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## SECTION 1.0 INTRODUCTION

*Lackawaxen and Shohola Townships are endowed with remarkable natural surroundings that generate a high quality of life for our residents. In order to sustain this environment and quality of life, our communities' vision is to effectively manage growth and development while: protecting personal property rights; providing appropriate public facilities, expanding recreational opportunities and infrastructure; expanding opportunities for local employment; and, promoting economic activities that have a natural stake in preserving our environment and scenic resources.*

A community's land is its most valuable asset. Therefore, Lackawaxen Township and Shohola Township partnered to conduct a multi-municipal comprehensive planning process to address future needs of the Lackawaxen/Shohola region. This partnership was developed due to past and current practices of cooperation between the Townships as well as the many common characteristics between the Townships which make this region unique. This partnership was formalized by each Township passing individual ordinances and through a multi-municipal agreement agreeing to cooperate in the following manner:

- Participate in the preparation of a regional comprehensive plan for the purpose of achieving compatibility of land use patterns across municipal boundaries and consistency with the Pike County Comprehensive Plan;
- Partner with Pike County Community Planning to assist with project management and applying for grants on behalf of the Townships;
- Share financial responsibility for the project; and
- Create and provide representation to a Citizens Advisory Committee (CAC).

It is this agreement that formed the basis for collaboration and cooperation to successfully develop this Multi-Municipal Comprehensive Plan. This plan builds upon an Existing Conditions Report, a Build-Out Analysis Report and Summary of Community Input. These reports and documents are referenced as Appendices to this plan. This plan is developed to work in concert with the Multi-Municipal Open Space, Greenways and Recreation Plan for the Lackawaxen/Shohola Region.

### Section 1.1 Plan Purpose & Goals

A multi-municipal comprehensive plan is a plan developed by more than one municipality. It generally addresses a variety of community issues such as land use, transportation, housing, natural and historic resources, and community facilities and services.

The plan addresses current conditions and desired future conditions by identifying valued community resources, a desired way of life and strategies to manage growth through techniques such as preservation and conservation, designation of future growth areas and rural resource areas, identification of non-residential uses to insure an adequate tax base and



*Lackawaxen River*

*The land and its natural resources are the most valuable asset of the Lackawaxen/Shohola Region.*

provisions for appropriate public facilities. This plan includes short-term and long-term implementation strategies for the next 20 years providing the basis for management of growth and recommendation for update of a variety of ordinances including, but not limited to, the Townships' Zoning Ordinances and Zoning Maps, Subdivision and Land Development Ordinances and any other implementing ordinances.

## Section 1.2 Benefits of a Multi-Municipal Comprehensive Plan

A multi-municipal comprehensive plan has several benefits to those who partner to conduct long range planning. The multi-municipal plan:

- Organizes the Townships for the future to address a variety of community facilities, services and municipal needs.
- Provides a blueprint for land use patterns of the future for each Township.
- Provides growth management and community preservation strategies.
- Addresses community issues unique to each Township as well as community issues common to both Townships.
- Provides a process for planning together to minimize community and environmental impacts related to growth.
- Identifies opportunities for the Townships to work together, sharing resources and providing desired community services.
- Increases opportunities to obtain grants to support projects, programs and services.
- Plans for a balanced tax base to ensure future sustainability for each Township.

Many of the above benefits will be realized through implementation of the plan.

## Section 1.3 Planning Process

Put simply, the comprehensive planning process involves finding the sometimes complex answers to the following simple questions.

- Where are we?
- Where do we want to be?
- How do we get there?

Finding these answers involves implementing a collaborative planning process.

The Townships engaged in a collaborative planning process covering eighteen (18) months. The process involved routine meetings with the Citizen Advisory Committee (CAC), Visioning Activities (*vision statement, plan goals and objectives and concept development*), a SWOT (strengths, weaknesses, opportunities and threats) exercise, a Visual Preference Survey, a Community Survey, three (3) public meetings and a joint public hearing to support adoption of the plan. The public meetings included a number of



Shohola Creek

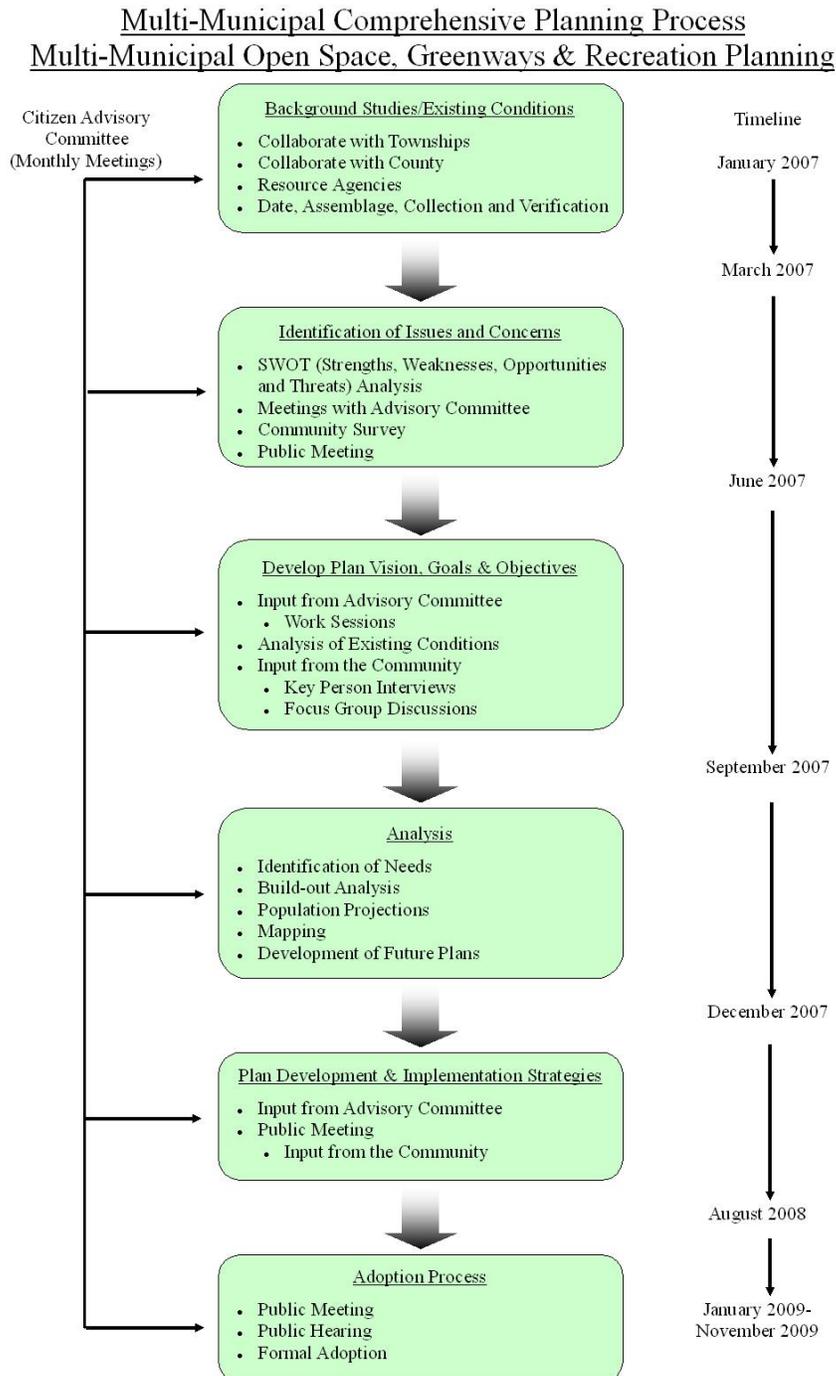
activities, several of which are listed above, to actively engage the community. In addition to those activities, participants of the CAC and Open Space, Greenways and Recreation sub-committee and public meetings were encouraged to participate in a Greenway's Activity, a Village Visioning/Enhancement Activity and review and comment on the Build-Out Analysis. Each activity is described in detail in Appendix 3: Community Involvement. The planning process was supplemented with a project website and newsletters.

The CAC consisted of representation from each community and was established to provide guidance to the Consultant Project Team. The CAC's responsibilities included taking a leadership role in obtaining input from the community by participation in public meetings, sharing information and educating the community about key issues and concerns along with identifying potential solutions and planning strategies. Members of the CAC played an instrumental role in plan development.



The CAC met routinely throughout the planning process to fulfill their responsibilities and to provide opportunities for public participation, communication with the consultant team and review the results of analysis and plan documents. The planning process is graphically presented below with additional details pertaining to the public involvement process and public input provided in Appendix 3: Community Involvement.

**Figure 1: Planning Process**



## SECTION 2.0 BACKGROUND INFORMATION

Background information describing existing conditions, trends and projections, and public concerns provide the framework for development of a comprehensive plan. Key background information is summarized in this section. Detailed background information is presented in the Appendices of this document including: Appendix 1: Existing Conditions Report, Appendix 2: Build-Out Analysis Report and Appendix 3: Community Involvement Report. These reports provide the basis for further assessment, evaluation and recommendations contained in this plan. An overview of planning implications addressed by this plan is also provided in this section.

### Section 2.1 Summary of Existing Conditions & Future Impacts

The summary table below and on the following page describes regional characteristics derived from the Existing Conditions Report and the Build-Out Analysis Report. The information provides a brief synopsis of data in the reports and summarizes existing conditions. Refer to the previously mentioned reports for greater detail and/or explanation of characteristics.



Shohola Creek

Table 1: Summary of Lackawaxen/Shohola Region Facts

Regional Characteristic	Lackawaxen Township		Shohola Township		Lackawaxen/Shohola Region	
	Amount	%	Amount	%	Amount	%
<b>Land Use Characteristics</b>						
<b>Total Area (Acres)</b>	<b>52,180</b>		<b>29,160</b>		<b>81,340</b>	
Total Residential Acres	15,974	30.6	5,153	17.7	21,127	26.0
Total Commercial Acres	547	1.0	511	1.8	1,058	1.3
Total Industrial Acres	155	.03			155	0.2
Total Agricultural/Wooded Acres	13,264	25.6	11,338	38.8	24,602	30.2
Total Conserved/Preserved Acres	8,819	16.9	11,067	37.7	19,886	24.4
Total Public Open Space/Recreation (TWP & State)	8,131	15.6	8,171	28.0	16,303	20.0
Lands Available for Development	24,004	46.0	9,548	32.7	33,552	41.2
<b>Population/Demographics</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
<b>Total Population (2000)</b>	<b>4,154</b>		<b>2,088</b>		<b>6,242</b>	
Population per Square Mile	52.85		46.71		50.62	
Projected 2030 Population	8,138		5,656		13,794	
<b>Household Information</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
<b>Total Households</b>	<b>3,750</b>	<b>100</b>	<b>3,089</b>	<b>100</b>	<b>6,839</b>	<b>100</b>
Total Occupied Housing Units	1,694	45.2	836	27.1	2,530	37.0
Vacant Units	193	5.1	198	6.4	391	5.7
Seasonal Housing Units	1,863	49.7	2,055	66.5	3,918	57.3
Owner Occupied Units	1,456	86.0	716	85.6	2,172	85.8
Renter Occupied Units	238	14.0	120	14.4	358	14.2

**Table 1: Summary of Lackawaxen/Shohola Region Facts (continued)**

Regional Characteristic	Lackawaxen Township		Shohola Township		Lackawaxen/Shohola Region	
	Amount	%	Amount	%	Amount	%
<b>Employment Characteristics</b>						
<b>Total Employment</b>	<b>1,543</b>	<b>100</b>	<b>894</b>	<b>100</b>	<b>2,437</b>	<b>100</b>
Education/Health/Social	222	14.4	159	17.8	381	15.6
Arts/Entertainment/Recreation/Food/Accommodations	317	20.6	72	8.1	389	16.0
Manufacturing/Construction	258	16.7	199	22.3	457	18.8
Professional/Finance/Information/Public Administration/Other Services	366	23.7	238	26.6	604	24.8
Agricultural/Forestry/Hunting/Mining	17	1.1	10	1.1	27	1.1
Retail Trade/Wholesale Trade	267	17.3	153	17.1	420	17.2
Transportation and Warehousing and Utilities	96	6.2	63	2.0	159	6.5

The predominant land use is residential (30.6%) and agriculture/wooded lands (25.6% mostly wooded). Significant areas throughout both townships are conserved/preserved lands (16.9%) and public open space/recreational lands (15.6%). The Lackawaxen/Shohola Region is impacted by a significant number of seasonal housing units (3,918 or 57.3% of all housing units) that are typically occupied during late spring, summer and early fall coupled with seasonal housing during hunting season. Most employment is provided in the greater region in urban centers within acceptable commuting distances.

