Area:** 100.4 square miles or 64,256 acres

**Floodplain Area:** 6.7 square miles

**Major Watersheds:** Lycoming Creek watershed

**Land Cover as Percentage of Total Area (University of Vermont Spatial Analysis Laboratory):** 67% tree canopy, 27% otherwise vegetated, 5% developed, 1% water and wetlands

### POPULATION

**Population (2010 Census):** 21,191 persons; 3.5 % decrease since 2000

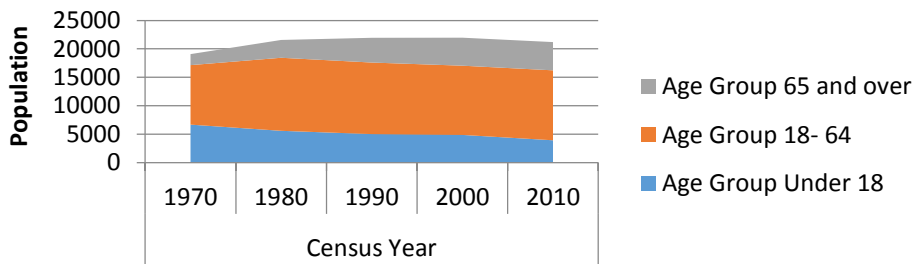
**Table 1. Median Ages, 2014 American Community Survey Estimates**

Township Of Hepburn	48.1
Township Of Lewis	45.5
Township Of Loyalsock	51.8
Township Of Lycoming	49.2
Township Of Old Lycoming	49.7

**Table 2. Population in Each Census, 1960-2010**

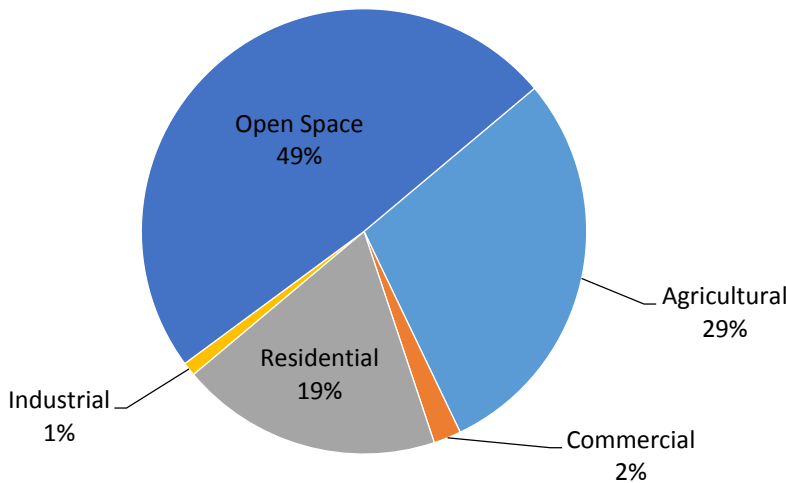
Year	1960	1970	1980	1990	2000	2010
Hepburn	1,315	1,623	2,534	2,834	2,836	2,762
Lewis	752	750	1,149	1,194	1,139	987
Loyalsock	9,047	10,581	10,763	10,644	10,876	11,026
Lycoming	1,196	1,507	1,902	1,748	1,606	1,478
Old Lycoming	3,996	4,616	5,220	5,526	5,508	4,938
<b>TOTAL</b>	<b>16,306</b>	<b>19,077</b>	<b>21,568</b>	<b>21,946</b>	<b>21,965</b>	<b>21,191</b>

**Figure 1. Population Composition by Age, 1960-2010**



**ZONING**

**Figure 2. Current Zoning as Percentage of Total Area in Planning Area**



**INFRASTRUCTURE AND FACILITIES**

**Locally-Owned Roads (PennDOT data):** 270.1 miles

**State-Owned Roads (PennDOT data):** 146.5 miles

**Major Transportation Routes:** I-180, PA-973, PA-14, and PA-15

**School Districts:** Williamsport Area, Loyalsock Township

**Water and Sewer Providers:** Williamsport Municipal Water Authority-Williamsport Sanitary Authority (WMWA-WSA); Old Lycoming Area Authority (Sanitary Sewer)

**Housing Units (2014 American Community Survey Estimate):** 10,005

**ECONOMY**

**Table 3. Median Household Income, 2014 American Community Survey Estimates**

Township Of Hepburn	\$53,167.00
Township Of Lewis	\$45,000.00
Township Of Loyalsock	\$46,843.00
Township Of Lycoming	\$50,268.00
Township Of Old Lycoming	\$45,268.00

**Top county employers with presence in Planning Area (PA Dept. of Labor & Industry):**

- Williamsport Area School District
- Weis Markets Inc.
- Heartland Employment Services, LLC
- Loyalsock Township School District
- Lycoming Community Care, Inc.

## **Plan Organization**

*The plan is designed to be succinct, focused, and action-oriented with emphasis placed on the implementation steps.*

This document incorporates a review of the 2005 Lower Lycoming Creek multi-municipal comprehensive plan with emphasis placed on developing implementable strategies to address the current set of prioritized issues. This review is organized into four sections.

The Plan Overview section presents background of the Lower Lycoming Creek Planning Area including highlights of its 2005 Comprehensive plan, geography, and demographics.

The Implementation Strategy section identifies seven priority issues. These seven issues were determined to be the most important, within the Lower Lycoming Creek Planning Area, out of the top 14 thematic issues commonly identified across all multi-municipal planning areas during the 2015-2017 comprehensive planning process.<sup>1</sup> Following each priority issue is the PAT’s “top viable project” and implementation plan, as well as a list of additional projects chosen by the PAT to be highlighted in the plan. The PAT will continue to meet at least twice a year to evaluate the progress of implementation. After a top project is completed under one or more of the priority issue categories, the PAT will have the opportunity to complete an implementation plan for the other projects on the list and create specific Project Delivery Teams (PDT) to begin implementation of the additional projects. The PDT will include those individuals responsible for planning and executing a particular project. The PDT will be prepared to provide status updates on project implementation at each PAT meeting.

The Growth Area and Future Land Use Maps section provides a detailed look at any areas of the multi-municipal planning area where the PAT has recommended changes in the designated growth area boundaries, future growth area boundaries, and/or future land uses.










The Appendices are the final section of this document and include the following items:

- A. Plan Process
- B. Planning Advisory Team Meeting Summaries and Reports
- C. Results of Research and Analysis
- D. Plan Consistency and Plan References
- E. Acronyms List
- F. Adopted Municipal Resolutions

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<sup>1</sup> See Thematic Issues List at the end of Appendix A

The Lower Lycoming Creek Planning Area Current Priority Issues

	Issue Name	Comprehensive Plan Topical Areas								
		Agriculture	Community Development	Community Facilities & Infrastructure	Economic Development	Heritage, Culture & the Arts	Land Use	Natural Resources	Public Safety	Transportation & Mobility
										
1	Water, Sanitary Sewer, and Stormwater Infrastructure		X	X	X		X	X	X	
2	Natural Gas Infrastructure			X	X		X	X	X	
3	Outdoor Recreation Resources		X	X	X	X	X	X		X
4	Changing Economy vs. Local Work Force	X		X	X	X	X	X		X
5	Fragmentation of Local Government	X	X	X	X	X	X		X	X
6	Water Quality	X	X	X	X		X	X	X	
7	Flooding Impacts	X	X	X	X	X	X	X	X	

## Chapter 2: Implementation Strategy

### Priority Issue #1



**Water, sanitary sewer, and stormwater infrastructure systems are not sufficient across the County to meet all needs.**

**Back Story** The Lower Lycoming Creek Planning Area has multiple public water, sanitary sewer, and stormwater infrastructure adequacy needs, similar to other parts of Lycoming County. Yet, the members of the Lower Lycoming Creek PAT are particularly concerned about stormwater management. To be clear, stormwater management is not a new issue. Pennsylvania State Act 167 of 1978 had required all property owners developing their property to ensure the rate of stormwater run-off post development to be equal or less than the pre-development run-off rate.

However, there was not an effort at the state level to enforce the act. Very few developments received stormwater management facilities other than tying roof drains and gutters into the street stormwater conveyance system. In short, previous practices of stormwater management could be characterized as “out of sight, out of mind.” Thus, buildings, parking lots, roads, and driveways were constructed without considering the means of handling onsite the increased stormwater run-off.



Photo Credit: watershedcommittee.org

*Improper or absent stormwater drainage leads to flooding*

It was not until the 1980s that state and local officials started to consider requiring on-site management of stormwater run-off with centralized stormwater detention areas and other practices, including instituting more specific stormwater management language into land use ordinances. Some individual watershed stormwater management plans were developed to help address deficiencies within Lycoming County, first in a few smaller watersheds and then later in the larger watershed of Lycoming Creek.

The lack of stormwater management for existing development within the Grafius Run/Millers Run/McClure’s Run watersheds was addressed through

a watershed stormwater management plan implemented through ordinance in the areas of Hepburn Township, Loyalsock Township and the City of Williamsport. Stormwater problems were also highlighted as a concern in the 2005 Lower Lycoming Creek Multi-Municipal Comprehensive Plan. Issues documented in these plans set the

stage for creation of the Lycoming County Stormwater Plan and the Lycoming Creek Watershed Stormwater Plan, both adopted in 2011.

The amount of development that occurred within these specific watersheds, before stormwater ordinances were passed, was a key factor in establishing baseline requirements for all future construction. Depending on its location within the watershed, a new development must now implement a lower stormwater release rate to help compensate for the historical creation of impervious surface lacking the stormwater management controls.

After these stormwater plans were adopted, the state required each Lycoming County municipality to adopt a comprehensive stormwater ordinance consistent with the plans. Hepburn, Lewis, Lycoming, and Old Lycoming Townships adopted stormwater ordinances in 2011. Loyalsock Township had previously adopted a municipal stormwater ordinance in 2006.

**Priority Issue Overview** Throughout development of the Lycoming County Stormwater Plan, there was a clear and discernable, documented need for improved stormwater management in the watersheds of Grafius, Millers, and McClure’s Runs, as well as Lycoming Creek. Localized flooding increased and poorly drained areas developed stormwater problems after 100-plus years of concentrated development with impervious surfaces conveying stormwater into street drains and nearby streams.

This stormwater issue is ubiquitous across the Planning Area. Stormwater management and erosion and sedimentation control was identified in the 2005 Multi-Municipal Plan as an issue on single-lot residential development. In most municipalities, however, this level of development has been exempted from having to do a stormwater plan or in some cases required to prepare a minor plan when a threshold of run-off is met. As a result of past stormwater management practices and these exemptions, the cumulative impact of the numerous single-lot residential parcels throughout the planning area represents a large area with limited or no stormwater management controls.

In addition, with the onset of Marcellus Shale natural gas development in 2007, stormwater run-off in this Planning Area became an increasingly pressing issue. The Pennsylvania Department of Environmental Protection (PA DEP) has issued natural gas well drilling permits in all the Lower Lycoming Creek PAT municipalities except for Old Lycoming



Photo Credit: Lycoming County PCD

*Forest clearing required for Natural Gas Development in Lycoming County*



Township. For several years, gas development companies benefited because they were not required to install stormwater facilities for access roads, pipelines, gas well pads and other related developments, and were required only to address erosion and sedimentation control. Below are two of the many problems contributing to stormwater related issues:

- Removal of hundreds of acres of trees has eliminated a key element of the hydrologic cycle
- Replacing the trees with gravel roads and pads and, at best, warm season grasses that do not have the transpiration potential or ability to process water run-off as a forest does.

Under the Oil & Gas Act of 2012, PA DEP has been able to address part of this issue:

- Gas exploration related development companies are now required to install post-construction stormwater management devices and facilities for new development
- These companies also are required to retroactively install these devices for gas development pads that need permit renewals.

For the most part, stormwater facilities have been instituted for larger residential and other non-residential development within the planning area, and the existing state regulations and municipal stormwater ordinances appear to be effectively addressing erosion and water run-off for the new larger developments.

While progress has been made in management of stormwater, there is much more that needs to be done. There remains a need to directly retrofit historical development or systematically fix existing stormwater issues that are perpetuated by undersized road drainage systems and development that was installed absent any stormwater management planning. Specifically, there is consensus among PAT members to develop a process to identify stormwater problem areas created from poor stormwater management practices and implement remediation projects. This is being accomplished in part through the PA state MS4 program. Four of the Lower Lycoming Creek PAT's five municipalities are Municipalities with Separate Stormwater Systems, or MS4s: Hepburn, Loyalsock, Lycoming, and Old Lycoming Townships. These communities are required to secure a National Pollutant Discharge Elimination System, or NPDES, permit as well as mandated to implement their Chesapeake Bay Pollution Reduction Plan with stormwater best management practices and retrofitting projects. Still, the selected projects will generally be targeted to initiatives that will yield the "best bang for the buck" concerning nutrient and sediment reductions to the Chesapeake Bay. The net result is that other problem areas are left to be addressed in other ways, such as the installation of infiltration areas or green infrastructure.

**Key Implications** With unmanaged stormwater, repeated maintenance costs associated with municipal and state road erosion as well as loss of private and public real estate from increased flooding will continue to plague the region. Moreover, unmanaged stormwater has historically contributed to flooding levels in the water bodies in these watersheds and has had a deleterious effect on the quality of these waterways. Additionally, loss of trees through infestation and disease (hemlock loss via the emerald ash borer) also contributes to the increase of stormwater, giving a reason to focus on reforestation efforts.

From a positive perspective, proper stormwater management — including the skillful planning, design, construction and maintenance of stormwater infrastructure — can offer a number of benefits to the communities, such as:

- Access to clean drinking water
- Reduced flood risk
- Increased recreation opportunities
- Support for new development and economic growth
- Protection of life, property, and the environment.

**Top Viable Project of Regional Significance for this Issue**

**STORMWATER PROBLEM AREA IDENTIFICATION AND PROJECT DEVELOPMENT**

This project identifies stormwater problem areas for design and retrofitting of stormwater best management practices. Stormwater management is either inadequate or non-existent in some areas in each of the municipalities within the Lower Lycoming Creek Planning Area, contributing to flooding, stream and private property damage, and higher maintenance costs of municipal infrastructure.

**HOW PROJECT ADDRESSES THE ISSUE**

Systematically identifying, categorizing, and prioritizing stormwater problem areas by level of impact will allow the members of the Lower Lycoming Creek PAT to decide what problem areas need to be addressed first, as some may cross municipal boundaries. Currently, there is no consistent mechanism for addressing existing stormwater problem areas outside the limited project scope of the PAT’s four MS4 municipalities. An assessment and consensus on the priority projects will set the stage for pursuing potential funding sources and will allow the municipalities to be competitive for development funds with “shovel ready” projects. Some projects may even rise to the level of MS4/Chesapeake Bay Pollution Reduction Plan projects to address permit obligations. Areas to be explored include roadside ditches, road intersections, ponding low-lying land areas, improperly placed or absent storm drains, and pipes at wrong locations or elevations.

**PROJECT LEADERSHIP**

Lead Agency – The Lower Lycoming Creek PAT municipalities could take the lead to hire a consultant to be the project manager. As stormwater management is a localized issue, the consultant will gather and verify stormwater problem areas in coordination with the individual municipalities.

Other Partners – MS4 Coalition, Lycoming County Conservation District, PA DEP, U.S. Army Corp of Engineers, U.S. Fish and Wildlife Service, Pennsylvania Fish & and Boat Commission, Pennsylvania Game Commission, private land owners, water and sanitary sewer authorities, and Lycoming County Planning Department.

**STEPS FOR SUCCESS**

<b>STEP NUMBER</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
<b>1</b>	<b>ESTABLISH A PROJECT DELIVERY TEAM (PDT)</b>	<b>2018</b>	<b>PCD STAFF, LLC , PAT</b>
<b>2</b>	<b>IDENTIFY PROBLEM AREAS—VERIFY AND EXPAND UPON THE LYCOMING CREEK STORMWATER PLAN MAP PLATE #8, DRAINAGE PROBLEM AREAS MAP TO INCLUDE OUTSIDE LYCOMING CREEK WATERSHED BOUNDARY</b>	<b>2020</b>	<b>PDT, CONSULTANT, MUNICIPAL OFFICIALS, PCD STAFF</b>
<b>3</b>	<b>CATEGORIZE PROBLEM AREAS INTO BENEFIT- EROSION CONTROL, WATER</b>	<b>2020</b>	<b>PDT, CONSULTANT, MUNICIPAL OFFICIALS,</b>

<b>STEP NUMBER</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
	<b>QUALITY, GROUND WATER RECHARGE</b>		<b>PCD STAFF</b>
<b>4</b>	<b>PRIORITIZE PROBLEM AREAS BASED UPON GREATEST BENEFIT &amp; TIMING OF FUNDS</b>	<b>2020-2021</b>	<b>PDT, CONSULTANT, MUNICIPAL OFFICIALS, MS4 COALITION, PCD STAFF,</b>
<b>5</b>	<b>SECURE FUNDING FOR ENGINEERING &amp; DESIGN</b>	<b>2021-2027</b>	<b>CONSULTANT, MUNICIPAL OFFICIALS, MS4 COALITION, PCD STAFF</b>
<b>6</b>	<b>MUNICIPALITY EXECUTES PROJECT</b>	<b>2021-2027</b>	<b>MUNICIPAL OFFICIALS</b>

**FUNDING RESOURCES**

Dirt and Gravel Road Program

**Additional Projects, Programs, and Initiatives for this Issue**

**1. LYCOMING CREEK ROAD WATER LINE EXTENSIONS**

Explore funding for extending public water service up the Lycoming Creek Road Corridor, including Heshbon Park and Maybee Hill areas.

**2. MS4 CHESAPEAKE BAY POLLUTANT REDUCTION PLAN IMPLEMENTATION**

The next round of MS4 permitting (beginning in 2018 to 2019) will require numerous infrastructure projects called Best Management Practices, or BMPs, to reduce stormwater pollution to comply with state and federal regulations. Municipalities must determine where and how to best implement these BMPs to achieve the required pollution reductions as part of the Chesapeake Bay Pollutant Reduction Plan (CBPRP). These communities will also have to determine how to fund these projects—some of which may be very costly. Opportunities for joint funding and implementation will likely need to be fully explored. The CBPRP will also likely require the incorporation of green infrastructure projects in all appropriate transportation and redevelopment project scopes as well as the maintenance and potential upgrade of “grey” stormwater management infrastructure.

**3. IDENTIFY WATER & SANITARY SEWER PROBLEM AREAS**

This project consists of design and extension of sewer lines in problem areas of these townships.

**4. UPDATE ZONING ORDINANCES TO LIMIT DENSITY FOR AREAS NOT SERVED BY PUBLIC WATER & SEWER**

Discourage medium to high density developments to be served by on-lot septic and on-site wells.

**5. ASH TREE REMOVAL AND FOREST REPLANTING DUE TO EMERALD ASH-BORER INSECT**

## Priority Issue #2



### Natural Gas infrastructure is not readily accessible in all areas of the County.

**Back Story** The recent discovery of significant quantities of natural gas contained within Marcellus Shale deposits in Lycoming County has presented numerous opportunities to the local community, including new development, job creation, educational opportunities, and increased revenue for local businesses, among others. However, as a result of a lack of natural gas infrastructure and facilities, including access lines and fueling stations, residents and businesses have not been able to fully enjoy direct access to this energy source.

At the time the 2006 County Comprehensive Plan was developed, the presence of large deposits of natural gas in the County's shale formations was largely unknown. The Marcellus Play is one of the largest natural gas discoveries in the world. It encompasses large geographic areas of Pennsylvania, New York, West Virginia, Ohio, and Maryland, including major portions of Lycoming County, primarily north of the West Branch Susquehanna River. The U.S. Geological Survey estimates the formation's total area to be approximately 95,000 square miles, ranging in depth from 4,000 to 8,000 feet below the earth's surface.

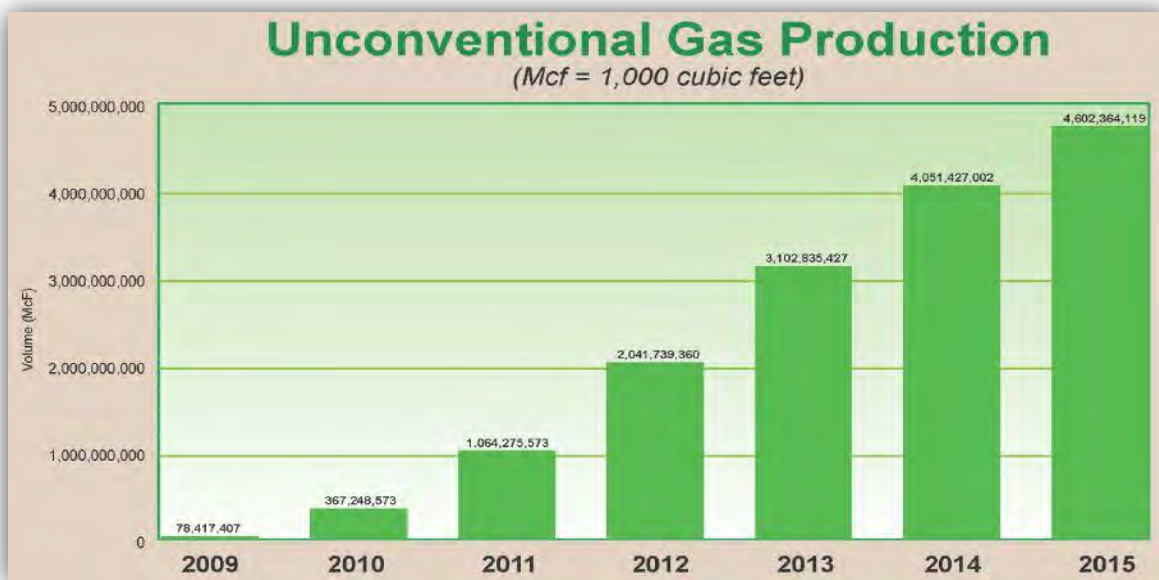


*Ogontz East Compressor Station*

In Lycoming County, gas exploration began in the fall of 2007 and steadily ramped up, with well drilling peaking in 2012 and 2013. Drilling began to subside in 2014 because of a glut of natural gas in the market, reduced customer demand attributed to a general national economic slowdown, and lower natural gas trading prices, which made drilling less profitable. However, these factors are changing, and the forecast for 2017 and beyond suggests a resurgence in gas drilling in the County, but perhaps not as robust as the 2012 to 2013 peak periods.

Marcellus Shale gas exploration activity has had a heavy impact on public infrastructure in Lycoming County, especially regarding roads and bridges. The large amount of truck traffic necessary to transport water and frac sand to assist in the drilling operations in rural areas has damaged state and local roadways, including the wear and tear of pavement and traffic congestion.

Figure 3.



Source: Pennsylvania Department of Environmental Protection 2015 Oil and Gas Annual Report

Natural gas has a profound impact across this planning area, Lycoming County, the state and the nation:

- The amount of natural gas produced in Pennsylvania was a record high at 4.6 trillion cubic feet of natural gas in 2015 (*DEP 2015 Oil and Gas Annual Report*).
- The Marcellus Play is estimated to contain more than 410 trillion cubic feet of natural gas, which can supply the nation's energy needs for future generations.
- An average residential consumer in Pennsylvania uses over 86,000 cubic feet of natural gas per year (*Pennsylvania Independent Oil & Gas Association*).
- 51% of Pennsylvania residents use natural gas for their heating source (*U.S. Energy Information Administration--2014*).
- The level of natural gas burning efficiency and generally lower cost has made it one of the most sought-after non-renewable energy sources.
- Seven conventional and 929 unconventional natural gas wells have been drilled in Lycoming County between March 1, 2007, and March 1, 2017 (*PA DEP*).
- Of the fossil fuels used for energy creation, natural gas has proven to be one of the most clean burning and efficient modes currently available to the everyday consumer.

#### Priority Issue Overview

Similar to other parts of the county, natural gas infrastructure is not readily accessible throughout this planning area. The abundance of this energy source has caused members of the Lower Lycoming Creek PAT and residents alike to question how the general public can gain full access to the

resource. The chief obstacle is the rural nature of more than half of the Lower Lycoming Creek Planning Area—a pattern that characterizes most of Lycoming County. This obstacle has made extending natural gas pipeline infrastructure cost prohibitive in the past. However, circumstances are changing. With the addition of hundreds of miles of natural gas gathering and distribution lines in and around Lycoming County, there may now be new opportunities to extend natural gas infrastructure to rural areas. Through outreach, education, and collaboration with natural gas providers, municipal leaders and residents alike in the Lower Lycoming Creek Planning Area seek to expand natural gas service areas and increase residential and business owner usage of natural gas for heating or other uses.

In addition to rural areas, there are many developed areas of the County, including the Lower Lycoming Creek Planning Area, that currently lack the necessary infrastructure to bring the natural gas service to residences, industrial, institutional, and commercial businesses.

Expanding natural gas infrastructure was not discussed in any depth in either the 2005 Lower Lycoming Creek multi-municipal or the 2006 Lycoming County Comprehensive Plans. The Lower Lycoming Creek plan mentions possible plans to lease land in the Tiadaghton State Forest for the exploration of oil and natural gas. The Lycoming County comprehensive plan goes a little farther: it hints that natural gas extraction may provide a significant number of jobs. The 2011 Lycoming County Energy Plan devotes several pages to resource extraction and infrastructure expansion of natural gas.