### Section 2.1.1 Existing Conditions Report

The Existing Conditions Report provides analysis of existing conditions within the Lackawaxen/Shohola Region. Analysis of existing conditions provides an understanding of the current social, economic and physical environment. This report presents findings, inventories and assessment of the present status of each Township with respect to the required comprehensive plan elements outlined in the Pennsylvania Municipalities Planning Code (MPC). The report includes population and housing demographics, land use, environmentally sensitive areas, natural areas inventory, agriculture, historic resources, infrastructure, transportation, community facilities and services, local and regional economics and utilities.

This report provides the following key information and maps to identify the following inventories, conditions and trends to support this plan:

- Section 2.3 Regional Population Projections
- Section 3.1 Demographics: Population and Housing Data and Trends
- Section 3.2 Land Use
  - General Land Use Map – Map 1
  - Lands Available for Development – Map 2
- Section 3.3 Environmentally Sensitive Areas
  - 3.3.1 Hydrology
    - Surface Hydrology & Watershed – Map 4
    - Surface Hydrology & Subwatersheds – Map 5
  - 3.3.2 Geologic Formations & Aquifer Yields
    - Geologic Formations & Aquifer Yields – Map 6

- 3.3.3 Wetlands
- 3.3.4 Floodplains
- 3.3.5 Steep Slopes
- Section 3.4 Natural Areas Inventory
  - Existing Conservation & Preservation – Map 8
- Section 3.7 Historical Resources
  - Existing Historic Sites & Natural Areas – Map 11
- Section 3.8.3 Exceptional Value and High Quality Waters
- Section 3.9 Transportation
  - Existing Transportation – Map 13
- Section 3.10 Community Facilities and Services
  - Existing Parks, Recreation & Open Space – Map 14
- Section 3.11 Economic Profile
- Section 4.0 Summary of Planning Implications
  - Section 4.1 Population Growth Planning Implications
  - Section 4.2 Land Use Planning Implications
  - Section 4.3 Environmentally Sensitive Areas Planning Implications
  - Section 4.4 Natural Areas Planning Implications
  - Section 4.7 Historic Preservation Planning Implications
  - Section 4.9 Economic Planning Implications

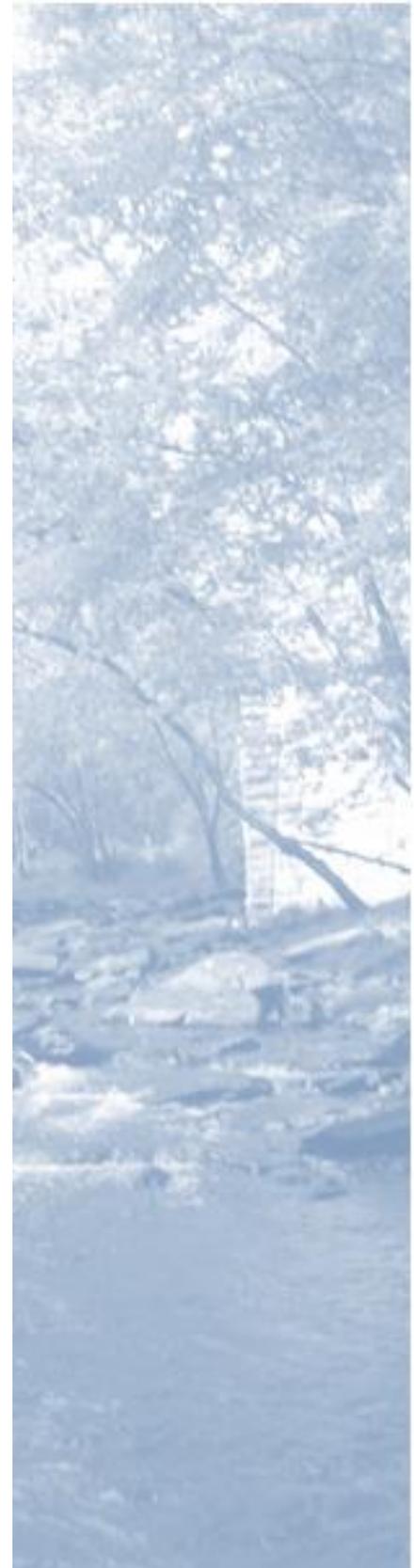
The Existing Conditions Report is supporting documentation for this plan as well as the Multi-Municipal Open Space, Greenways and Recreation Plan for the Lackawaxen/Shohola Region. Refer to Appendix 1 for additional details.

### Section 2.1.2 Build-Out Analysis Report

The Build-Out Analysis Report provides a model of the Lackawaxen/Shohola Region's potential for development based upon existing conditions, existing land use regulations and current and future economic trends. The analysis quantifies land use and the costs and/or impacts associated with growth. The analysis describes a maximum build-out scenario (the maximum amount of residential and commercial uses permitted per acre) and a low density build-out scenario (the least amount of residential uses permitted per acre) under current zoning regulations. One of the aspects assessed with respect to community services is park and recreation facilities relating to current population and anticipated population. Refer to Appendix 2 for additional details.

This report also includes a cost analysis of conservation of lands in comparison with fiscal impacts on the school districts. Both the Build-Out Analysis and cost analysis of conservation suggests the following:

- Past growth within the townships has not posed a burden on the school district due to the high percentage of seasonal housing and high percentage of older householders resulting in lower average numbers of students per household.
- Analysis reveals that, if trends were to change and more housing was occupied year-round by younger home owners, growth in the townships would pose a burden on the school districts.



- Analysis reveals that past and projected growth poses fiscal impacts on various township infrastructure, facilities and services.
- The short-term cost associated with conservation of land is less burdensome financially on the townships when compared to short-term and long-term costs associated with township infrastructure, facilities and services to meet the needs of growth.
- The region's tax base is unbalanced with insufficient development of lands with non-residential uses.

### Section 2.1.3 Community Involvement Report

The Community Involvement Report documents the results of public input received through the collaborative planning process to support plan development conducted as part of the comprehensive planning process. This public involvement process was tailored to obtain valuable input about community issues associated with land use, preservation/conservation, growth areas, infrastructure, community services, parks, recreation, open space and greenways to support plan development. Refer to Appendix 3 for additional details.

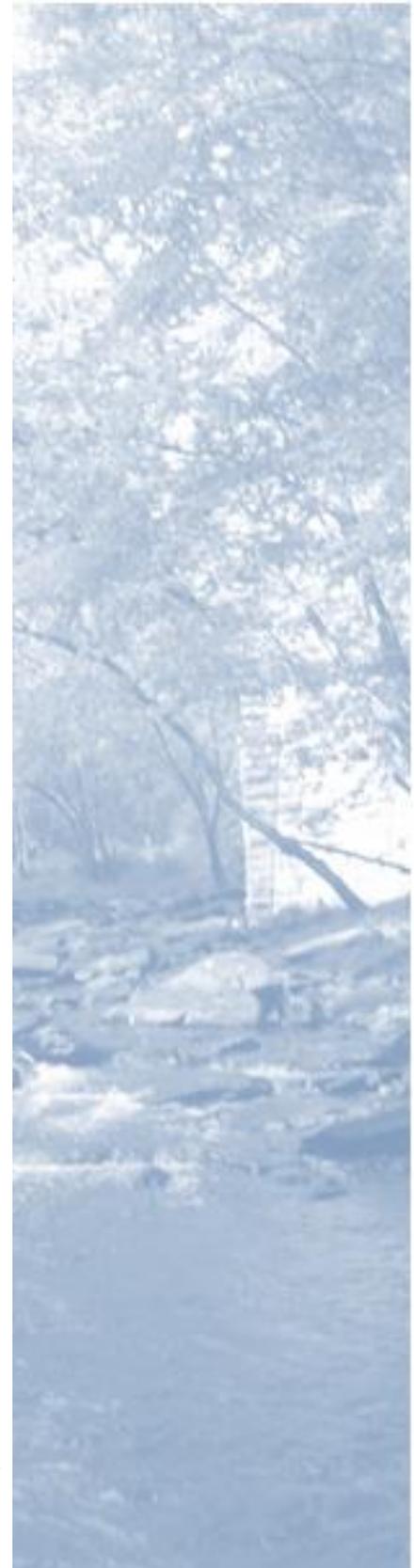
### Section 2.1.4 Overview of Planning Implications

Over the past two decades, the region has experienced considerable growth and has experienced the impacts of this growth reflected in a variety of community issues outlined in Chapter 2.0, Background Information. Additionally, Appendix 1 – Existing Conditions Report provides a variety of information, inventories, data, trends and planning implications as a result of study of both the existing conditions of the region as well as the relationship of past, current and projected trends. The Build-Out Analysis Report contained in Appendix 2 further identifies these impacts with respect to projected population, housing units and commercial development with fiscal impacts on the community.

Planning implications are conclusions or circumstances that are implied based upon various trends, patterns or conditions that if not addressed will impact the rural character and sustainability of the region. A detailed listing of planning implications is included in Chapter 4.0, Summary of Planning Implications. The following are several key planning implications outlined by plan element that are addressed by this plan for the purpose of obtaining the vision of this plan.

- **Population Growth**

Population increases for Lackawaxen and Shohola Townships grew 46% and 31% respectively from 1990 to 2000 resulting in a loss of natural resources and amenities to development. As growth continues, the demand for additional public services and expanded community facilities (*i.e. schools, police, sanitary sewer, water and other utilities and emergency services*) will increase.



- **Land Use**

Six percent (6%) of the total land areas within the region permits commercial development. Approximately 96% of the total 33,553 acres available for development within the region are zoned to permit predominantly low density residential development, a land use which typically requires the highest demand on public services for the least amount of tax return. As growth continues, higher taxes will be required by the residential community to support community services and facilities.

- *Under current land use regulations, the Lackawaxen/Shohola Region has the potential to nearly double its population over the next 20 years resulting in a significant loss of natural lands and open space.*
- *Unmanaged growth has the potential to consume approximately 33,553 acres of natural beauty over the next 20 years.*

- **Environmentally Sensitive Areas**

There are a variety of natural resources and amenities that have been impacted by development.

- *Development within environmentally sensitive areas jeopardizes water quality and supply, wildlife habitats and scenic beauty of the region.*
- *Increased development will impact water supply, wetlands and groundwater recharge areas.*
- *Development has impacted the 4.5 square miles of floodplain areas and will continue to impact these areas unless appropriate regulation is applied to development standards.*
- *Development on steep slopes impacts run-off and pollution of streams within the region.*

- **Natural Areas**

The loss of natural areas negatively impacts habitats of species unique to the region as well as limits eco-tourism opportunities within the region. The Lackawaxen/Shohola Region has nearly 23% (18,601 acres) of its land in permanently preserved lands with another 14,633 acres owned by private hunting and fishing clubs and 2,725 acres enrolled in the County's Agricultural Security Areas Program both of which is temporarily preserved and subject to future development opportunities.

- **Public Infrastructure and Community Facilities/Services**

As population increases, additional schools, police, fire, recreation and open space, and emergency services are



required to comply with state and national standards that ensure the community's health, safety and welfare.