Today, the primary question is how to provide natural gas to potential users who want it. As of 2015, there were 30 public natural gas providers in Pennsylvania. With the exception of any public-private partnerships with individual natural gas gathering companies, UGI Penn Natural Gas, Inc., is the public provider for natural gas to customers in the Williamsport and surrounding areas. UGI connects with two main distribution lines from Williams' interstate gas pipeline:

- A dedicated 8-inch line on the west end of Williamsport
- A 12-inch line in the Muncy/ Hughesville area, east of Williamsport that also serves many communities to the south.

Extending natural gas distribution lines can present challenges that do not exist for other utilities such as water and sanitary sewer. In particular, natural gas infrastructure expansions can be more expensive than other utilities. As a result of the nature of natural gas distribution pressures and volumes required by existing and potential new users, installation of lines to serve a new customer on one end of the system can directly affect the quote for service in other sections of the system, possibly requiring upgrades in pipeline sizes for long distances to meet capacity needs. As a result, natural gas providers must carefully analyze demand and potential new customer needs before investing in service expansions to ensure financial feasibility. Given these challenges, providers do not build new lines to provide natural gas service until the customer is ready to “sign on the dotted line.”

Some of the identified pathways to address this issue include:

- Identify locations and capacity of existing gas lines

- Conduct feasibility studies for extensions
- Quantify the demand for new service through outreach to potential consumers (home and businesses)
- Explore alternative funding mechanisms for gas line extensions in targeted areas
- Begin conversations with gas companies operating in Lycoming County to discuss avenues for meeting cost benefit ratios in either starting new gas utilities or expanding UGI services
- Address possible safety and environmental concerns with natural gas development such as potential explosion risk and forest fragmentation.



**Top Viable Project of Regional Significance for this Issue**

**NATURAL GAS DEMAND ANALYSIS AND COMMUNITY COORDINATION INITIATIVE**

This project will conduct necessary analysis, coordination, and outreach to assess the viability of natural gas infrastructure extensions that will improve community access to natural gas resources in areas that are currently not served or are underserved. The project will accomplish two directives: education and assessment.

**Landowner education** is essential to expanding natural gas services. The project will focus on providing educational materials and forums for the public to understand the gas utility’s procedures for considering an area to expand and the available programs to help make it happen.

**Assessment** will occur of the current and future demand for expanded gas service by quantifying the number of potential homes and businesses that desire access to natural gas service. Assessment methods include:

- \* Resident and business surveys
- \* Growth projections
- \* Direct outreach to stakeholder organizations

In addition, the project leadership will expand communications with natural gas providers to collaboratively evaluate the potential feasibility of service extensions, the obstacles to designing and constructing those extensions, and viable solutions that should be pursued. Efforts may be coordinated with SEDA-COG’s Regional Gas Utilization Initiative (RGUI) and SEDA-COG Natural Gas Cooperative, Inc.

**HOW PROJECT ADDRESSES THE ISSUE**

This project aims to quantify demand for expanded natural gas services to assist natural gas service providers in assessing the feasibility of service expansions and gain confidence in the expected return on investment. Once demand has been identified, this initiative will also foster open communication with natural gas providers to identify any potential barriers to expanded services and to jointly identify and pursue solutions.

**PROJECT LEADERSHIP**

Lead Agency – PCD staff

Other Partners – UGI Utilities, Williamsport/Lycoming Chamber of Commerce, Penn DOT, PA DCED, SEDA-COG

**STEPS FOR SUCCESS**

<b>STEP NUMBER</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
1	<b>ESTABLISH A PROJECT DELIVERY TEAM</b>	<b>FALL 2018</b>	<b>PCD STAFF, LCC PAT</b>
2	<b>CONDUCT OUTREACH WITH NATURAL GAS SERVICE PROVIDERS TO BEGIN OPEN COMMUNICATIONS AND EXPLAIN THE PURPOSE OF THE PROJECT.</b>	<b>SPRING 2019</b>	<b>PDT, CHAMBER OF COMMERCE, PCD STAFF</b>
3	<b>DEVELOP AN ON-LINE SURVEY</b>	<b>SUMMER 2019</b>	<b>PDT, PCD STAFF</b>

<b>STEP NUMBER</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
4	<b>ANNOUNCE THE AVAILABILITY OF THE SURVEY &amp; EDUCATIONAL FORUMS TO RESIDENTS &amp; BUSINESSES THROUGH MULTIPLE MEDIA &amp; OUTREACH METHODS INCLUDING WEBSITES, RADIO, SOCIAL MEDIA, PRINT MEDIA AMONG OTHERS</b>	<b>2019-2027 ON 5-YEAR CYCLE</b>	<b>PCD STAFF, MUNICIPAL OFFICIALS, CHAMBER OF COMMERCE</b>
5	<b>CONDUCT OUTREACH WITH STAKEHOLDER GROUPS, BUSINESSES, AND RESIDENTS TO FURTHER IDENTIFY POTENTIAL DEMAND</b>	<b>2019-2027 ON 5-YEAR CYCLE</b>	<b>PCD STAFF, PDT, CHAMBER OF COMMERCE</b>
6	<b>ANALYZE RESULTS OF SURVEY &amp; OUTREACH &amp; PREPARE A SUMMARY OF POTENTIAL DEMAND FOR EXPANDED SERVICES. DEMAND SHOULD BE ASSESSED GEOGRAPHICALLY TO DETERMINE TOP VIABLE LOCATIONS FOR EXPANDED SERVICES.</b>	<b>2019-2027 ON 5-YEAR CYCLE</b>	<b>PDT, PCD STAFF, MUNICIPAL OFFICIALS, CHAMBER OF COMMERCE</b>
7	<b>CONDUCT A MEETING WITH NATURAL GAS PROVIDERS TO PRESENT THE FINDINGS. THIS MEETING WILL IDENTIFY TOP VIABLE AREAS FOR SERVICE EXTENSION, IDENTIFY ANY ADDITIONAL BARRIERS TO SERVICE EXTENSIONS, AND BRAINSTORM SOLUTIONS.</b>	<b>2019-2027 ON 5-YEAR CYCLE</b>	<b>PDT, PCD STAFF</b>
8	<b>IDENTIFY AND PURSUE POTENTIAL FUNDING</b>	<b>2019-2027 ON 5-YEAR CYCLE</b>	<b>PDT, PCD STAFF</b>
9	<b>IMPLEMENTATION</b>	<b>2019-ONGOING</b>	<b>PDT, PCD STAFF, MUNICIPAL OFFICIALS</b>

**FUNDING RESOURCES**

DCED’s Pipeline Investment Program (PIPE). The search for other capable funding sources and the establishment of a financial strategy will take place during project development.

**Additional Projects, Programs, and Initiatives for this Issue**

None

### Priority Issue #3



#### Outdoor recreation resources are not fully developed, protected and promoted.

**Back Story** Lycoming County is known for its beautiful mountains, wide valleys, miles of hiking trails, and pristine streams and creeks. The recreational resources of the Lower Lycoming Creek Planning Area offer some of these same amenities and are a key reason why many residents choose to live, work, and play in these five municipalities. In short, these natural and recreational resources are among the greatest assets of this Planning Area.

Residents of the Lower Lycoming Creek communities desire to develop or expand these existing recreation assets, as well as improve access to them, so that residents and visitors alike can more fully capitalize on the benefits they provide:

- Opportunities for positive community impacts
- Enhanced quality of life
- Improved health benefits
- Expanded transportation options (trails)
- New educational opportunities
- Economic growth.

**Priority Issue Overview** The 2005 Lower Lycoming Creek Multi-Municipal Comprehensive Plan flagged declining open space and the need for coordinated management of natural resources as priority issues for this Planning Area. While a variety of recommended strategic actions to improve conservation of these areas were proposed in the 2005 Plan, several of the concepts or actions listed in that plan, as well as the overarching Lycoming County's Open Space, Recreation and Greenways Plan (Recreation Plan),



Photo Credit: Lycoming County PCD

Heshbon Park in Loyalsock Township

have yet to be successfully implemented.

Unlike their western neighbors in the Pine Creek Valley, the municipalities of the Lower Lycoming Creek Planning Area enjoy recreational assets that are used mostly by local residents, with the absence of large tracks of public lands. The challenge is to find the balance between developing and protecting these recreational assets without compromising the nature of these communities.

Members of the Lower Lycoming Creek PAT have identified a desire to create a Lower Lycoming Creek Recreation Improvement Plan that would serve as a local-sector (or regional) update to the broader Lycoming County Comprehensive Recreation, Parks, and Open Space/ Greenway Plan. While individual municipalities within this Planning Area have completed improvements in their own individual park facilities, there is still much more to do.

The Lower Lycoming Creek PAT members favored three initiatives to address this issue:

- Explore connectivity options for bikeways, walkways and greenways
- Develop a plan for use of floodplain buyout areas
- Create a Regional Recreational Area Improvement Plan

**Key Implications** This Lower Lycoming Creek Regional Recreation Improvement Plan will evaluate existing municipal owned property for its highest and best recreational use, including the flood buy out properties. These publicly owned sites represent a tremendous opportunity to address the need to better capitalize on outdoor recreation to improve quality of life for residents. Once completed, the Lower Lycoming Creek Regional Recreation Improvement Plan will serve as a “model” for the rest of the County.



Photo Credit: Lycoming County PCD

*Trout Run Park in Lewis Twp. built on FEMA floodplain buyout property with creek access*

**Top Viable Project of Regional Significance for this Issue**

**REGIONAL RECREATIONAL AREA IMPROVEMENT PLAN**

Create a Regional Recreation Improvement Plan that will update and implement the Lycoming County Comprehensive Recreation, Parks, and Open Space/ Greenway Plan within the Lower Lycoming Creek Planning Area. The improvement strategy will inventory existing recreational assets, identify asset gaps, explore bikeway, walkway and greenway connectivity including a plan for use of floodplain buyout areas and plan/implement projects that the Regional Recreational Area Improvement Plan highlights as priorities.

**HOW PROJECT ADDRESSES THE ISSUE**

These efforts will help improve residents’ understanding of existing recreational assets. Through discovery:

- Recreation analysis will be performed—recreational gaps will be located and identified
- Changes with the recreational infrastructure will be inventoried
- An interactive map will be developed to depict noteworthy attributes and links to pictures and education concerning each recreational activity
- The desired improvement with possible funding sources will be documented
- Priorities will be determined
- Timelines for project implementation will be developed

These measures will allow the Lower Lycoming Creek Planning Area community to be better interconnected and provide a pathway for local residents to plan how they can best market and promote their assets as a regional system and an economic development opportunity.

**PROJECT LEADERSHIP**

Lead Agency – Regional Recreation Improvement Steering Committee/ PDT using municipal leaders

Other Partners – PA DCNR, PA DEP, Lycoming County Conservation District, Master Gardeners

**STEPS FOR SUCCESS**

<b>STEP No.</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
<b>1</b>	<b>CREATE A STEERING COMMITTEE/LEAD GROUP/PDT</b>	<b>SUMMER 2018</b>	<b>PCD STAFF, LLC, PAT</b>
<b>2</b>	<b>INVENTORY &amp; MAP EXISTING RECREATIONAL ASSETS WITH USES &amp; AMENITIES</b> <ul style="list-style-type: none"> <li>• Water &amp; land trails</li> <li>• Open space &amp; greenways</li> </ul>	<b>2018-2019</b>	<b>PDT, PCD STAFF</b>
<b>3</b>	<b>EXAMINE ACCESS TO SITES &amp; LEVEL OF</b>	<b>2019</b>	<b>PDT, PCD STAFF</b>

<b>STEP No.</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
	<b>DIFFICULTY BY MODE OF TRANSPORTATION</b>		
<b>4</b>	<b>ENGAGE PUBLIC TO DETERMINE</b> <ul style="list-style-type: none"> <li>• Unmet needs/ desires</li> <li>• Where are the needs</li> </ul>	<b>SPRING 2019</b>	<b>PDT, MUNICIPAL OFFICIALS, PCD STAFF</b>
<b>5</b>	<b>INVENTORY &amp; MAP EXISTING &amp; FUTURE BUY-OUT PROPERTIES</b>	<b>2018-2019</b>	<b>PDT, MUNICIPAL OFFICIALS, PCD STAFF</b>
<b>6</b>	<b>CONSIDER BEST RE-USE OF BUY-OUT PROPERTIES- WHERE APPLICABLE</b>	<b>2018-2019</b>	<b>PDT, MUNICIPAL OFFICIALS, PCD STAFF</b>
<b>7</b>	<b>EXPLORE CONNECTIVITY BETWEEN &amp; AMONG RECREATIONAL ASSETS</b>	<b>2018-2027</b>	<b>PDT, MUNICIPAL OFFICIALS, PCD STAFF</b>
<b>8</b>	<b>DEVELOP OVERALL RECREATION IMPROVEMENT STRATEGY</b> <ul style="list-style-type: none"> <li>• Review 2008 recreation plan implementation matrix &amp; statewide recreation plan for relevance to improvement strategy</li> <li>• Consider establishing regional recreational group</li> <li>• Convert raw mapping data to online interactive mapping application to display attributes</li> <li>• Explore funding options</li> </ul>	<b>2019-2023</b>	<b>PDT, MUNICIPAL OFFICIALS, LPCD STAFF</b>

**FUNDING RESOURCES**

DEP Growing Greener program; U.S. Fish & Wildlife Service grants

**Additional Projects, Programs, and Initiatives for this Issue**

**1. EXPLORE RECREATIONAL AREA USER BENEFIT DONATION OR FEE PROGRAM**

This program would be designed to help offset cost of maintaining recreational infrastructure.