- *The allocation, acquisition and improvement/enhancement of space for public recreation (active and passive) have not been sufficiently made as growth has occurred.*

- **Housing**

A significant number of seasonal housing is located within the region (*47% of total housing units are seasonal housing in Lackawaxen and 67% of total housing units are seasonal housing in Shohola*) with trends indicating that seasonal housing is converting to year-round housing and new housing development is predominantly for year-round housing resulting in the increased demand on community services and the environment.

- **Historic Preservation**

The Lackawaxen/Shohola Region is rich in history; yet, many historic resources have been lost to roadway construction and unchecked development impacting opportunities to attract visitors/tourists to the region. Additionally, a loss of physical evidence of heritage of the region impacts the region's "sense of place."

- *Losses include portions of the Delaware & Hudson (D&H) Canal, hotels/inns and several lock houses.*

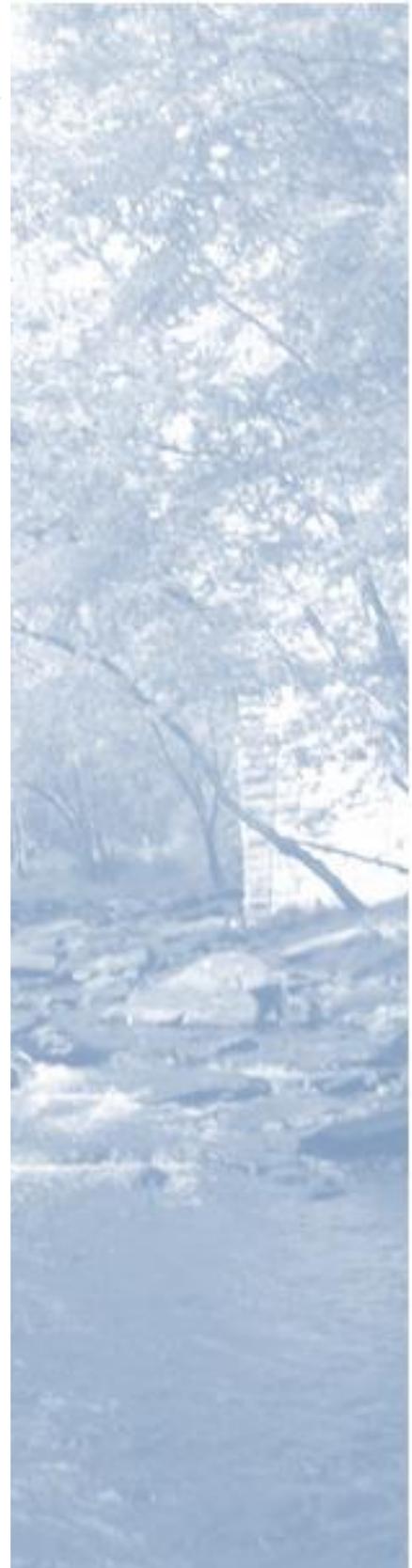
- **Transportation**

A significant portion of Township budgets are allocated to local roads and maintenance and a majority of the state roadways in the region are of substandard width and condition. A significant portion of the population must commute for employment and the roadways are heavily utilized by the tourist community during peak periods resulting in costly investments necessary for bridges, roadways, utility location, roadside maintenance of trees and stormwater management.

- **Economic Development**

The region's unbalanced economic base will pose serious economic implications if a predominantly residential pattern of development continues with losses to the natural resources that support eco-tourism and limited commercial opportunities for employment as well as to provide necessary goods and services to the region such as shopping options, entertainment and professional services.

- *Annually, Pike County has more than 11 million visitors from the state and surrounding states. A loss of eco-tourism influences such as natural lands, open space*



*and greenways will affect the local and regional economy.*

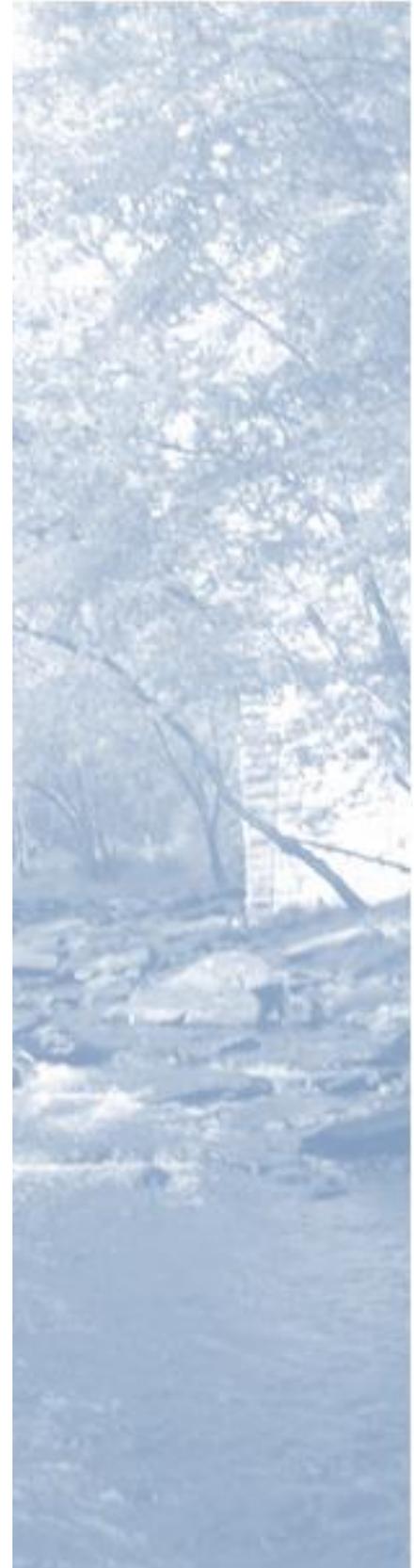
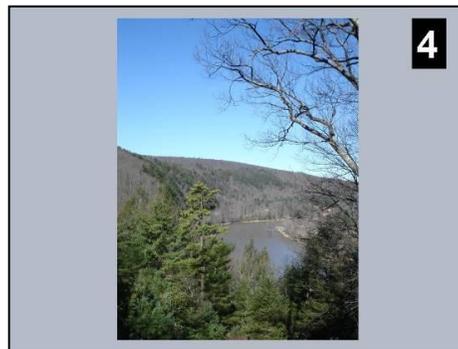
## Section 2.2 Summary of Community Issues, Concerns & Priorities

Community issues, concerns and priorities were derived from the community-at-large using several techniques including a visual preference survey (VPS), a community survey, and several facilitated discussions with the CAC. The compilation of survey results and facilitated discussions provides a generalized view of the community's issues, concerns, and priorities. These views were used to develop plan objectives and strategies. Appendix 3: Community Involvement includes data collection, analysis techniques and detailed results of public involvement.

### Section 2.2.1 Visual Preference Survey

At the June and October 2007 public meetings, as well as at the first CAC meeting, a visual preference survey (VPS) was conducted to provide opportunity for citizen evaluation of physical images of natural and built environments depicted with pictures of streetscapes, land uses, site design, building types and varying aesthetic and natural amenities. The results of this type of survey are an indication of the community's level of preference for what they have viewed and what they identify as appropriate for the community. The following images include the top preferred and top opposed preferences for both the CAC and the general public.

### CAC and Community Preferred Images



21



25



33



45



CAC and Community Opposed Images

3



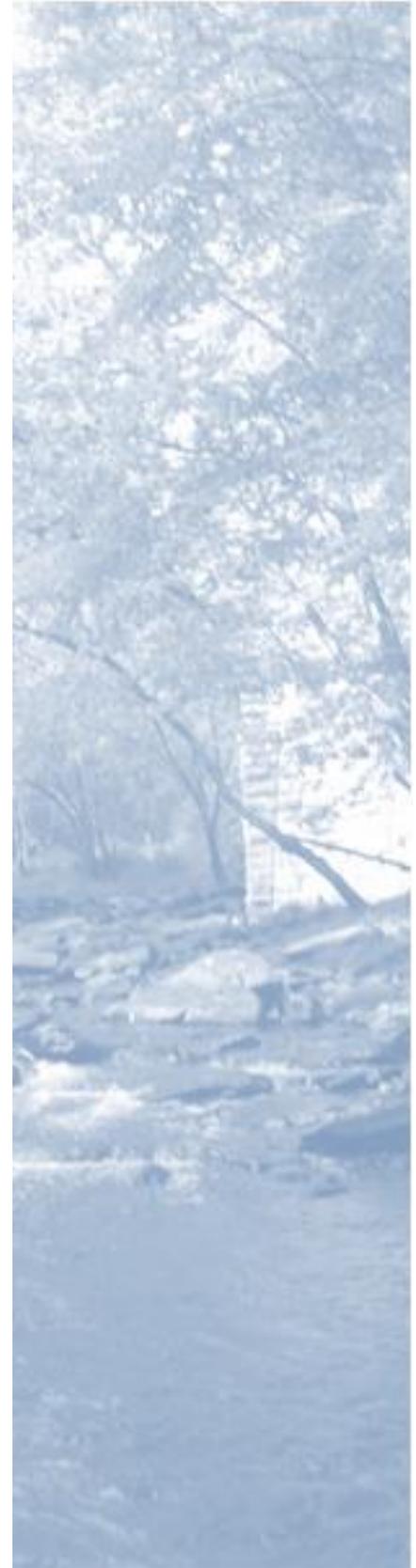
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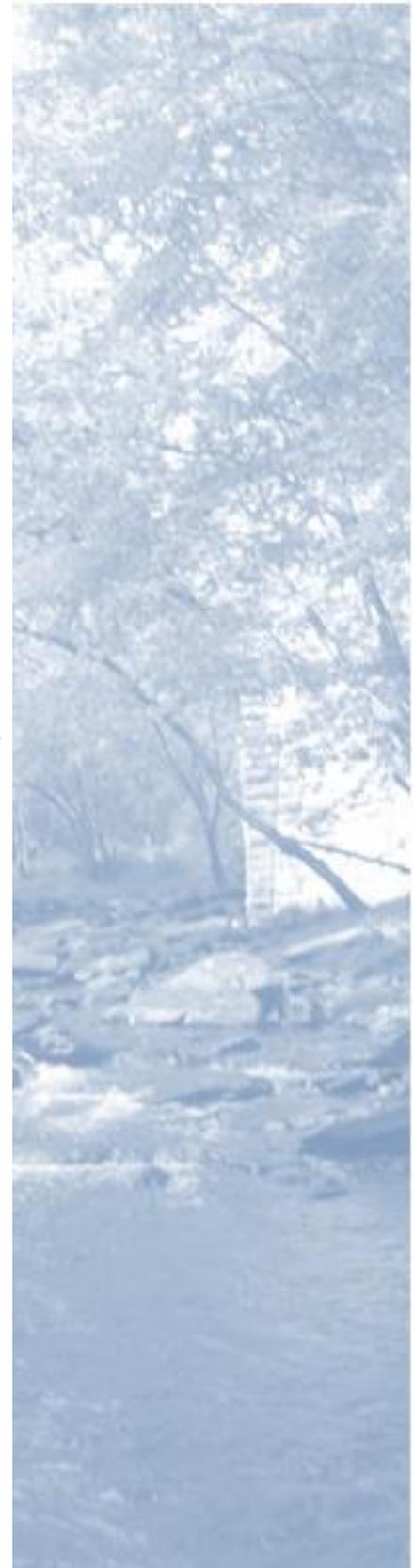


Interpretation of the above images suggest that the community is *in support* of preservation of historic and natural resources as well as improvement of the appearance of existing properties and uses coupled *with a lack* of support for higher density growth and suburbanization of the community.

### Section 2.2.2 Community Survey

A community survey was developed and administered by mail to property owners in both Townships as a component of the public involvement portion of the comprehensive planning process. This public involvement technique was used to collect citizen opinions, attitudes, and facts about the community. The results of the community survey provide the Townships vital information about assets within the community, about how the community would like to change, key issues, and where tax dollars should be spent. The results of the community survey were incorporated with other supporting documents. The Existing Conditions Report and Visual Preference Survey results focus on the technical analysis to support strategy development that meets community goals and objectives of Lackawaxen and Shohola Townships.

The results of the community survey signify the community's awareness of the responsibilities of local government as well as an understanding of development impacts. A detailed summary of the Community Survey is contained in Appendix 6. Results also indicate that in order to address concerns regarding increased taxes, demand for services, preservation of rural character, and efficient transportation growth, management tools and techniques must be applied. Results of the community survey also point out the community's desire that future development be of good quality and preserve open space, resulting in minimal impacts on the rural character and



non-developed areas of the community while maintaining or improving the quality of life for residents of the region.

In general, respondents were satisfied with the overall quality of life in Lackawaxen Township and Shohola Township. According to respondents from both Townships, land uses need to include non-franchised restaurants, professional offices, medical clinics/doctors' offices, a grocery store and a pharmacy/drug store. Shohola Township respondents indicated a need for a bakery as well.

Respondents favor preservation/conservation of scenic views, conservation of open space, and preservation/conservation of environmentally sensitive lands including steep slopes, wetlands, floodplains, and wellhead protection areas. Respondents also prefer land use regulations that promote cluster development patterns to preserve agricultural, forest and environmentally sensitive lands, and zoning regulations that allow non-traditional lot design to promote preservation/ conservation of open space, agricultural lands and environmentally sensitive lands.

### **Section 2.2.3 Community Issues (Strengths, Weaknesses, Opportunities & Threats (SWOT) Analysis)**

The purpose of the SWOT activity is to provide an opportunity for local residents, businesses, and organizations to identify the community's assets and opportunities as well as weakness and threats. The CAC used a SWOT worksheet to identify important issues for the study area and for each Township in response to specific questions about the community. The participants of the June 2007 public meeting were asked to add to the list and prioritize identified issues. Participants of the public meeting were informed that their completed SWOT worksheet will provide guidance to the CAC and Consultant Team. Participants were asked to react to key questions to identify community strengths, weaknesses, opportunities and threats.

Upon completion of identification of issues or review of identified issues, participants were given colored dots to indicate the level of importance for various items listed. The results of the activity was utilized to support the finalization of the plan vision statement, goals and objectives and to focus analysis to support development of plan elements and implementation strategies.

The focus area categories are based upon the several key elements identified in the Municipal Planning Code (MPC) including: Land Use, Quality of Life, Economic Development/Tourism, Natural Resources, Leadership/Organization, Public Services, Transportation, and Utilities.



## **Strengths**

The following is a summary of the top strengths identified by the community listed by focus area category.

### **Economic Development/Tourism**

- Reasonable taxes
- Picturesque landscapes
- Historic sites
- Desirability as a tourist destination
- Desirability as a hunting/fishing destination
- Railroad activity

### **Land Use**

- Large tracts of forested lands
- Public Game Lands
- Second homes with no impact to School District
- Agricultural Security District

### **Leadership/Organization**

- Commitment of leaders to create a plan with a long term vision
- Strong Pike County technical services
- Active Watershed Organizations
- Concerned local officials
- Understanding/awareness of public community assets

### **Natural Resources**

- Natural resources, rivers, streams, public lands and water quality
- Wildlife habitats

### **Public Services**

- Safe environment with low crime

### **Quality of Life**

- High level of quality of life
- Good local schools – quality education and low class room sizes
- Community spirit – neighbors know one another

### **Community Strengths**

*Identification of physical, social and regulatory assets of the community by the public.*

- ❶ What makes this community unique?
- ❷ What do you like about the community?
- ❸ What is contributing to a positive community image?



## Weaknesses

The following is a summary of the top weaknesses identified by the community listed by focus area category.

### **Economic Development/Tourism**

- Inadequate state funding, infrastructure and community services
- Limited commercial services
- Significant differences in income levels

### **Land Use**

- Lack of professional services
- Local of local employment – long commutes
- Land use regulations out of date with undesirable development patterns resulting (“cookie cutter” development patterns with no conservation)
- No town center or central place
- Bedroom community
- Development pressures

### **Leadership/Organization**

- Lack of volunteers
- Have not required developers to provide infrastructure improvements
- Unfunded mandates by the state (i.e. UCC, requirements for police force and fire departments, farming procedures and required training for staff, boards and commissions)

### **Natural Resources**

- Poor soils, do not support on-lot systems – impacts on wells, lakes and streams

### **Public Services**

- Limited police protection and presence
- Inadequate ambulance services with state requirements that are difficult to meet

### **Quality of Life**

- Perception that local residents are naïve
- Lack of media coverage of local events
- Limited access to higher education

### **Transportation**

- Maintenance of state roads
- Lack of infrastructure (roads and public transit)
- Railroad not maintained and transportation of hazardous materials

### **Utilities**

- Cell phones, radio and other communications are poor
- Natural gas line with no ability to tap into and terrain issues

### **Community Weaknesses**

*Identification of physical, social and regulatory obstacles or shortcomings of the community by the public.*

- ❶ What do you dislike about the community?
- ❷ What do you want to see less of in the community?
- ❸ What is contributing to a poor community image?

### Opportunities

The following is a summary of the top opportunities identified by the community listed by focus area category.

#### **Economic Development/Tourism**

- Small businesses
- Use of private/public forest lands for economic gain (forest products and operations locally)
- Route 6 Scenic Byway
- Pull offs, scenic overlooks and interpretive signage
- Wayfinding signage
- Promotion of telecommuting
- Alternative tax revenues – Act 1 School taxes

#### **Land Use**

- Development of town center
- Best management practices
- Change of land use/zoning regulations to achieve vision
- Programs for local realtors, businesses and developers to educate them about land use regulations
- Relatively undeveloped – planning has kept pace while implementation ordinances need to be amended

#### **Natural Resources**

- Preservation of natural resources
- Open space and interlinking greenways
- Development of state lands to gain access to remote areas with improvements including trails, parking and hiking

#### **Utilities**

- Gain access to the natural gas line

### Threats

The following is a summary of the top threats identified by the community listed by focus area category.

#### **Economic Development/Tourism**

- Potential loss of Route 6 Scenic Byway to development

#### **Land Use**

- Large “cookie-cutter” development that are poorly planned with on-lot systems
- As population grows there is more stormwater runoff (need for BMPs)
- Land development pressure due to desirability of area
- Management of developments – community property is poorly maintained and owner associations poorly managed
- Loss of viewscape due to clear cutting in NY
- Bedroom community with low school taxes and lack of infrastructure

#### **Community Opportunities**

*Identification of physical and social entities or assets of the community which are underutilized or undeveloped.*

- ❶ Where are opportunities for new development and/or preservation?
- ❷ Where are opportunities for change?
- ❸ What would you like to see more of in your community?
- ❹ What could change the image of this community?

#### **Community Threats**

*Identification of physical and social entities or assets and regulations that detract from the community or if left unchecked, could diminish quality of life for residents and businesses in the community.*

- ❶ What prevents the community from flourishing?
- ❷ What are obstacles to community development and/or preservation?
- ❸ What detracts from a positive community image?

#### **Leadership/Organization**

- New population of retirement age or close to retirement – need for younger volunteers to provide emergency services

#### **Natural Resources**

- Unprecedented flooding and other natural threats (i.e. snow storms, etc.)
- Pests, gypsy moths, elodea (aquatic plants in lake) and similar threats to ecosystem

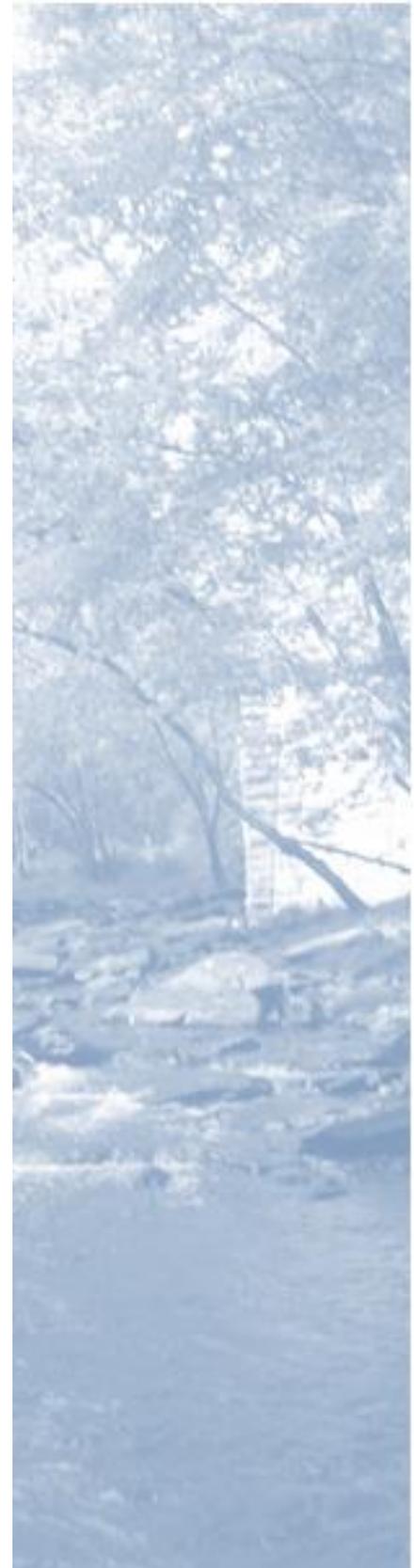
#### **Public Services**

- Population influx wanting “Big City” amenities – differing perceptions between local residents, seasonal residents and newcomers

#### **Utilities**

- NYRI – HVDC – loss of viewscapes and environmental impacts
- No central sewage system – threat of potential contamination/threat to water quality
- Natural gas pipeline with no access
- No central water – public safety concern and poor condition to support economic development

Detailed results of the SWOT Analysis including the rating/ranking of strengths, weaknesses, opportunities and threats are included in Appendix 3: Community Involvement.



## SECTION 3.0 STATE, COUNTY AND LOCAL INITIATIVES

There are several relevant state, county and local initiatives with respect to land preservation/conservation and *smart growth*. Those initiatives provide the framework for research, analysis and plan development. Key points associated with those initiatives are briefly described in this section.

### Section 3.1 Municipalities Planning Code

The Pennsylvania Municipalities Planning Code (MPC) empowers Townships, individually or jointly, to:

- Plan their development and to govern the same by zoning, subdivision and land development ordinances, planned residential development and other ordinances; and, by official maps that identify the reservation of certain land for future public purpose and by the acquisition of such land;
- Promote the conservation of energy through the use of planning practices and promote the effective utilization of renewable energy sources; and,
- Provide for transfer of development rights.

Article III, Comprehensive Plan of the MPC provides a guide to basic plan elements, procedures and details of the legal status of the Comprehensive Plan. Article XI, Intergovernmental Cooperative Planning and Implementation Agreements outlines the requirements for County or Multi-municipal Comprehensive Plans in Section 1103. In addition to required plan elements outlined in Section 301, the following must be addressed in accordance with this section of the MPC (Section 1103):

- Enable Lackawaxen and Shohola Townships (cooperating municipalities) to designate growth areas in and around villages where public infrastructure will be provided, and rural resources areas where rural uses will be preferred and infrastructure will not be provided with public funds.
- Give Lackawaxen and Shohola Townships (cooperation municipalities) the ability to distribute all uses in reasonable geographic areas of the plan.
- Give Lackawaxen and Shohola Townships (cooperating municipalities) authority to carry out their plan using their own individually adopted ordinances if they so choose, without joint zoning, so long as those ordinances are generally consistent with the adopted multi-municipal plan.
- Provide incentives for the following:



Zane Grey Museum

- Priority consideration in state funding programs of all kinds;
- Required consideration of the plan and implementing ordinances by state agencies in making permitting and funding decisions;
- Legal advantage in curative amendments challenges if all uses are accommodated in reasonable geographic areas of the plan; and
- The availability of special tools that can be used across municipal boundaries such as transfer of development rights, sharing taxes or revenues and fees, and specific plans for commercial and industrial development.