**2. MILLERS RUN GREENWAY / TRAIL**

The Millers Run Greenway/ Trail is a Loyalsock Township specific project but will be a part of the improvement plan. This project will establish a greenway and multi-use trail along Millers Run in Loyalsock Township to connect the Susquehanna River Walk with the Township’s recreation assets including Bruce Henry Park, the Loyalsock Community Center, James Short Park, community swimming pool and school facilities. This trail would serve multiple users, including pedestrians, joggers, bicyclists, and others connecting them with residential developments, schools, recreation areas, and business districts.





### Priority Issue #4



**The economy is changing, and our communities and workforce are not optimally positioned to realize our untapped economic potential and become resilient to economic trends.**

**Back Story** A comprehensive strategy to support a thriving economy in Lycoming County must consider many factors including the availability of a quality workforce, jobs that can sustain a family, suitable locations for employment centers supported by infrastructure, and economic diversification among job sectors. According to the U.S. Census for Workforce Information and Analysis, there are 55,800 persons employed in Lycoming County with an unemployment rate of 6.3% as of November, 2016. The County unemployment rate is higher than the current Pennsylvania average of 5.7 %. Lycoming County has a lower income level than the Pennsylvania average when measured by per capita personal income, median household income, and median family income indicators, as noted below:

Income	Lycoming County	Pennsylvania
Per Capita Personal Income	\$41,171	\$49,745
Median Household Income	\$47,313	\$53,599
Median Family Income	\$60,191	\$68,158

These statistics pose two challenges:

- How to improve a community’s economic strength or vitality
- How to buttress a community’s local economy to withstand the impacts of unexpected factors or forces.

The response to both challenges requires a shift in the traditional mindset. A better-educated workforce is crucial. Public school districts, institutions of higher learning, and workforce training centers need to be focused on providing the necessary tools to produce skilled workers better prepared to perform family-sustaining wage jobs or salaried positions. According to the U.S. Economic Development Administration, economic resiliency is described with three major elements:

- The ability to recover quickly from a major disruption (shock)
- The ability to withstand a shock
- The ability to avoid the shock altogether.

The U.S. Economic Development Administration has also stated, “Establishing economic resilience in a local/regional economy requires the ability to anticipate risk, evaluate how that risk can impact key economic assets, and build a responsive capacity.” In short, an economically resilient community is one that is well aware

of the factors that have the potential to influence its economic base and has learned how to identify associated market trends.

**Priority Issue Overview** The challenge is to determine how to best prepare local communities for the inevitable fluctuations in the national or global economies. To build economic resilience a number of goals need to be pursued:

- Strengthen weaker industry sectors
- Solidify or enhance the stronger sectors
- Enhance the quality of the trained workforce
- Ensure every parcel of land is achieving its full potential.

To achieve this goal, Lower Lycoming Creek Planning Area municipal leaders can undertake a “Regional Redevelopment Initiative.” When completed, this initiative could serve as a model for a Lycoming County-wide program.

A diverse economy where job opportunities are provided over many different sectors avoids the economic vulnerability of relying on a single employment sector where cyclical downturns can induce a major loss of jobs and local economic stagnation. The recent Marcellus Shale gas exploration underscores the importance of maintaining a diversified job base. Gas development throughout Lycoming County soared and then declined. Yet there were other sectors of the local economy that did not experience this “boom – bust” shift when the gas drilling industry slowed. While future forecasts for the resurgence of gas drilling look promising, the lesson learned is to develop a more diversified and robust set of employment sectors.

The 2005 Lower Lycoming Creek Multi-Municipal Comprehensive Plan, Chapter 2, identified eight important issues or factors that affect a community’s social and economic conditions. Each of these items directly or indirectly affects the ability of Lower Lycoming Creek communities to become resilient:

- Exodus of younger generation—leaving an Increasing elderly population
- Housing stock and diversity
- Loss of industries and opportunities
- Quality, quantity and education of the local labor force
- Strength of the manufacturing base
- Importance of tourism
- Tax rates
- Crime rate and drug use.



Photo Credit: Lycoming County PCD

*Vacant retail store fronts within the Garden View Plaza*

Another significant factor in the resiliency equation involves the optimal use of all available land. In many cases, underutilized property is an anchor serving to retard economic growth. In response, the community can take a comprehensive look, analyzing and exploring redevelopment options for all underutilized and abandoned commercial, industrial, institutional, and residential properties. A small, but effective, redevelopment tool is Lycoming County's Planning & Community Development Department administration of a Brownfields Assessment program that can assist property owners with Phase I and Phase II Environmental Site Assessments. The results of these assessments can pave the way for possible environmental cleanup funding, if warranted - an integral step after properties are identified and categorized for possible redevelopment. The Brownfields program is not an environmental watchdog initiative; instead, it is aimed at economic redevelopment.

Another tool to consider is a market study to help properties reach their full potential. With the upturn in internet shopping, some local retail establishments may need to be repurposed. Alternatively, the residential properties near a highway interchange may be better used as an office park with an Internet café. A comprehensive market study cuts across all industry sectors and will help define what is needed and where it should be located.

Being prepared to respond to economic opportunity is prerequisite to a successful outcome. A number of previously vacant properties along the Lycoming Creek Road corridor were able to take full advantage of the Marcellus Shale-driven economic upturn. Today, a number of those properties still house gas industry support companies, consumer products, or service businesses. Unfortunately, some of the warehousing and service buildings constructed to house gas support companies now sit vacant, waiting for an increase in gas well development or an economic push in a new direction. Other municipalities within the planning area such as Loyalsock's "Golden Strip" experienced more of the hospitality industry with the addition of new or expanding hotels and restaurants. Residential properties marketed to support the gas industry workers like apartments, single family home rentals, and hotel rooms are available once again to meet the resident population.

In terms of non-floodplain land availability for future growth, the Lower Lycoming Creek Planning Area has limited options for industrial and mixed-use development. Thus, the reuse or repurposing of each vacant or underutilized property must be considered carefully for redevelopment to ensure maximum return on investment and positive overall economic results. Within this Planning Area, the former Round Hills Elementary School has been vacated by the Williamsport Area School District and Loyalsock's Becht School is for sale. As an excellent example of adaptive reuse, the Round Hills School has been acquired by STEP to serve as a Head Start site. Similar to other communities throughout Lycoming County, both Loyalsock and Old Lycoming Township contain shopping plazas that have large amounts of commercial retail space up for lease.

Economic resiliency also requires a commitment to educate and re-train the local workforce in



response to new or emerging sectors in the economic landscape. This initiative would involve active community outreach, collaboration, and engagement with the public schools and institutions of higher learning such as Penn College of Technology, Lycoming College, and Lock Haven University. These institutions need to continue to evaluate and expand courses and vocational-technical training programs that are designed to provide essential knowledge and skills for students that would enable them to obtain area jobs with family sustaining wages. This strategy can lead to economic stabilization within these communities and reverse the “brain drain” pattern, whereby young adults depart local areas for destinations that offer better paying jobs.

**Key Implications**

Without a clear understanding of gaps in the industrial sector and new market conditions, the local economy is likely to be stagnant, at best. Land limitations pose another challenge to creating jobs with family sustaining wages. Having a well-trained workforce is a third essential to achieving economic resiliency. Training the workforce includes understanding some of the hurdles for individuals

obtaining or retaining jobs, which include drug use; alcohol use; lack of transportation; and the lack of a high school diploma.



Photo Credit: Lycoming County PCD

*Vacant warehouse building in Hepburn Twp., previously Ed’s Used Furniture*

Unless municipal leaders embrace an economic redevelopment initiative to address all three of these key factors, the area will likely continue to see the exodus of youth, as well as the unemployment and low income issues previously described. Lack of employment opportunities and lower paying jobs directly contribute to the younger generation leaving local communities for areas that have better employment opportunities and higher wages.

Employment opportunities are generally the key factor that dictates where younger adults will make their home. The combination of fewer younger workers, higher

unemployment, and lower median income results in a lower tax base to support community services and unintended negative impacts on all citizens, especially among the elderly population who rely on these services.

## **Top Viable Project of Regional Significance for this Issue**

### **LOWER LYCOMING CREEK REGIONAL REDEVELOPMENT INITIATIVE**

Based on concerns and interests of economic growth of this Planning Area, the PAT recognizes that many of the tasks identified in this initiative must be implemented on a County-wide basis. This is due to the tasks needing to be on a larger scale, to provide each PAT the opportunity to participate and give feedback during each effort. Other tasks to be completed by the Lower Lycoming Creek PAT can serve as pilot projects for possible replication across the County. This project will include a multi-component initiative that offers the opportunity for the Lower Lycoming Creek PAT to:

- Examine redevelopment options for underutilized and abandoned commercial, industrial, institutional and residential properties in coordination with the County’s Brownfield Program
- Participate in the evaluation of public transportation needs for areas not currently being served or underserved from the perspective of first, second, and third shift operations, considering municipal subsidy where patron numbers are low. Possible funding through Act 13 contributions from municipalities could help offset operation costs because of the smaller volume of patrons
- Participate in developing a County-wide program for possible assistance to individuals who cannot obtain a job or are facing job loss (job security) because of lack of transportation in areas where public transportation is not available, especially to help disabled/ elderly to get to jobs; or education about available transportation resources
- Participate in a County-wide Job Generator loss study to determine why major manufacturers/job generators have located outside Lycoming County when they had the opportunity to locate here
- Participate in a County-wide Market Study (Services and Consumables Business Gap Analysis) to determine where there are gaps in businesses that provide services and consumables within Lycoming County including seeing where our county falls short in being resilient while sharing information with the public to encourage investment and job creation in the areas where we as a community are lacking
- Participate in the evaluation to expand or create courses needed to educate or train local workers for jobs in the current and future economy including a high school focus to reduce students not graduating and then follow-up for individuals needing GEDs.

### **HOW PROJECT ADDRESSES THE ISSUE**

The economic redevelopment initiative examines all elements of the resiliency equation—training and education of workforce, industrial sector gaps, market conditions, optimization of land use, and transportation needed to support both learners and workers.

### **PROJECT LEADERSHIP**

Lead Agency - The PAT would establish a Lower Lycoming Creek Project Delivery Team (PDT), which in turn would assume leadership. The PDT would have representatives from the Board of Supervisors from Old Lycoming, Loyalsock, Hepburn, Lycoming, and Lewis Townships.

Other Partners - The Williamsport/Lycoming Chamber of Commerce, UGI, PPL, Sewer & Water Authorities, Phone/Cable/Internet providers; SEDA-COG, landowners, real estate agents, schools and colleges.