*Source: MPC, Act of July 31, 1968, P.L. 805, No. 247 as amended and Planning Beyond Boundaries, A Multi-Municipal Planning and Implementation Manual for Pennsylvania Municipalities.*

### Section 3.2 Keystone Principles

The Commonwealth of Pennsylvania adopted the *Keystone Principles & Criteria for Growth, Investment & Resource Conservation* in May of 2005. These principles and criteria were designed to support a coordinated interagency approach to fostering sustainable economic development and conservation of resources through the state's investments in communities. The principles outline general goals and objectives for economic development and resource conservation. The criteria help measure the extent to which particular projects accomplish identified goals. Projects to be funded by state agencies are to be evaluated with the recognition that rural, suburban and urban areas have different characteristics and needs. For example, what might work in an urban area might not work in a rural area. The following is a brief description of the state's *Keystone Principles* that provide the basis for growth, investment and resource conservation.

- **Redevelopment First** – The State is giving priority to cities, towns, brownfields and previously developed sites in urban, suburban, and rural communities for economic development activity that create jobs, housing, mixed-use development and recreational assets. Conservation of heritage resources and rehabilitation of historic buildings and neighborhoods for compatible contemporary uses is a priority.
- **Provide Efficient Infrastructure** – The State is emphasizing fix it first by making improvements to existing infrastructure resulting in highway and public transportation investments that use context sensitive design to improve existing developed areas and attract residents and visitors to these areas. This emphasis includes providing multi-modal choices and adequate public facilities within designated growth areas. Other strategies include the use of on-lot and community water and septic/sewer systems in rural areas and the requirement for private and public expansions consistent with comprehensive plans and implementing ordinances.

#### **State Policy Goals**

1. *Soundly planned growth is in the best long term interest of the Commonwealth and should be encouraged at all levels of government.*
2. *Farmland and open space are valued Commonwealth natural resources and reasonable measures for their preservation should be promoted.*
3. *Development should be encouraged and supported in areas that have been previously developed or in locally designated growth areas.*
4. *Because land use decisions made at the local level have an impact that expands beyond boundaries, regional cooperation among local governments should be encouraged.*
5. *The constitutional private property rights of Pennsylvanians must be preserved and respected.*
6. *The Commonwealth shall work to improve the understanding of the impact of land use on the environmental, economic, and social health of communities.*
7. *Sustaining the economic and social vitality of Pennsylvania's communities must be a priority of state government.*
8. *Infrastructure maintenance and improvement plans should be consistent with sound land use practices.*

- **Concentrate Development** – The State is supporting both infill and greenfield development that is compact and conserves land and is integrated with existing or planned transportation, water and sewer services and schools. The goal is to create well-designed developments that are walkable communities with options for non-vehicular modes of travel that offer healthy life style opportunities. It is important that these types of developments be planned and designed for successful and timely completion.
- **Increase Job Opportunities** – The State is focusing on retaining and attracting a diverse, educated workforce by partnering with local communities to provide quality economic opportunities that improve the quality of life for current and future residents. The state is investing in businesses that offer good paying, high quality jobs, and that are located near existing or planned water and sewer infrastructure, housing, existing workforce, and transportation access (highways or transit).
- **Foster Sustainable Businesses** – The State is promoting efforts to strengthen natural resource based businesses that use sustainable practices in energy production and land uses such as agriculture, forestry, fisheries, recreation and tourism. Support is for construction and promotion of green buildings and infrastructure that use land, energy, water and materials efficiently. This principle supports economic development that increases or replenishes knowledge-based employment, or builds on existing industry clusters.
- **Restore and Enhance the Environment** – The State is supporting efforts to maintain and expand land, air and water protection and conservation programs. The conservation and restoration of environmentally sensitive lands and natural areas for ecological health, biodiversity and wildlife habitat are a priority. The emphasis is to promote development that respects and enhances the state's natural lands and resources.
- **Enhance Recreational and Heritage Resources** – The State is promoting maintenance and improvement of recreational and heritage assets and infrastructure including parks, forests, greenways and trails, heritage parks, historic sites and resources, fishing and boating areas and game lands offering recreational and cultural opportunities for residents and visitors.
- **Expand Housing Opportunities** – The State is emphasizing the construction and rehabilitation of housing of all types to meet the needs of people of all incomes and abilities. It is important to coordinate the location of housing with the location of jobs, public transit, services, schools and other existing infrastructure. New housing developments should be consistent with local plans and community character.



- **Plan Regionally and Implement Locally** – The State is encouraging multi-municipal, county and local planning and implementation that has broad public input and support of these principles. The State is providing funding for such planning efforts.
- **Be Fair** - The State is supporting equitable sharing of the benefits and burdens of development. The State applies these principles and criteria for selection of projects so that all communities are assisted regardless of characteristic: suburban, urban or rural.

*Source: Keystone Principles & Criteria for Growth, Investment & Resource Conservation, Commonwealth of Pennsylvania, Economic Development Cabinet, May 31, 2005.*

The goals, objectives, concepts, plan elements and implementation strategies of this plan were developed applying the above principles so that the Townships are best positioned to develop partnerships with state agencies to realize the vision for the future of the region through successful implementation of the plan.

### Section 3.3 Smart Growth

*Smart growth* is development that serves the economy, community and the environment. This planning initiative provides the framework for communities to make informed decisions about how and where they grow. *Smart growth* techniques are designed to accommodate growth in a way that protects the **environment and rural land**, and enhances the economy and the quality of life. Important elements of *smart growth* for municipalities include:

- Encouraging compact development patterns to reduce sprawl, land consumption, and conflicts with natural resources.
- Permanently protecting open space and planning for a system of greenways to connect natural areas and providing hiking and biking trails.
- Providing roadways, public water supply and distribution, wastewater collection and treatment, and stormwater infrastructure to concentrate development and attract new businesses.
- Using traditional village settings containing smaller lots and mixed residential retail, office and green space, surrounded by working rural land, such as farmland, forest, and river, to create true communities.
- Revitalizing existing towns to encourage infill and appropriate expansion of existing communities.

*Source: PA Smart Growth Initiative.*



*Smart growth* elements described above and development principles outlined below support conservation and preservation of natural resources that can be used in an environmentally sensitive manner to meet the Lackawaxen/Shohola Region's open space, greenways and recreation needs Comprehensive Plan.

### Section 3.3.1 Development Principles

The following development principles have been identified in Pike County's Comprehensive Plan, *Growing...Naturally*, to support *Smart Growth* initiatives and principles.

1. Work together to conserve the unique character, open spaces, and beauty of Pike County in the face of continued development pressures.
2. Sprawl is not an acceptable development pattern.
3. County and municipal government should consider forging new partnerships to proactively plan for our future.
4. Growth should be managed and directed to designated growth areas in accordance with multi-municipal and municipal comprehensive plans and implementing land use regulations.
5. Preserve natural, historic, scenic, and cultural resources by protection and integration into future developments.
6. Existing Boroughs, villages and hamlets in the County should be enhanced and infilled when appropriate.
7. Work to achieve economic growth that preserves the quality of life that has made Pike County an attractive place for tourism and for residents to live and work.
8. Compact, mixed use development patterns will be encouraged. Public sewer and water systems should be provided to permit compact development.
9. Development will be attractive, well-planned, appropriately landscaped, with architecture characteristic of Pike County.
10. Major road corridors will be enhanced and managed to facilitate mobility and increased safety.
11. Greenways, trails, open space and recreation shall continually be provided and expanded commensurate with population growth.
12. Alternatives to automobile traffic, including pedestrian, bicycle, and transit modes, should be encouraged and enhanced.

Source: *Pike County Comprehensive Plan*.

Development principles are incorporated into various planning principles, tools and techniques and implementation strategies identified in this plan.



## SECTION 4.0 SUMMARY OF PLANNING IMPLICATIONS

The region possesses many natural resources with a predominantly rural development pattern that evolved around historic villages and hamlets. The region is influenced by recreational use of the Delaware River and State Game Lands, Parks and Forests, private hunting and fishing clubs, camps and tourist attractions. Over the past two decades, the region has experienced both traditional and clustered residential developments of significant number, limited commercial development and the continuation of natural resource based industrial operations such as mining, timbering and agriculture. Although several significant changes have occurred, for the most part, public and private conservation and preservation efforts have contributed to the region retaining its rural character and heritage as an area of great natural beauty attractive to long-term residents, new families and retirees as well as visitors.

This section outlines a series of planning implications for the Lackawaxen/Shohola Region based upon assessment of the existing conditions and potential consequences of build-out under current zoning. Planning implications are conclusions or circumstances that are implied based upon various trends, patterns or conditions that if not addressed will impact the rural character and sustainability of the region. These implications will be combined with issues and concerns identified throughout the public involvement process as well as planning implications identified in the Build-Out Analysis. Policies and implementation strategies identified in the Multi-Municipal Comprehensive Plan and the Multi-Municipal Open Space, Greenways and Recreation Plan will be designed to address the following planning implications.

### Section 4.1 Population Growth Planning Implications

Existing conditions presented with respect to increase in population indicate the following planning implications that should be considered as Lackawaxen and Shohola Township guide future land use patterns and development standards.

- Lackawaxen Township experienced a 46.7% increase in population from 1990 to 2000 resulting in a loss of natural amenities to development.
- Shohola Township experienced a 31.7% increase in population from 1990 to 2000 resulting in a loss of natural amenities to development.
- Although the region has experienced significant growth over the past ten years, the region has a slightly lower population density than areas within the County as a whole (*approximately 78 persons per square mile are scattered across the region and 84 persons per square mile are scattered across the County*).
- As growth continues, the demand for additional public services and expanded community facilities (*i.e. schools, police, sanitary sewer, water & other utilities, and emergency services*) will increase.



Shohola Caboose Museum and  
Visitors Center

- As the population grows, the natural and undeveloped lands within Lackawaxen and Shohola area will be lost to development.
- As the population grows accessibility to and from work and other necessary daily trips will become increasingly difficult and time consuming.

### Section 4.2 Land Use Planning Implications

Existing conditions presented with respect to land use indicate the following planning implications that should be considered as Lackawaxen and Shohola Township guide future land use patterns and development standards.

- One out of every five acres of land is held in Pennsylvania State Game Lands, Delaware State Forests or park ownership.
- Approximately 11,680 acres of available land for development is within the defined growth areas.
- In the last twenty years, 2,660 building permits were issued within the region. Over 50% of Lackawaxen Township's permits have been issued within the past six years. Over 66% of Shohola Township's permits have been issued within the past six years.
- Only 6% of the land area within the two Townships permits commercial development with additional lands in Shohola Township zoned RU which allows agricultural based businesses and small scale commercial and industrial uses.
- Population increases for Lackawaxen and Shohola Townships grew 46% and 31% respectively from 1990 to 2000. Although, there are limited employment opportunities within the region with approximately 29 employers providing jobs for more than 5 employees.
- The area school districts estimate on average an increase of roughly one hundred (100) students per year over the next 8 years.
- Approximately 96% of the total 33,553 acres available for development are zoned to permit predominantly low density residential development, a land use which typically requires the highest demand on public services for the least amount of tax return.



### Section 4.3 Environmentally Sensitive Areas Planning Implications

Existing conditions presented with respect to environmentally sensitive areas indicate the following planning implications that should be considered as Lackawaxen and Shohola Township guide future land use patterns to reduce impacts on the natural environment in order to maintain public health, safety and welfare.

#### Water Quantity & Quality:

- If residential land development, gas drilling and mining activities continue to increase, the quality and quantity of groundwater may significantly decrease.
- Generally the amount of land lost to residential, commercial and industrial development (including roadways) is approximately 24,451 acres out of 81,340 total acres in the two townships. This is approximately 30% of the total lands. Increased development will, and has been, decreasing water supply and will affect the groundwater recharge.

#### Wetlands:

- There are more than 3,600 acres of wetlands within the region that act as a natural buffer protecting water quality and are important groundwater recharge areas.
- Wetlands scattered throughout the region provide benefits to water quality and recharge of ground water as well as provide habitats for a variety of wildlife.

#### Floodplains:

- There are 4.5 square miles of floodplain areas within the two townships.
- Both Townships have adopted Floodplain regulations as well as buffer requirements for development near water bodies. The Floodplain regulations prohibit development from occurring within the 100-year flood plain zones.
- Shohola Township has adopted the Upper Delaware Overlay District. This district provides regulations for permitted and prohibited uses, requires impact analysis, tree and vegetation clearing, preservation of the river corridor, and institutes "Conservation by design techniques." Density bonuses as well as development options apply to tracts over 10 acres. Shohola should monitor the impacts of development as a result of this overlay district

#### Steep Slopes:

- Each Township adopted steep slope regulations prohibiting development in areas containing steep slopes of 25% or greater. To date, both Townships have been successful at prohibiting steep slope development.



### Section 4.4 Natural Areas Planning Implications

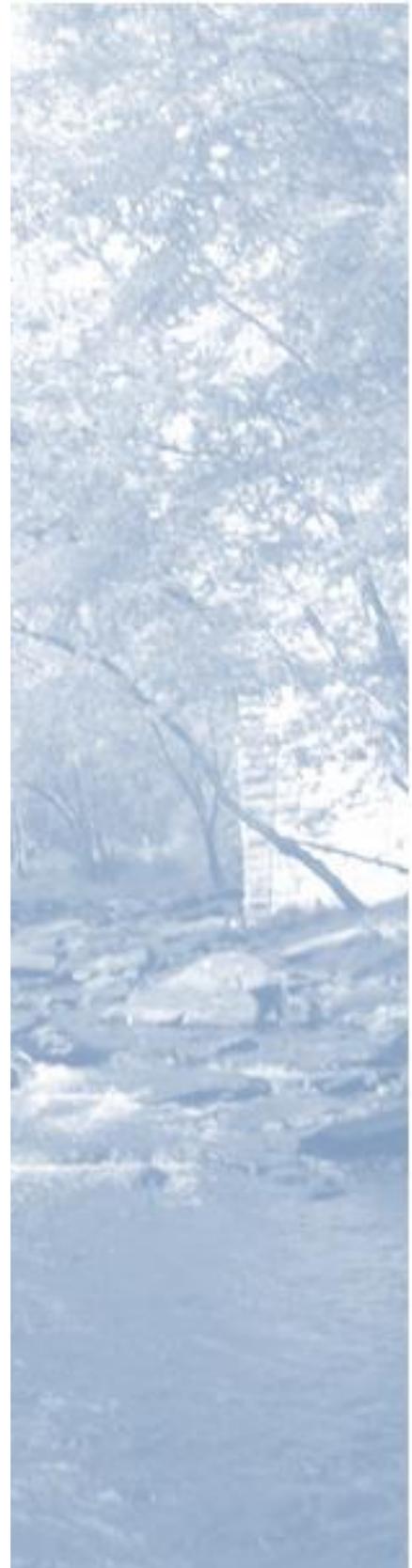
Existing conditions presented with respect to natural areas in need of protection indicate the following planning implications that should be considered as Lackawaxen and Shohola Township guide future land use patterns, plan and design community water and waste/water facilities and recognize the impacts growth and development have on the natural environment.

- Loss of natural areas negatively impacts habitats of species unique to the region.
- Development patterns have affected natural areas and wildlife habitats that require additional inventory and assessment to accurately identify areas for protection.
- Lackawaxen has 352 acres in the Delaware Highlands Conservancy and Natural Lands Trust combined and Shohola has 1,611 acres as permanently preserved.
- The Lackawaxen and Shohola region have over 22.9% or 18,601 acres in permanently preserved lands: State Forest, Game Lands and National Park Service.
- A total of 14,633 acres within the Lackawaxen/Shohola Region are used by private hunting and fishing clubs; however, most of these lands are not permanently preserved and subject to future development opportunities.
- There are approximately 29,089.6 acres of land area receiving tax incentives through the Clean and Green Program (Act 319); however, most of these lands are not permanently preserved and subject to future development opportunities.
- There are approximately 2,724.5 acres enrolled in the Pike County Agricultural Security Program; however, most of these lands are not permanently preserved and subject to future development opportunities.

### Section 4.5 Public Infrastructure and Community Facilities/Services Planning Implications

Existing conditions presented with respect to community facilities indicate the following planning implications that should be considered as Lackawaxen and Shohola Township guide future land use patterns, plan and design community water and waste/water facilities and recognize the impacts of growth on community facilities such as schools, quality of life as well as local taxes.

- Both Lackawaxen and Shohola Townships have limited active recreation facilities offering inadequate playing fields, playgrounds, walking paths and other amenities to meet organized and unorganized recreational needs of current and future populations.
- Current and future demands for active recreational lands and facilities will create fiscal challenges for both Townships.
- As the population grows, additional schools, police, fire and emergency services will be required just to comply with state and national standards that ensure the community's health and safety.

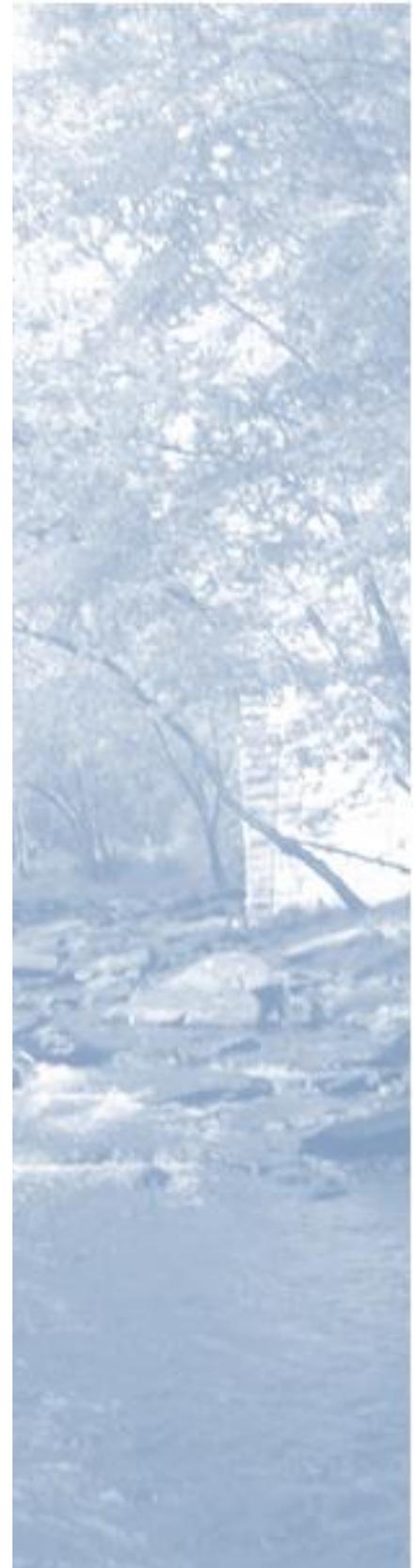


- The Sewage Facilities Plan for Shohola Township is over 30 years old.
- Lackawaxen Township recently updated their Sewage Facilities Plan in 2006. Sewerage system improvements for Lackawaxen Village should be considered to accommodate additional growth and development to provide goods, services and commerce to meet regional needs.
- Today, over 2,900 structures are serviced by on-lot systems. The Walker Lake region is currently subject to malfunctioning on-lot systems. The Westcolang Lake and Fawn Lake regional sewer system can only service half of its current residents. A large majority of the lot sizes in this region are less than 1 acre.
- Each Township on average issues approximately 138 residential building permits per year. If this trend continues the Townships can expect approximately 3,532 new residents over the next 10 years.
- Consistent with development trends, water consumption needs would also increase by approximately 425,000 gallons/day over the next 10 years; and, demands on both existing community systems along with additional on-lot systems will impact the environment.
- On average, nearly 75% of high school graduates pursue higher education outside of the region with a small percent rate of return to reside within the region. There are no institutions of higher education within the local region or Pike County.
- Police services are provided by the Pennsylvania State Police and one Shohola Township police officer.
- As growth continues, emergency services for the region will increase requiring additional volunteers and equipment to meet state and national standards. *(Currently, the region is serviced by 9 Fire Stations and 4 EMS services.)*
- From 1993 to 2008 area taxes have significantly increased.
  - The Wallenpaupack Area school district school tax millage rate has increased over 56% (27.01 to 61.28 mills).
  - The Delaware Valley School District school tax millage rate has increased over 43% (57.2 to 100.87). Pike County Taxes have increased 31% (10.50 to 15.17 mills).

### Section 4.6 Housing Planning Implications

Existing conditions presented with respect to housing indicates the following planning implications that should be considered as Lackawaxen and Shohola Township guide future land use patterns impacting the housing market and adequate public facilities to serve the needs of current and new residents.

- Approximately 63% of all housing units are categorized as seasonal housing units.
- The number of housing developments utilizing a Homeowner Association has increased.
- Less than 25% of all housing units were built prior to 1960.
- On average, taxes paid by a new home owner in comparison to an existing homeowner are \$1,000 higher due to increased housing values.



- 2000 Census shows the median family income is 31% higher income than 10 years ago. However, the average sales price of a home has dramatically increased and is approximately 130% higher than 10 years ago.
- A significant number of seasonal housing is located in both Townships: 49.7% of the total housing units in Lackawaxen and 66.5% of the total housing units in Shohola. Current trends show many of the seasonal units are converting to year-round units resulting in increasing demands on services and the environment.
- 2000 Census data states 59.6% of all housing units counted were mobile home units in Shohola Township.
- In the last 6 years, the number of housing units increased 14% (19.7% in Lackawaxen and 7.4% in Shohola).
- If the region continues a low density growth pattern, using current development trend data and taking into account lands available for residential development, approximately 3,200 new homes could be developed within the next 20 to 25 years with build-out projected to be approximately 7,900 homes over the next 50 years.

#### **Shohola Falls Trails End**

Trails End is a four season recreational camping community in Shohola Township. The development encompasses 400 acres with 1851 lots. Each lot is approximately 4,500 square feet and RV's up to 400 square feet are permitted. The development provides a variety of amenities. Since the development allows for four seasons, the units are considered mobile homes for purposes of Census counts of housing units.

### **Section 4.7 Historic Preservation Planning Implications**

Existing conditions presented with respect to historic preservation indicates the following planning implications that should be considered as Lackawaxen and Shohola Township guide future land use patterns with respect to historic resources.

- Both Lackawaxen and Shohola Townships are rich in history; yet, many historic resources have been lost to roadway construction and unchecked development (i.e. portions of the D&H Canal remain, loss of hotels/inns and impacts to several lock houses, etc.).
- A loss of historic resources will impact opportunities to attract visitors/tourists to the region.
- Loss of physical evidence of heritage of the region impacts a sense of place for Lackawaxen Village and Shohola Village as well as the region.
- The Townships do not have Historic District designations nor do they have adopted Historic Zones or Overlays to protect the historic villages and hamlets within the region.
- There are numerous examples of private protection and preservation of historic resources. These efforts should be supported and encouraged.

### **Section 4.8 Transportation Planning Implications**

Existing conditions presented with respect to transportation infrastructure indicates the following planning implications that should be considered as Lackawaxen and Shohola Township guide future land use patterns as well as for mobility and accessibility for vehicular and non-vehicular modes of travel and emergency access.



- The state has estimated a need for over \$22.8M in bridge projects to rehabilitate or replace five bridges within the Lackawaxen/Shohola region.
- The average width of State roadways in the region is approximately 20 feet and considered substandard in comparison to PennDOT standard of 28 feet minimum paved area for rural collectors and local roadways.
- Narrow roadways pose safety issues with respect to access for emergency vehicles, trucks, snow plows and other large vehicles.
- A significant portion of Township budgets are allocated for local roads and maintenance.
- The region is serviced by two active rail lines including the Southern Tier Line and the Stourbridge Line.
- Development along Route 6 will impact the State Designated Scenic Byway.
- The region has only 2 public access boat launches.
- Numerous sections of roadways and intersections have been identified with safety concerns and poor sight distance.