**STEPS FOR SUCCESS**

<b>STEP NUMBER</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
<b>1</b>	<b>ESTABLISH A STEERING COMMITTEE/PDT &amp; ADOPT A MEMORANDUM OF UNDERSTANDING THAT MEMORIALIZES THE OBJECTIVES, ACTIONS &amp; SCHEDULE TO ACHIEVE ECONOMIC RESILIENCY</b>	<b>2018</b>	<b>PCD STAFF, LLC PAT, MUNICIPAL OFFICIALS</b>
<b>2</b>	<b>DEVELOP COST ESTIMATES &amp; FUNDING RESOURCES TO IMPLEMENT THE SCOPE</b>	<b>2018-2019</b>	<b>PDT, PCD STAFF</b>
<b>3</b>	<b>IDENTIFY UNDERUTILIZED, ABANDONED PROPERTIES- MAP &amp; CREATE DATA-BASE</b> <ul style="list-style-type: none"> <li>• Develop systematic approach to property analysis, breaking down PAT by: i.e. zoning districts</li> <li>• Analysis of property based upon location, proximity to utilities, ease of access (to local &amp; state roads), land use</li> </ul>	<b>2019-2024</b>	<b>PDT, MUNICIPAL OFFICIALS, PCD STAFF</b>
<b>4</b>	<b>LAND OWNER &amp; DEVELOPER EDUCATION FORUM- VISIONING, REGULATORY REQUIREMENTS INCLUDING ZONING &amp; FLOODPLAIN EDUCATION OF POTENTIAL USES &amp; EXISTING USE EXPANSION FOR THEIR PROPERTY, TECHNICAL &amp; FINANCIAL ASSISTANCE, CONNECTION TO OTHER PROGRAMS</b>	<b>2022-2027</b>	<b>PDT, LANDOWNERS, REAL ESTATE AGENTS, DEVELOPERS, PCD STAFF, OTHER PATS</b>
<b>5</b>	<b>PROMOTE &amp; PARTICIPATE IN THE EVALUATION OF THE PUBLIC TRANSPORTATION NEED RELATED TO JOB ATTAINMENT &amp; RETENTION</b>	<b>2019-2021</b>	<b>PDT, CONSULTANT, PCD STAFF, OTHER PATS</b>
<b>6</b>	<b>PROMOTE &amp; PARTICIPATE IN MARKET STUDY, JOB GENERATOR LOSS STUDY, &amp; GAP ANALYSIS OF INDUSTRY SECTORS</b>	<b>2019-2023</b>	<b>PDT, CONSULTANT, PCD STAFF, OTHER PATS</b>
<b>7</b>	<b>PROMOTE &amp; PARTICIPATE IN THE ASSESSMENT OF EDUCATION &amp; TRAINING NEEDS TO MEET THE CHANGING ECONOMY</b>	<b>2019-ONGOING</b>	<b>PDT, CONSULTANT, PCD STAFF, OTHER PATS</b>

**FUNDING RESOURCES**

To be developed by the PDT in collaboration with PA DCED, Commonwealth Financing Agency, Economic Development Administration, County of Lycoming, USDA Rural Development, SBDC, SEDA-COG.

**Additional Projects, Programs and Initiatives for this Issue**

**1. ESTABLISH A CENTRAL DATABASE/ EVENTS CALENDAR**

This database/ events calendar would house all Lycoming County events to be used by all Lycoming County Municipalities to promote cultural events to help revitalize participating communities. When a municipality or organization adds an event to its individual website calendar, the linked countywide calendar automatically populates with the new event.

**2. LYCOMING CREEK CORRIDOR BEAUTIFICATION EFFORT**

Promoting uniformity in signage control, facade improvements, landscaping and street tree considerations, visual heritage and arts promotion would be beneficial.





## Priority Issue #5



### **Fragmentation of local government in Pennsylvania is a barrier to efficient delivery of some public services.**

**Back Story** The majority of Pennsylvania counties are “fragmented” into a large number of small municipalities. In fact, there are 2,562 local governments in Pennsylvania--Lycoming County alone has 52 of them. In Pennsylvania many government rules, regulations, and policies are left to the most local level of government to administer. Likewise, many services are provided separately by each municipality. The replication of services from one municipality to the next imposes a manpower stressor on local communities. This fragmentation can also result in a lost opportunity for improved cost efficiency and enhanced service delivery.

Government at the township, borough, and city level is the most local form of government in Pennsylvania. As such, it allows citizens easy accessibility to government officials and enables the maximum degree of local citizen dialogue related to policy-making, service delivery, and taxation. In general, this form of government is viewed as being accessible, accountable, and effective. However, while small governments provide accessibility and accountability, many examples exist around the Commonwealth that highlight the shortfalls of Pennsylvania’s fragmented structure of government.

For example, many municipalities find it difficult to recruit readily accessible numbers of citizens and trained professionals to serve on their legislative bodies, boards, and commissions. Additionally, all local governments are required to provide certain capital-intensive services, such as water, sewer, and fire protection, as well as managing administrative functions. These expenses could be considered redundant overhead in areas with small populations and a limited tax base. Over time, expectations of local governments have changed both from the state government and citizen perspectives. Local governments have assumed growing responsibilities that are not always easily handled by the traditional structures of local government. However, PA municipalities have structured many creative solutions to meet the needs presented to them.

Pennsylvania has built up an array of viable regional-scaled entities, such as regional council of governments (COGs), metropolitan and rural planning organizations (MPOs and RPOs), and various other regional planning-type councils, commissions, and organizations. In addition, there have been a growing number of multi-municipal cooperatives, joint efforts, and mergers related to the provision of police, fire, Emergency Medical Service (EMS), zoning, codes, sewer, water, stormwater, and other infrastructure and public work programs.

A good local example of multiple municipalities joining forces to work toward a common goal is the six multi-municipal comprehensive planning efforts in Lycoming County, including the Lower Lycoming Creek Planning Area. Another excellent example is the Lycoming County MS4 Coalition. MS4 (Municipal Separate Storm Sewer

System) is an unfunded federal mandate of the U.S. Environmental Protection Agency (U.S. EPA) that requires designated municipalities to define how they will reduce sediment and nutrient levels, nitrogen and phosphorous, discharging to waters reaching the Chesapeake Bay. The MS4 program is permitted and enforced at the state level through the Pennsylvania Department of Environmental Protection. To lessen the municipal cost burden of the MS4 program, in 2011 nine municipalities and one college came together to form the Lycoming County MS4 Coalition. After a series of increased permit responsibilities, the Coalition funded a county staff position, the MS4 Planner, who managed all of their permits, the initiation of the Chesapeake Bay Pollution Reduction Plan and the completion of the required six minimum control measures for the period of 2014-2017. The Coalition allows the municipalities to share costs in permit fees, training, implementation of best management practices, and consultant fees. The Coalition has operated successfully since its formation, keeping the participants in regulatory compliance, while maintaining effective economies of scale.

During the 2017 Comprehensive Plan update, the Lower Lycoming Creek PAT members acknowledged that fragmented government services have impacts in their planning area. Of particular concern was the ability to provide readily accessible and essential emergency services for Police, Fire, and EMS because of a decrease in volunteer capacity, intensive certification requirements and the lack of sustainable financial resources. While members of the Lower Lycoming Creek PAT were concerned about all three areas of emergency service, EMS was the focus of more intense analysis and discussion.

### **Priority Issue Overview**

The Fire and EMS Agencies that serve this Planning Area, as well as the five municipal governments themselves, were increasingly concerned with their ability to provide readily accessible levels of emergency medical services to the residents of these municipalities. Readily accessible levels are dictated by the 2009 Pennsylvania EMS System Act 37 (EMS Act), which establishes requirements for service coverage and certification standards. As in other small rural communities around the state, the local emergency medical service providers are also experiencing declining numbers of volunteers. In short, Fire and EMS Agencies are more challenged to provide these essential and required services because of four interrelated factors:

- Increasing service requirements—greater time commitment for training
- Decreasing staff capacity—fewer volunteers
- Increasing cost to provide certification training and essential equipment
- Funding limitations to support the above

**Increasing Certification Requirements and Decreasing Volunteer base** –The provisions of the EMS Act, which took effect on April 10, 2014, state that all EMS Agencies, including those located throughout Lycoming County, are required to provide coverage 24 hours a day and 7 days a week (24/7) to respond to a dispatched request for EMS assistance. The EMS Act does permit the EMS Agencies to provide less than 24/7 coverage if they participate in a county-level EMS Response Plan approved by the Pennsylvania Department of Health.<sup>1</sup>

The EMS Act created 14 Regional EMS Councils. The Lycoming County Board of Commissioners is the Pennsylvania Department of Health’s contract holders for the Regional EMS Council that serves the Counties of Lycoming, Tioga, and Sullivan.

In addition to requirements of the EMS Act, local municipal codes also regulate the provision of emergency services. Lewis, Hepburn, Lycoming, Old Lycoming, and Loyalsock Townships are all Townships of the Second Class. The Second Class Township Code requires a township to “be responsible for ensuring that fire and emergency medical services are provided within the township by the means and to the extent determined by the township, including appropriate financial and administrative assistance for these services.”<sup>ii</sup> In addition, Lewis, Hepburn, Lycoming, Old Lycoming, and Loyalsock Townships are also required by Code to consult with these emergency service providers to discuss the needs within their municipalities.



Photo Credit: Lycoming County PCD

*The new Lewis Twp. Volunteer Fire Company facility*

According to the EMS Act, all EMS certification examinations recognized by the Commonwealth are required to align with the National EMS Education Standards. To comply with these standards, emergency medical technician (EMT) certification requires 150 hours of training plus co-requisites including two on-line courses and a 2.5-hour Hazardous Materials Awareness class. The cost of training is over \$900. Currently, a Basic Life Support Ambulance must be staffed by one person trained to EMT or higher and one emergency medical responder (EMR). The EMR may be the driver if he or she is credentialed as the driver as well, which requires an additional 16-hour driving course. The cost to equip a fire fighter is in excess of \$10,000. There is currently no state mandate for structural fire fighters; however, many volunteer fire companies VFCs have internal standard operating guidelines and policies that do require specific training programs to become an “interior firefighter” except for HAZMAT class. The most common requirement is completion of the PA Fire Fighter I certification. The extensive training hours and costs required to be a volunteer fireman or EMS personnel are making it difficult for new recruits to commit the time required to become certified while meeting the demands of a career and family.

The obstacles created by cost and time requirements needed to secure the increased training and equipment is compounded by lower volunteer recruitment numbers, resulting in decreased capacity to provide Code-required services. This is a statewide issue. Since 1985, the number of volunteers in Pennsylvania has declined from

152,000 to 70,000. There are 2,462 fire companies in PA and 90% of them are volunteer. Across the state, volunteer agencies are being challenged to maintain services while suffering from a declining pool of volunteers. The lack of volunteers has hit the volunteer fire departments and emergency service agencies especially hard. EMS is provided to more than 1,200 square miles in Lycoming County through several service methods including: hospital based life support services, paid and volunteer fire department based units, paid duty crews, and all volunteer crews.

**Capacity** - Currently the municipalities in the Planning Area are served by the following EMS agencies:

- Lewis Township: Trout Run & Ralston Volunteer Fire Co.
- Hepburn Township: Hepburn Twp. Volunteer Fire Co.
- Lycoming Township: Trout Run, OLT, and Hepburn Fire Co.
- Old Lycoming Township: OLT Volunteer Fire Co.
- Loyalsock Township: Loyalsock Volunteer Fire Co.
- Paramedic Services to PAT – UPMC/Susquehanna Regional EMS



Firefighting capacities and capabilities of local fire departments are critical to future growth and development potential in Lycoming County and its municipalities. If adequate capacity cannot be sustained and increased due to limitation of capabilities and/or funding, and/or for other reasons, businesses and industries seeking new locations or expansions at current locations will also be limited. Firefighting capacity and advanced safety training and equipment related to service of haz-mat operations are also critical. It is important that fire and EMS services also be considered essential infrastructure during planning and feasibility phases of new development.

**Trends** – During the five-year period between 2012 and 2016, call volumes within the two counties served by the Lycoming/Sullivan 911 Center have declined, but the number of fire/EMS incidents has increased. Types of 911 calls have also been changing. In recent years, personal care and assistance requests have increased significantly, as opposed to traditional emergency situations. Within the GWA Planning Area, these trends are generally consistent, but further analysis is needed.

**Table 4.**

Lycoming/Sullivan County 911 Center Activity 2012-2017 Year to Date (YTD)							
	2012	2013	2014	2015	2016	Up to 8/2017	
Fire/EMS Incidents	17,378	16,915	17,314	18,856	18,601	13,062	
Police Incidents	43,068	40,403	41,397	42,532	43,773	32,872	
Total 911 Calls	61,598	59,836	60,628	58,223	56,295	35,659	
Working Fires	126	97	125	113	137	98	
2nd Alarm Fires	19	18	27	11	12	10	
3rd Alarm Fires	1	2	3	2	2	2	
MVA w/entrapment	74	46	80	75	64	31	
Water Rescues	19	11	17	11	20	10	

The members of the Lower Lycoming PAT also expressed an interest in evaluating the current regionalization arrangements of both fire and police services.

**Cooperative Relationships** In addition to the issues described above, strong communication between the volunteer fire departments and the municipal governing bodies is of utmost importance. Because townships are required to ensure that adequate fire and EMS are provided in the municipality and the volunteer fire departments are by and large the entities providing these services in Lycoming County — and particularly in this Planning Area — it is essential that there is an open and transparent relationship between these entities. Most importantly, both parties should have a mutual understanding and agreement on aspects such as annual budget, funding needs, service delivery parameters and requirements, operational management, and problems being encountered. If this is not already taking place, then a healthy working relationship that responds to these objectives needs to be cultivated.

**Key Implications** If the five municipalities in the Lower Lycoming Creek Planning Area and the Fire and EMS Agencies do not find ways to more effectively work together to provide 24/7 EMS services in their municipalities, the following five impacts are possible:

- The municipalities will incur increased program administrative costs
- Residents of these municipalities will not be provided the required and readily accessible level of EMS service needed
- The municipalities may not meet the requirements of Pennsylvania EMS System Act 37 of 2009 and their municipal codes.
- The municipalities may be required to hire emergency service personnel, which would create a substantial cost burden and other related fiscal challenges.
- Municipalities may be forced to cut other existing programs and services that local residents rely on.