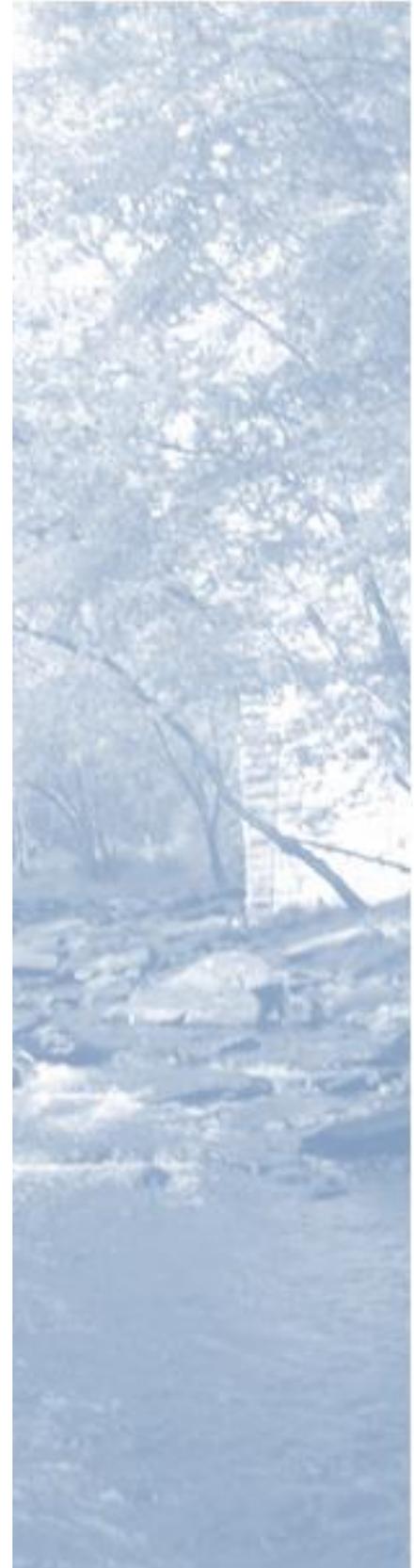
### Section 4.9 Economic Planning Implications

Existing conditions presented with respect to economic opportunities indicates the following planning implications that should be considered as Lackawaxen and Shohola Township guide future land use patterns as well as for mobility and accessibility to the region while minimizing environmental impacts.

- Lackawaxen Village and Shohola Village possess opportunities for economic development and increased tourist activity provided adequate water and sanitary sewer systems are in place to support additional development and redevelopment opportunities.
- The region lacks shopping options and entertainment for residents and visitors.
- The region lacks professional services for residents and visitors.
- Due to an influx of population from New York, New Jersey and other parts of Pennsylvania, housing values have increased significantly contributing to the local tax base.
- Within the Lackawaxen and Shohola Region, significant levels of homeowners and renters pay more than 30% of their income for housing and are considered cost burdened. Lackawaxen has over 58% of owners and renters determined cost burdened and Shohola has over 60%.
- Tourism has, and will continue to play, a significant role to the economic base of the Pocono Mountain Region of Pike County and the Lackawaxen/Shohola Region. The top employment sector in the region is the arts, entertainment, recreation, accommodation and food industry. In Pike County, this industry sector has an annual payroll of \$28.9 million.
- Only 6% of the land area within the two Townships permits commercial development. An additional 1,527 acres of land is projected to be available for additional commercial/economic use.



- The region's unbalanced economic base will pose serious economic implications as a predominant residential pattern continues as projected.



## SECTION 5.0 GROWTH MANAGEMENT POLICY

This portion of the plan contains a vision for the future, plan objectives, growth management concepts and strategies, and village and hamlet design elements to guide future development and redevelopment of the region. This policy provides the basis for development of plan elements that address future community development activities. The policy is built around a framework of growth management strategies for developing a sustainable community that:

- recognizes that growth occurs within some limits and is ultimately limited by the carrying capacity of the environment;
- values cultural diversity;
- respects other life forms and supports biodiversity;
- promotes shared values amongst the members of the community through education;
- employs ecological decision-making such as integration of environmental criteria into all municipal government, business and personal decision-making processes;
- makes decisions and plans in a balanced, open and flexible manner that includes the perspectives from the social, health, economic and environmental sectors of the community;
- makes best use of local controls, capabilities and resources;
- uses renewable and reliable sources of energy;
- minimizes harm to the natural environment;
- does not compromise the sustainability of other communities (a regional perspective); and,
- does not compromise the sustainability of future generations by its activities.

Growth management is a process by which Lackawaxen and Shohola Townships will attempt to minimize the negative effects of rapid development by controlling the timing, location, type, intensity and amount of development. The act of growth management through comprehensive planning is not intended to stop growth completely; instead, manage growth in an environmentally sensitive and fiscally responsible manner. It is the following regional vision, plan goals and objectives, growth management concepts and strategies, and village enhancement elements that establish this portion of the plan that is considered a framework for elements of the plan.



Roebling Bridge

**Growth management** is a process by which local governments attempt to minimize the negative effects of rapid development by controlling the timing, location, type, intensity and amount of development.

## Section 5.1 Vision Statement

The general public and the CAC played an important role in creating a vision for the future. The vision statement for the Lackawaxen/Shohola Region is a vivid description of desired outcomes spanning a planning horizon of 25 years. The vision is intended to inspire, energize and help to create a mental picture of the future for the region. The vision statement builds upon the region's assets with an emphasis on conservation and preservation described as follows:

*Lackawaxen and Shohola Townships are endowed with remarkable natural surroundings that generate a high quality of life for our residents. In order to sustain this environment and quality of life, our communities' vision is to effectively manage growth and development while: protecting personal property rights; providing appropriate public facilities, recreational opportunities and infrastructure; expanding opportunities for local employment; and, promoting economic activities that have a natural stake in preserving our environment and scenic resources.*

The vision statement provides the basis for research, analysis and the planning process to support development of this plan. This vision looks both within and outside of the Lackawaxen/Shohola Region to determine what kind of place would be suitable for present and future generations.

## Section 5.2 Plan Goals & Objectives

The Plan goals and objectives have been developed based upon issues and concerns expressed by the community, local elected officials and staff. The plan goals and objectives outlined by plan element are consistent with the requirements outlined in the MPC. The goals and objectives provide the basis for development of growth management and conservation/preservation policies, strategies, regulations, projects and programs.

### Section 5.2.1 Land Use

A delicate balance of land use is required to create a desired level of local and regional sustainability.

**Goal:** *Create a land use plan that includes provisions for amount, intensity, character and timing of land use proposed for use categories such as residential, commercial, industrial, agricultural, transportation facilities, utilities, community facilities, public grounds, parks and recreation, environmentally sensitive areas and other areas of special interest.*

#### Objectives:

1. Establish a **designated growth area** and a **future growth area** of adequate size where it is appropriate to accommodate future growth of more intense development.
2. Provide a **growth management strategy** that addresses the quality, quantity, location and phasing of growth.
3. Provide **strategies for preservation and conservation** of natural resources and landscapes and environmentally sensitive areas through regulation and partnership with property owners.



Shohola Village Streetscape

4. Provide appropriate protections from **developments of regional significance and impact** to minimize impacts on the natural environment, transportation network and existing communities.
5. Identify the appropriate location of land uses and best management practices that will result in **low-impact development** or **conservation-based development**.
6. **Enhance the Village Centers** in order to provide access to desired goods, services, events and attractions while preserving historic and architectural integrity.

### Section 5.2.2 Housing

Availability of decent, affordable housing for households of all ages and all income levels is an indicator of a sustainable community.

**Goal:** *Create a housing plan to meet the needs of present residents and those individuals and families anticipated to reside in the region.*

#### Objectives:

1. **Conserve and preserve** presently sound housing stock.
2. Efficiently and effectively **enforce building and property codes**.
3. Coordinate with housing program providers offering assistance to **rehabilitate existing housing stock** including preservation of historic structures.
4. Provide for **different dwelling types** at appropriate densities for households of all income levels.

### Section 5.2.3 Transportation

Safety, mobility and accessibility for all modes of travel are key indicators of sustainability.

**Goal:** *Create a transportation plan for the movement of people and goods including facilities for all modes of transportation.*

#### Objectives:

1. Provide an **adequate transportation network** for all modes of travel.
2. Provide for **adequate maintenance** of the transportation network.
3. Restore **rail access to the region** to support movement of non-hazardous freight and to provide regional access for tourism/recreation.

### Section 5.2.4 Community Facilities and Utilities

Community facilities and utilities include land, buildings and services to help meet health, safety, welfare, educational and social needs.

**Goal:** *Create a community facilities and utilities plan addressing a wide array of community facilities, services and public and private utilities necessary to meet community needs.*



*Railroad Bridge – Lackawaxen Village*

**Objectives:**

1. Identify opportunities for **expanded police protection and emergency services**.
2. Provide for **adequate public facilities and services** to meet the needs of both the current and future population as well as seasonal populations.
3. Identify strategies to **obtain access to or enhance existing regional facilities** such as natural gas lines, telecommunications and other utilities.
4. Enhance **access to all forms of the media**.
5. Provide **community water and sewer facilities** were appropriate to support higher densities of residential development, town centers and mixed use development.

**Section 5.2.5 Historic and Natural Resources**

The cultural, historic and natural resources of a community create a “sense of place” for both residents and visitors.

**Goal:** *Create a plan for the protection of natural and historic resources consistent with county, regional and state plans and regulations.*

**Objectives:**

1. Identify **natural and historic resources** for protection, preservation, conservation and enhancement **for access to the public to support tourism**.
2. Identify various **tools and techniques** for public and private preservation and conservation of historic and natural resources.
3. Identify **best management practices** for the conservation of natural resources and environmentally sensitive areas.

**Section 5.2.6 Open Space, Greenways and Recreation**

Community sustainability and green infrastructure are interrelated with respect to economic development and preservation of natural resources for use by current and future generations.

**Goal:** *Create a plan to address local and regional recreation, preservation and conservation needs including parks and recreation facilities and programs, greenways and open space.*

**Objectives:**

1. **Preserve and conserve natural resources** through public and private efforts.
2. Identify **public park and recreation facilities and programs** to meet the needs of current and future populations.
3. Identify opportunities to utilizing **greenways to provide connections/linkages to a variety of hubs or destinations** open to the public such as: park and recreation facilities, natural scenic overlooks, water access, historic sites, town centers and other key locations within the region.



4. Identify opportunities to **preserve and conserve open space and greenways through private preservation opportunities.**

The open space, greenways, park and recreation goal and objectives are further developed in the Multi-Municipal Open Space, Greenways and Recreation Plan for the Lackawaxen/Shohola Region. Please reference this document as a part of this plan.

### Section 5.2.7 Economic Development

A healthy economy fosters a sustainable community by providing a balance of land uses to include housing, business development, employment, open space, recreation and tourism opportunities.

**Goal:** *Guide orderly, efficient and environmentally sensitive development to accommodate projected growth of the region while providing adequate public facilities and services and preservation/conservation goals to maintain a sustainable community.*

#### Objectives:

1. Maintain the region's existing rural community character by **promoting environmentally sensitive non-residential development.**
2. **Conserve open land and tourism-recreation** as an important element of the local economy.
3. Encourage commercial and industrial development located and designed to be **compatible with existing land use and the tourism recreation economy.**
4. Allow development that can provide for **adequate public facilities and services** that promote public health, safety and welfare.