The Lower Lycoming Creek PAT identified potential strategic approaches for addressing this issue including:

- Sharing services or joint efforts to provide zoning, subdivision, and land development, stormwater, building codes, police, fire, EMS, and other services
- Participating in the Countywide EMS Response Plan

## **Top Viable Project of Regional Significance for this Issue**

### **EXAMINE COST EFFECTIVENESS AND PERSONNEL EFFICIENCY OF FIRE AND EMS SERVICES IN THE LOWER LYCOMING CREEK PLANNING AREA AS A PREREQUISITE TO THE COUNTY EMS RESPONSE PLAN**

The five municipalities and their Fire and EMS agencies will work together to evaluate their abilities to provide a readily accessible and efficient level of EMS services to the residents of this Planning Area and meet the service requirements of the EMS System Act 37. The agencies will examine and assess their individual and collective resources, services, capacity, management structures, training requirements, costs, and funding potentials in support of the proposed *Countywide EMS Response Plan*.

The Fire and EMS Agencies of the Lower Lycoming Creek Planning Area will work with the municipal governments of Lewis, Hepburn, Lycoming, Old Lycoming, and Loyalsock Townships to identify specific shortcomings and needs within these municipalities. They will also help provide the necessary data and information to a third party consultant to support the development of the Countywide EMS Response Plan and assist with its implementation.

The following is a sample of the types of data and information that the third-party consultant will need to adequately complete the assessment and make viable recommendations to the county's EMS Response and Staffing Task Force. It is recommended that the planning area municipalities and EMS agencies begin collecting this information before the consultant is hired.

#### **Volunteer Fire Departments and EMS Providers located in or serving the PAT**

- Service area
- Service calls (increase or decrease or missed) – trend over last 5 years?
- Response time
- What are the gaps of providing 24/7 around-the-clock service?
- Number of paid staff and volunteers
- Average salary of employee
- Identify the changes from volunteer to paid programs (EMS)
- Average age of volunteer (Are the youth and/or younger residents volunteering?)
- Annual budget (expense and revenue)
- Level of financial commitment from local governments
- Funding received from County and for what purpose
- Who and how are operations managed?
- What reporting methods are used by each? Same, different?
- Costs for equipment / technology
- Training costs (trend over time)
- Training time commitment (trend over time)
- Facility costs

- Statutory requirements for training (provide statute/name and identify any changes that have occurred)
- Other training requirements?
- Training consortium in county provided for fire departments? If yes, what is the amount of subsidy to whom and how much?
- Are there any specific examples of problems related to provision of services?

It is expected that the countywide plan will provide a framework for how EMS Agencies will collectively manage, administer, and provide services in these five municipalities, and the other parts of Lycoming County, if or when they are unable to provide 24/7 staffing coverage. The plan will include recommended formal agreements among the participating agencies and municipalities and additional strategies for how they will provide readily accessible service coverage throughout this 5-municipality area and the Lycoming County.

### **HOW PROJECT ADDRESSES THE ISSUE**

Lewis, Hepburn, Lycoming, Old Lycoming, and Loyalsock Townships are committed to protecting the health, safety, and welfare of their residents as well as meeting the requirements of their municipal codes for providing EMS services and the requirements of Pennsylvania’s EMS Systems Act 37. However, the large expanse of rural territory combined with low-density population along with changing demographics and family responsibilities make it difficult for the traditional structure of EMS service delivery to remain effective in the 21<sup>st</sup> century.

Responding to these concerns, the Lycoming County Department of Public Safety has begun working with the EMS Response and Staffing Task Force to address the requirements and challenges of providing sufficient service to these five municipalities and other municipalities in the County. The development of an **EMS Response Plan** in Lycoming County will meet the requirements of Act 37 as well as provide a blueprint for how each EMS Agency will assist in the provisions required and critically important to EMS services.

Once funding can be secured to develop the Countywide EMS Response Plan, a consultant will be hired. In advance of that, the local PAT members can begin the dialogue and collect the needed data and information. This will help ensure a coordinated and effective planning process.

### **PROJECT LEADERSHIP**

Lead Agency - Lower Lycoming Creek PAT

Other Partners – Fire Chiefs’ Board and Hospitals, Lycoming County Commissioners, Department of Public Safety (DPS) and Lycoming Planning and Community Development (LPCD) will participate and support this effort.

**STEPS FOR SUCCESS**

<b>STEP NUMBER</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
<b>1</b>	<b>PLANNING ADVISORY TEAM FORM A PDT/STEERING COMMITTEE</b>	<b>EARLY 2018</b>	<b>FIRE RESPONDERS EMS UNITS MUNICIPAL OFFICIALS PCD &amp; DPS STAFF</b>
<b>2</b>	<b>CONVENE STEERING COMMITTEE TO DEFINE THE SHORTCOMINGS AND NEEDS OF THE FIRE AND EMS SERVICE PROVIDERS IN PAT</b>	<b>JANUARY 2018 – JULY 2018</b>	<b>STEERING COMMITTEE PCD &amp; DPS STAFF</b>
<b>3</b>	<b>DEFINE LIST OF DATA NEEDS AND BEGIN COLLECTION OF INFORMATION IDENTIFY FUNDING NEEDS AND POTENTIAL FUNDING SOURCES</b>	<b>JANUARY 2018 – JULY 2018</b>	<b>STEERING COMMITTEE</b>
<b>4</b>	<b>PARTICIPATE IN THE EMS RESPONSE PLAN FOR LYCOMING COUNTY</b>	<b>JULY 2018 – APRIL 2019</b>	<b>ALL</b>
<b>5</b>	<b>FORMULATE SOLUTIONS</b>	<b>JULY 2018 – ONGOING</b>	<b>STEERING COMMITTEE PCD &amp; DPS STAFFS CONSULTANTS</b>
<b>6</b>	<b>BEGIN IMPLEMENTATION OF AGREED UPON SOLUTIONS</b>	<b>ONGOING</b>	<b>LOCAL GOVERNMENTS STEERING COMMITTEE OTHERS – TBD</b>

**FUNDING RESOURCES**

Applicable potential funding sources will be developed by the Steering Committee in the January to June 2018 timeframe.



### **Additional Projects, Programs, and Initiatives for this Issue**

**1. REVIEW CURRENT ARRANGEMENTS FOR FIRE SERVICE & POLICE PROTECTION**

Explore the possibility for regionalization

**2. ADOPT & ENFORCE PROPERTY MAINTENANCE & JUNK ORDINANCE**

Incorporate regulations to target and enforce the disposal of junk cars and other materials in the Lower Lycoming Creek Planning Area.

**3. INITIATE LOWER LYCOMING CREEK PAT ZONING CONSISTENCY REVIEW**

Review Ordinances for consistency in administration and enforcement of zoning practices within this Planning Area. These could include improved utilization of zoning tools available, training of zoning personnel, and assistance with interpretation of zoning regulations.

**4. COORDINATED CELL SERVICE NEEDS ANALYSIS**

Work with neighboring municipalities to assess the need for and placement of cellular towers. This assessment could be a pro-active approach to increasing cell service reliability where cell companies are not establishing towers but the need is there. The County zoning special exception criteria could be used as a model for part of the review of proposed sites.

**5. LOWER LYCOMING CREEK ZONING PARTNERSHIP OPTIONS**

Analyze benefits from creating zoning administration partnerships within the Lower Lycoming Creek Planning Area—the County Zoning Partnership.

**6. REGIONAL CULTURAL EVENTS PROMOTION INITIATIVE**

As part of a tourism strategy to attract visitors, each municipality has an opportunity to highlight special attributes that can be collectively marketed-possibly by a created job position funded by all municipalities.

**7. EXPLORE SCHOOL DISTRICT REGIONALIZATION EFFORTS**

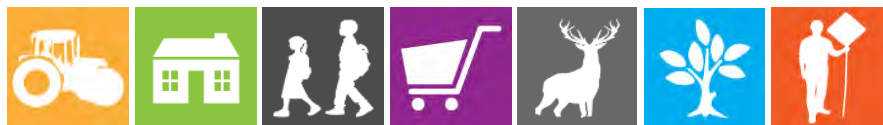
Explore school district regionalization.

**8. SUPPORT DRUG PREVENTION & REHABILITATION PROGRAMS**

Support Project Bald Eagle and other efforts to help residents overcome addiction through treatment, rehabilitation, education and counseling.



## Priority Issue #6



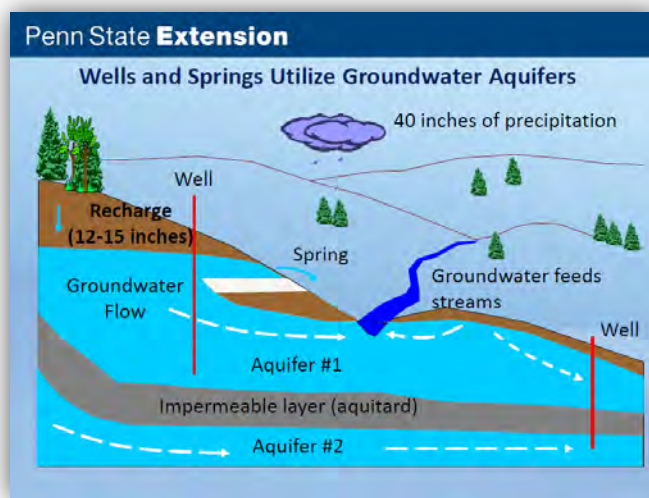
### Water quality is vital, but is vulnerable to a multitude of threats.

**Back Story** On average, about 75% of the human body is water; thus, it is readily apparent that the abundance of clean water is critical to life and not something to be taken for granted. Water is used for drinking, cleaning, bathing, recreating, energy generation, manufacturing cooling, and food making processes. The U.S. EPA gives some facts about water:

- 80% of the earth's surface is covered with water and is the most common substance found on the earth
- It takes 39,090 gallons of water to produce a new automobile
- Raising a single chicken uses about 400 gallons of water
- The average residential household uses over 100,000 gallons of water indoors and outdoors per year
- A person can live without water for only a week, depending on conditions
- Only 1% of all the water on the earth is suitable to drink.

The illustration to the right depicts that, on average, Pennsylvania receives about 40 inches of rain per year and only 12 to 15 inches recharges our groundwater aquifers. The remainder of the rainwater either runs directly into creeks and streams or returns back to the atmosphere through evapotranspiration.

The Lower Lycoming Creek Planning Area is made up of three major watersheds: Lycoming Creek, Loyalsock Creek, and the West Branch Susquehanna River. The Lycoming Creek watershed contains the largest amount of land area, with 52.3 miles of mapped streams. The Loyalsock Creek and Susquehanna River watersheds contribute much smaller areas with 6.4 and 11.3 miles respectively. In understanding how the community uses water, how it moves through the hydrologic cycle, and how much water there is, the Lower Lycoming Creek Planning Area realizes there is a great responsibility to ensure that abundant, good-quality water remains for the continued use of its residents and businesses.



Through the U.S. EPA's mandate to the states from the Safe Drinking Water Act, the PA DEP Northcentral office has provided invaluable assistance to each public water system in Lycoming County to help establish source water protection plans. Proposed source water infrastructure projects – if any – should be carefully considered by the steering committee for this priority issue. Since the Williamsport Municipal Water Authority, WMWA,

provides public water to the urbanized sectors of two of the townships in the Lower Lycoming Creek Planning Area, WMWA will be approached to discuss its source water protection plan and determine if there are any priority projects in WMWA's plan that should be supported under this Priority Issue.

While PA DEP regulates the cleanliness of the water provided by public systems, there are no state requirements for construction, maintenance, and treatment of private water systems. Because there is no ownership of water, the "reasonable use"

of water is allowed. In addition, there is little protection for existing private water sources, where the deepest well and the biggest well pump often wins. House Bill 48 of 2015, which introduces private well construction and water quality standards, was favored by Lycoming County State Representatives. As of yet, that bill has not become law.

Lycoming County residents located in rural areas rely on water supplied through natural occurring springs or manmade cisterns and private wells. In total, 85% of private water systems are drilled wells, 6% are hand-dug wells, and 9% are springs or cisterns.

In 2010 and 2011, the U.S. Geological Survey (USGS) and PA DEP assessed baseline surface and groundwater conditions in the Lycoming Creek Watershed: 31 main stem and tributary water samples and 14 ground water samples. To continue tackling the assessment of private water well supplies, Lycoming County Planning partnered with the USGS and PA DCED in 2015 to conduct a snap shot of the groundwater quality in Lycoming County through random sampling and testing of 74 private wells. Eleven of those wells were located in the Lower Lycoming Creek Planning Area.

In 2010, the Lycoming County Commissioners adopted the Lycoming County and Lycoming Creek Stormwater Plans. Each of these plans addresses the care of water through the proper use of stormwater best management practices for new development. The Grafius, Millers, and McClure's Runs Stormwater Plan is also applicable in areas of Loyalsock and Hepburn Townships.



Photo Credit: Lycoming County PCD

*Scenic Lycoming Creek*

**Priority Issue Overview** The Pennsylvania Municipalities Planning Code, MPC §301 (b) states: “The comprehensive plan shall include a plan for the reliable supply of water, considering current and future water resources availability, uses and limitations, including provisions to adequately protect water supply sources.”

The 2005 Lower Lycoming Creek Multi-Municipal Comprehensive Plan, Chapter 3, expressed the need to be more diligent in locating certain land uses away from water supply areas and not developing steep slope and ridge tops to reduce the chance for erosion and soil instability. The 2005 plan suggests developing wellhead protection programs for municipal wells-municipal water authorities and establishes wellhead protection areas to protect wells from potential land use and pollutant impacts that could contaminate public water supplies. Chapter 3 also points out the surface waters of Lycoming Creek and its tributaries are very important, as they provide aquifer recharge, recreational opportunities, and wildlife habitat. Furthermore, stormwater management, soil conservation measures, and riparian buffers are key tools for maintaining surface water quality.

Today, the members of the Lower Lycoming Creek PAT believe that developing and implementing a comprehensive source water protection program is essential for maintaining its good water quality. With hundreds of miles of streams and thousands of water wells and natural gas wells, there are many ways for pollutants to enter the water supply.

The Lower Lycoming Creek PAT recognizes the need for a comprehensive source water protection program that will accomplish the following:

- Verify and identify all water sources for mapping of private and public water protection zones based on sub watersheds
- Identify and verify existing or potential pollutants
- Gather existing water quality data
- Identify gaps where water quality data is needed
- Map above and below ground storage tanks
- Institute spill control and emergency control measures for storage tanks
- Ensure automotive industry uses best management practices for fluid storage, spill prevention and cleanup, and readily accessible fluid recycling stations
- Educate the public through social media, television, newspaper, and schools
- Promote integrated water resources management
- Adopt wellhead protection ordinances to require sanitary water well cap installations
- Review Act 537 plan recommendations
- Adopt septic tank pumping ordinances
- Investigate alternatives to salt for winter ice melt applications
- Support legislative action for private well water quality and construction standards
- Support the Lycoming County Conservation District with efforts for reduction in non-point source pollution

**Key Implications** The vast majority of the land within the Lower Lycoming Creek Planning Area is rural and served by on-lot water wells. Thus, it would be highly beneficial to establish standards for the construction, maintenance, and treatment of private wells as well as steps for protection of the surface water and groundwater so that municipal leaders can faithfully execute their most fundamental responsibility—to provide for the health, safety and welfare of their citizens.

There is a need to ensure that source water protection plans are in place, reviewed regularly, updated as needed, and implemented for the urbanized sectors of the Lower Lycoming Creek townships that are served by public water authorities or sometimes smaller private water systems.

The potential impact on groundwater from the ubiquitous gas drilling operations throughout this planning area needs to be carefully evaluated in the short term and over the long run.

**Top Viable Project of Regional Significance for this Issue**

**LOWER LYCOMING CREEK SOURCE WATER PROTECTION PROGRAM**

This project will be implemented in coordination with public water suppliers, PA DEP, and municipalities, with various options for implementation including the participation of an ongoing groundwater monitoring study.

**HOW PROJECT ADDRESSES THE ISSUE**

The Lower Lycoming Creek Source Water Protection program will look comprehensively at all water sources and potential pollution sources, giving direction to municipalities for suggested regulations, general public and school education, and coordination effort for reductions in pollution sources for groundwater and surface waters within the planning area.

**PROJECT LEADERSHIP**

Lead Agency – Lower Lycoming Creek PAT

Other Partners – Lycoming County PCD, PA DEP, Water Authorities, PAT Municipalities, Sewage Enforcement Officers, land owners, business owners, private and public schools, and colleges

**STEPS FOR SUCCESS**

<b>STEP NUMBER</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
<b>1</b>	<b>APPOINT A STEERING COMMITTEE/PDT</b>	<b>2018</b>	<b>PCD STAFF, LCC, PAT</b>
<b>2</b>	<b>REVIEW EXISTING REGULATION/ORDINANCES &amp; PLANS TO DETERMINE LEGAL ABILITY TO IMPLEMENT SOURCE WATER PROTECTION PROGRAM IDEAS</b>	<b>2018-2019</b>	<b>PDT, PCD STAFF, MUNICIPAL OFFICIALS</b>
<b>3</b>	<b>EVALUATE EXPANSION OF EXISTING WMWA SOURCE WATER PROTECTION IMPLEMENTATION STEPS OUTSIDE OF EXISTING PROTECTION ZONES PAT WIDE</b>	<b>2018-2019</b>	<b>PDT, PCD STAFF, MUNICIPAL OFFICIALS, WMWA</b>
<b>4</b>	<b>PRIORITIZE IMPLEMENTATION PROGRAM IDEAS BASED UPON IMPORTANCE TO THE WATERSHED &amp; TIMING OF AVAILABLE FUNDING SOURCES</b>	<b>2019-2022</b>	<b>PDT, PCD STAFF, MUNICIPAL OFFICIALS, DEP</b>
<b>5</b>	<b>WRITE DRAFT LOWER LYCOMING CREEK PLANNING AREA SOURCE WATER PROTECTION PROGRAM &amp; BEGIN IMPLEMENTATION</b>	<b>2020-ONGOING</b>	<b>PDT, PCD STAFF, MUNICIPAL OFFICIALS, DEP</b>

**FUNDING RESOURCES**

Applicable potential funding sources will be developed by the Steering Committee/PDT in the 2018 timeframe.

**Additional Projects, Programs and Initiatives for this Issue**

**1. CONSISTENT STORMWATER MANAGEMENT PRACTICES**

Require consistent and adequate application of stormwater management on proposed development and encourage stormwater management retrofits for existing development.

**2. IMPLEMENT MS4 PUBLIC EDUCATION & ENFORCEMENT**

Implement MS4 programing in accordance with the approved CBPRP.

**3. INCORPORATE APPROPRIATE LAND USE CONTROLS FOR EXTRACTION INDUSTRIES**

Lycoming County Planning has developed zoning amendments that could be used as model ordinance language.

**4. AMEND THE TOWNSHIP ZONING ORDINANCE TO LIMIT DEVELOPMENT IN DESIRED SPECIAL PROTECTION AREAS**

Such as steep slope and ridgetop using overlay districts.

**5. DEVELOP A CONSERVATION EASEMENT PROGRAM**

Encourage conservancy and land trust organizations to explore easements to preserve sensitive and scenic areas from future development.

**6. DEVELOP ON-LOT WASTEWATER MANAGEMENT DISTRICTS**

Effective on-lot disposal should be practiced.



## Priority Issue #7



### Flooding is a threat to life, property, and communities.

**Back Story** The American Society of Civil Engineers, ASCE, conducts periodic evaluations of 16 infrastructure categories, including levees. Using reports, studies, surveys, and other research materials from professional societies, non-profit associations, and local, state, and federal agencies, the ASCE documents its conclusions in a report titled the “Report Card for Pennsylvania’s Infrastructure.”

The latest 2014 ASCE Report Card grades Pennsylvania’s levee infrastructure at a grade C-, mediocre. The report states that the grades evaluate the current state of the physical infrastructure itself and not a reflection on the agencies responsible for the infrastructure, who are often working with limited resources. The grade was developed based on eight criteria: capacity, condition, funding, future need, operation and maintenance, public safety, resilience, and innovation. The grade C- reflects the fact that Pennsylvania operates one of the few state-level comprehensive flood protection programs in the nation that requires a high level of standards for monitoring and maintaining levees. The report also states the grade reflects:

- The consequences resulting from the advanced age of levee systems
- The numerous flood-prone watersheds in Pennsylvania
- The residual flood risk inherent in flood protection projects designed to the current flood protection standard
- The population at risk
- Non-existent funds for levee system repair and maintenance
- The threat to public safety from a catastrophic levee failure or overtopping.

The ASCE reports that a levee is defined as a manmade embankment, typically a linear, earthen structure, built to provide flood protection from temporary high water and may be the most important flood protection method used for flood-prone communities across Pennsylvania.

As of the 2014 report, there are 64 major levee systems in Pennsylvania, made up of 318 separate levee segments that provide a local flood protection length of about 151 miles.



Photo Credit: Lycoming County PCD

*Levee system along Lycoming Creek behind the businesses of Shirns Auto and Weis Markets in Old Lycoming Township.*

Historically, levees were designed to protect property rather than people. Ultimately, though, the systems were built to allow enough time for people to gather their valuables and evacuate if there is eminent danger to the levee system overtopping. Within the last 100 years, there have been 4,523 deaths recorded nationally caused by failure of levees, which alone supports the need for the national levee Rehabilitation and Inspection Program led by the U.S. Army Corps of Engineers (USACE).

In addition, the Federal Emergency Management Agency, FEMA, developed a levee certification process after the flooding and levee failure on the Mississippi that followed Hurricane Katrina in 2005. This certification process is mandatory for all areas in the United States, including the Lower Lycoming Creek and Greater Williamsport Alliance Planning Areas, if the areas protected by the levee are mapped as protected for the National Flood Insurance Program.

A key point is that, once certified, the area behind a levee is considered protected and the property owners do not have a regulatory requirement to purchase flood insurance, as is the case in the Lower Lycoming Creek and Greater Williamsport Alliance planning areas.

**Priority Issue Overview** The Williamsport Flood Control System protects the City and much of the urbanized areas of Old Lycoming Township and Loyalsock Township as well as the Borough of South Williamsport. The cumulative value of real estate protected by this system exceeds \$1 billion.

Using the County's Hazard Plan as reference, out of the five municipalities in the Lower Lycoming Creek Planning Area, properties in both Loyalsock and Old Lycoming Townships are protected by the levee system: the total assessed value of parcels protected by the levee in Loyalsock Township is \$146,552,190 and in Old Lycoming Township is \$32,741,640.

The system includes a number of pump stations, valves as well as several miles of levee. Major portions of the levee were authorized in the late 1930s, with full completion achieved in 1955. The system was further expanded in 1972 after Tropical Storm Agnes to protect the Golden Strip area of Loyalsock Township with the Bull Run Flood Protection Project.

After construction of the levee system, the sponsoring municipalities assumed responsibility for operation, recurring maintenance, and periodic recertification. The recertification process of these levees has become a significant financial challenge to these municipalities, particularly if the recertification engineers discover costly problems.

The Borough of South Williamsport is the Non-Federal Sponsor for the levee on the southern side of the West Branch Susquehanna River. Williamsport is the Non-Federal Sponsor for the two levee sections that surround the City and tie back into Old Lycoming and Loyalsock Townships. A separate levee, the Bull Run Flood Protection System, protects the commercial area of East Third Street in Loyalsock Township where Loyalsock Township is the Non-Federal Sponsor.

There are two separate federal agencies involved in the recertification process. The levee system must be recertified by USACE and certified by the FEMA. Recently, the USACE identified deficiencies in the Northeast

and Northwest Williamsport Levee System. These improvements must be made to provide the continued flood protection to the area.

Through FEMA’s Provisional Levee Accreditation Program (PAL), a partnership can be forged of those municipalities protected by the levee. The partnering municipalities can review the levees to ensure that they meet FEMA criteria for certifying the levee. Both agencies look to ensure the ongoing viability of levee systems.

**Table 5. Structures in Levee Protected Areas by Property Type & Municipality**

Table 4.3.13-2 Structures in levee protected areas by generalized property type.								
Municipality	Total Structures	Agricultural	Commercial	Industrial	Residential	Transportation/Utilities	Unknown	Grand Total
Loyalsock Township	5,344	0	232	13	399	2	3	649
Old Lycoming Township	3,091	0	147	6	154	0	8	315
South Williamsport Borough	2,899	0	154	19	531	3	9	716
Williamsport City	12,248	1	1,744	136	4,685	14	86	6,666
<b>TOTAL</b>	<b>63,791</b>	<b>1</b>	<b>2,277</b>	<b>174</b>	<b>5,769</b>	<b>19</b>	<b>106</b>	<b>8,346</b>

Source: 2015 Lycoming County Hazard Mitigation Plan

**Key Implications** Absent the levee being recertified, the properties protected by the levee may no longer enjoy a 500-year flood plain status. If those properties default to or revert back to a 100-year floodplain status, then the flood insurance premiums required could be difficult for property owners to afford.

Absent recertification and correction of any identified problem issues, a potentially fatal failure of the levee would go undetected until it became catastrophic. This failure could result in catastrophic human, economic, and financial losses for the communities behind the levee. It is noteworthy to consider the type of entities that are protected by the levees:

- Residential properties
- Commercial buildings and businesses
- Non-profit enterprises
- Critical infrastructure elements
- Chemical and other major industries
- Colleges and school facilities
- Correctional facilities and law enforcement locations
- Medical services including EMS and hospitals
- Wastewater treatment plants

Additionally, in the event of a levee breach or failure of a non-certified levee, the federal government would have no obligation to assist in financing recovery efforts for thousands of homeowners.

**Top Viable Project of Regional Significance for this Issue****LEVEE RECERTIFICATION**

The flood protection system that serves both the Lower Lycoming Creek and the Greater Williamsport Alliance Planning Areas includes a series of levees and tie-backs that protect the City of Williamsport, South Williamsport Borough, sections of Loyalsock Township to the east, and sections of Old Lycoming Township to the west.

Each levee was built by the USACE in partnership with the local municipality (Non-Federal Sponsor). The levees currently have two certifications that must be maintained; USACE and FEMA. Each Non-Federal Sponsor agreed to maintain the levees to the standards defined by the USACE when the levees were built. These levees must be repaired and maintained by the non-federal sponsor to protect life and property. The USACE has regularly scheduled inspections.

**HOW PROJECT ADDRESSES THE ISSUE**

The project is multiphase. The first is to examine the USACE deficiencies by levee and chart a plan to seek funding to remediate the issues. Next is to address any deficiencies with the FEMA Certification. Finally, a study should be undertaken to consider future configurations of how the levee and its maintenance are addressed into the future.

**PROJECT LEADERSHIP**

Lead Agency – This issue must be led by the non-federal sponsors – City of Williamsport, Borough of South Williamsport, and Loyalsock Township. Consideration must be given to identifying and securing the funding necessary to repair the levee system and address the deficiencies and developing alternatives for funding ongoing maintenance.

Other Partners – The Lycoming County Planning Department and the County Commissioners should provide support to these non-federal sponsors.

**STEPS FOR SUCCESS**

<b>STEP NUMBER</b>	<b>DESCRIPTION OF STEP</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTIES</b>
<b>1</b>	<p><b>REVIEW THE LATEST USACE REPORTS FOR IMPROVEMENTS THAT NEED TO BE COMPLETED.</b></p> <p><b>REVIEW THE REPORT RESULTS OF THE FEMA LEVEE CERTIFICATION STUDY</b></p> <p><b>BUILD A WORKING TASK FORCE</b></p>	<b>2014-12/31/2017</b>	<p><b>CITY OF WILLIAMSPORT</b></p> <p><b>LOYALSOCK</b></p> <p><b>SOUTH WILLIAMSPORT</b></p> <p><b>OLD LYCOMING</b></p> <p><b>COUNTY OF LYCOMING</b></p> <p><b>PCD</b></p> <p><b>PA DEP</b></p> <p><b>WILLIAMSPORT SANITARY AUTHORITY</b></p>
<b>2</b>	<b>PRIORITIZE WORK AND SEEK FUNDING FOR USACE SYSTEM REPAIRS AND UPGRADES</b>	<b>JANUARY 2017- JANUARY 2020</b>	<b>PCD, NON-FEDERAL SPONSORS</b>
<b>3</b>	<b>DEVELOP A COALITION TO ADDRESS THE ONGOING MAINTENANCE AND MEANS OF FUNDING IT.</b>	<b>JANUARY 2017-2020</b>	<b>PCD</b>

**FUNDING RESOURCES**

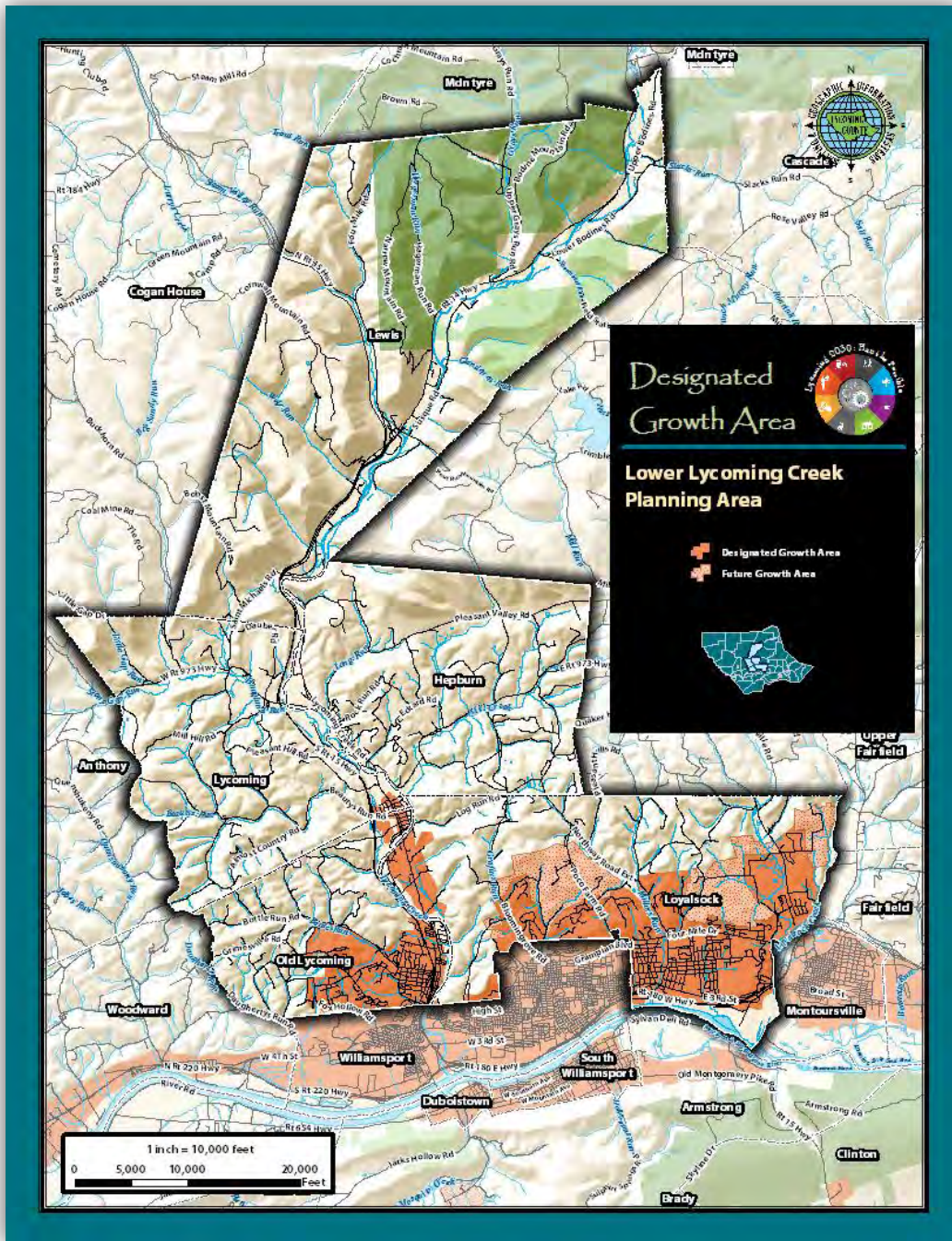
The Levee Non-Federal Sponsors, working with stakeholders as a Project Delivery Team, will continue to work with the State and community to help fund rehabilitation of levees in order to reduce risk to life and property should a levee breach. This team will seek assistance in efforts to continue accessing funds from the Levee Rehabilitation Assistance Program (LRAP) and the Water Infrastructure Finance and Innovation Act (WIFIA), which are currently pending for reauthorization per the Water Resources Development Act (WRDA). The Project Delivery Team will also work with FEMA to determine if the FEMA Levee Analysis and Mapping Approach (LAMP) (analysis of non-accredited levees) is necessary.

**Additional Projects, Programs and Initiatives for this Issue**

None.

## Chapter 3: Growth Area and Future Land Use Maps

### 2017 Designated Growth Area & Future Growth Area Map

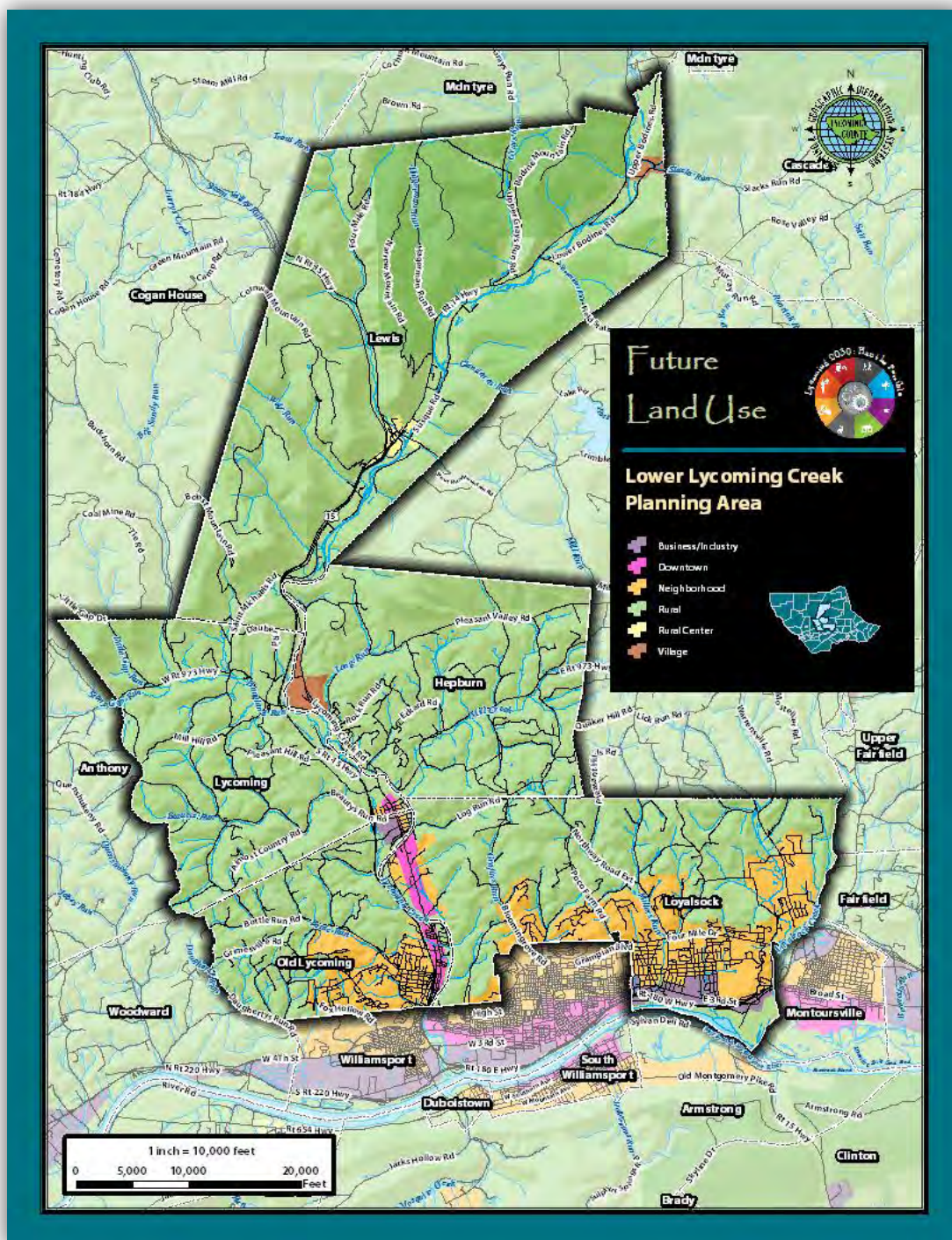


**Notable Change:** The designated future growth area was expanded into the northeastern portion of Loyalsock Township to encompass areas where there is potential to extend public water service in the future.

# Lower Lycoming Creek Planning Area Chapter 3: Growth Area and Future Land Use Maps

## 2017 COMPREHENSIVE PLAN REVIEW AND IMPLEMENTATION STRATEGY

### 2017 Future Land Use Map



No changes were made to the Future Land Use Map as a result of this update. Please refer to the appendices or the 2005 Map Book for mapped information on future land use.

## **References**

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<sup>i</sup> Act 37 -- HEALTH AND SAFETY (35 PA.C.S.) and VEHICLE CODE (75 PA.C.S.) - OMNIBUS AMENDMENTS  
Act of Aug. 18, 2009, P.L. 308, No. 37

<sup>ii</sup> The Township Second Class Township Code, Act of May 1, 1933 (P.L. 103, No. 69), as enacted and amended