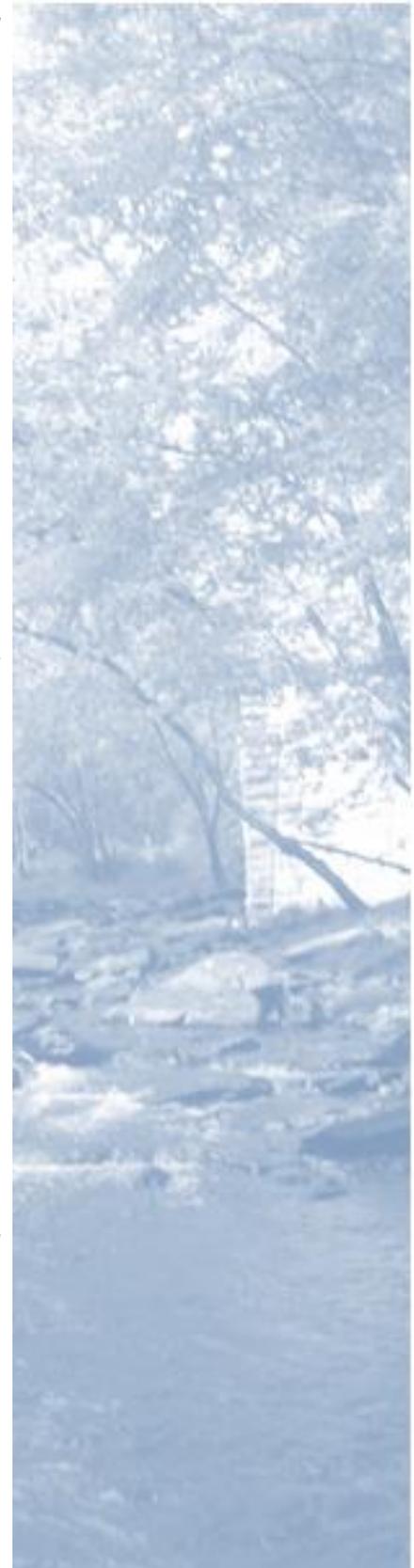
### Section 5.2.8 Government

Effective governance is leadership dedicated to maintaining a sustainable community through decision making emphasizing *smart growth* through regulation and design of development in harmony with the ecosystem of the region and financial stability.

**Goal:** *Provide an adequate organizational structure to support provision and maintenance of adequate public facilities, services and programs as well as efficiently administered policies, procedures, regulations and laws.*

#### Objectives:

1. Identify opportunities for shared services, staff pooling and other forms of **inter-governmental cooperation to maximize public resources.**
2. **Develop partnerships** with other levels of government as well as with other governmental agencies to maximize resources and opportunities to enhance facilities, services and programs.



3. **Develop public/private partnerships** to support further preservation/conservation of the region and future growth and development of the region.

### Section 5.3 Growth Management Concepts & Strategies

There are six key growth management concepts with accompanying strategies outlined in this section that provide the framework for preparation of a growth management plan. The key concepts are described in terms of boundaries, landscapes and resources. The following provides the purpose for each of these concepts.

1. Establish **growth boundaries** including a designated growth area, a potential future growth area, a rural resource area and a public infrastructure area in order to provide adequate public facilities and services.
2. Preserve **natural landscapes** including open space, farmland and naturally beautiful environmentally sensitive areas contributing to quality of life and economic sustainability.
3. Preservation and enhancement of **rural landscapes** by clustering development in and around rural villages and crossroads.
4. Promote mixed use infill development within undeveloped and underutilized **rural residential landscapes** within growth boundaries.
5. Enhance **village landscapes** by directing development towards existing villages and surrounding areas to reduce sprawl.
6. Preserve **historic resources** across all landscapes.
7. Preserve and enhance **public and private greenways**.

The following section provides a description for each of these concepts with supporting strategies.



### Section 5.3.1 Growth Boundaries

Growth boundaries are a means to delineate where more intense development is appropriate and where it is not. Boundaries are not intended to build a wall between communities or to stop growth. Instead, growth boundaries assist with management of growth in a responsible manner with respect to sustainability of the community by directing growth to the most appropriate locations. Growth areas are applicable to all landscapes and can be used around urban and densely developed suburban areas as well as around rural villages and clusters of rural residential development.

**STRATEGY:** Provide adequate public facilities through private and public partnerships to support growth within growth boundaries.

**STRATEGY:** Provide for a variety of uses at a variety of densities and intensities within the growth boundary to reduce development pressures outside of designated growth areas. The goal is to reduce rural residential sprawl working toward developing an environmentally sustainable community.

**STRATEGY:** Provide for the phasing and timing of growth by establishing a designated growth area and future growth area adequate in size and location to accommodate anticipated short-term growth while reserving adequate lands for long-term growth while protecting natural resources.

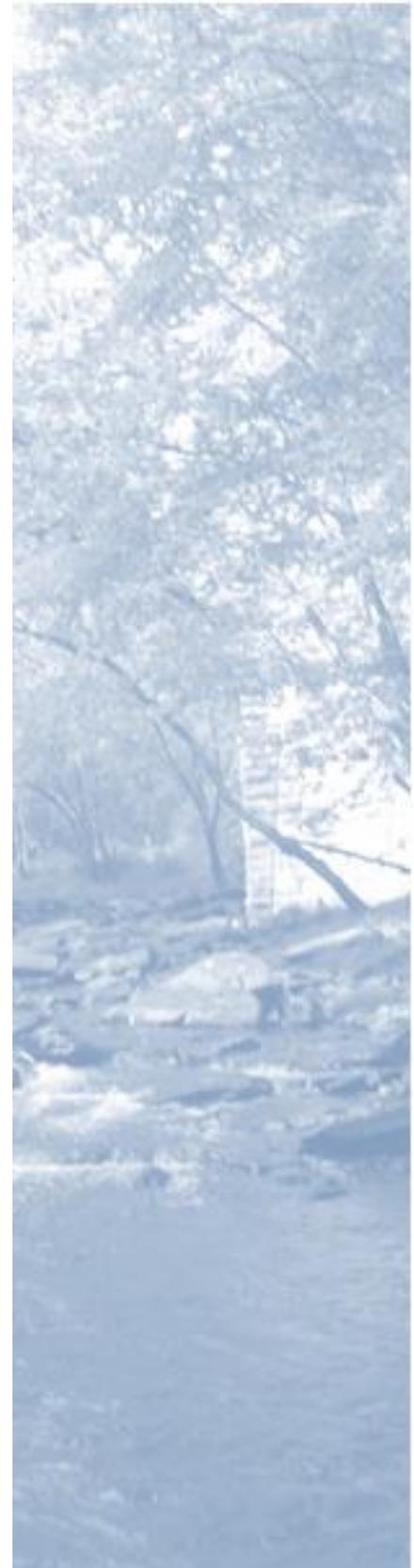
**STRATEGY:** Identify growth boundaries to preserve natural and rural landscapes.

**STRATEGY:** Use growth boundaries to allow community and public infrastructure improvements to keep pace with development in order to maintain a high quality of life by providing adequate public facilities.

Two types of growth boundaries used to support growth management are identified in the MPC and used to identify growth boundaries in this plan. They are defined as follows:

- **Designated growth area** is a region within the county that preferably includes and surrounds a city, borough or village, and within which residential and mixed use development is permitted or planned for at densities of one unit to the acre or more and commercial, industrial and institutional uses are permitted or planned for and public infrastructure services are provided or planned.

*Source: Pennsylvania Municipalities Planning Code*



- **Future growth area** is an area outside of and adjacent to a designated growth area where residential, commercial, industrial and institutional uses and development are permitted or planned at varying densities and public infrastructure services may or may not be provided, but future development at greater densities is planned to accompany the orderly extension and provision of public infrastructure services.

*Source: Pennsylvania Municipalities Planning Code*

The MPC also provides a definition for areas currently and planned to be serviced by public infrastructure such as water, sewer and other services.

- **Public infrastructure area** is a designated growth area and all or any portion of a future growth area where public infrastructure services will be provided and outside of which such public infrastructure services will not be required to be publicly financed.

*Source: Pennsylvania Municipalities Planning Code*

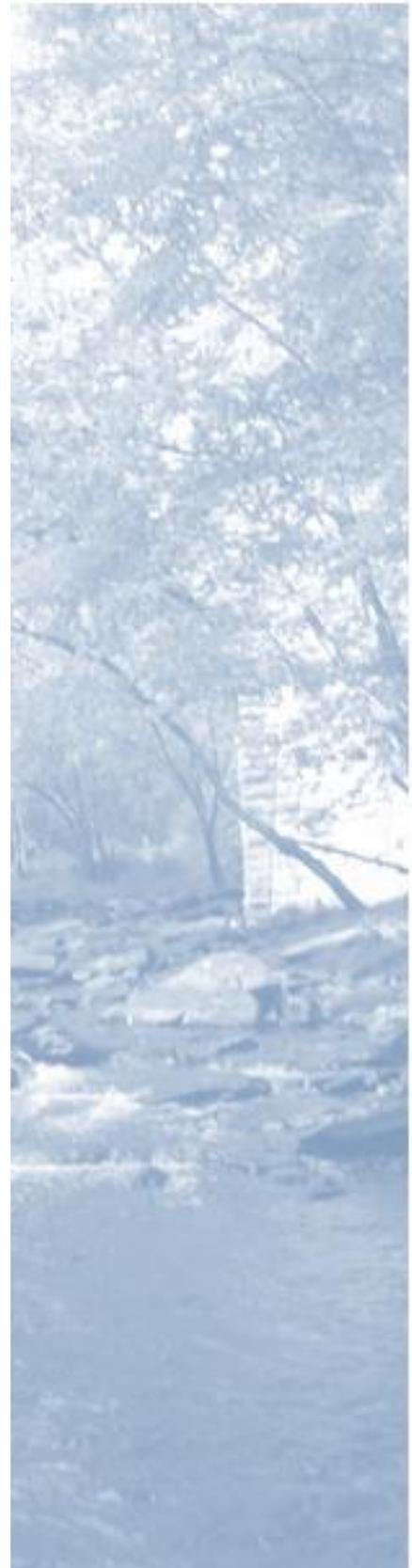
### Section 5.3.2 Natural Landscapes

Natural landscapes are undeveloped areas consisting of wetlands and aquifer recharge zones, woodlands, steep slopes, prime agricultural lands, floodplains, unique natural areas and similar environmentally sensitive areas. These areas provide benefit to public health, safety and welfare with respect to essential resources found in nature such as water, air, land, forests, fish and wildlife, topsoil, and minerals.

**STRATEGY:** Preserve and protect natural resources, forested lands and unique landscapes by using a variety of tools and techniques in order to establish sound land use policies, encourage community revitalization in urban areas and infill development in suburban areas, address recreational needs and protect agricultural lands and open space.

**STRATEGY:** Promote strategically located greenways that protect the region's natural resources and environmental quality, while providing opportunities for future linkages and connections via trails and paths.

**STRATEGY:** Promote the development of a greenway plan consistent with the County and State's plans as an integral part of the joint comprehensive planning initiatives and implementation plan. Encourage linking greenway concerns with implementation strategies that address sound land use, community revitalization, recreation needs, various modes of travel and open space protection.



The MPC provides the following guidance with respect to preservation and conservation of natural resources such as definitions, tools and techniques.

- **Preservation or protection** when used in connection with natural and historic resources, shall include means to conserve and safeguard these resources from wasteful or destructive use, but shall not be interpreted to authorize the unreasonable restriction of forestry, mining or other lawful uses of natural resources.

*Source: Pennsylvania Municipalities Planning Code*

- **Rural resource area** is an area within which rural resource uses including, but not limited to, agriculture, timbering, mining, quarrying and other extractive industries, forest and game lands and recreation and tourism are encouraged and enhanced, development that is compatible with or supportive of such uses is permitted and public infrastructure services are not provided except in villages.

*Source: Pennsylvania Municipalities Planning Code*

### Section 5.3.3 Rural Landscapes

Rural landscapes are areas consisting of prime agricultural lands and natural areas where development should be limited and targeted to serve the needs of local residents. Where new growth should occur, access to the transportation corridors should be carefully planned to protect the function of the corridor, preserve the scenic character of the landscape and enhance traffic safety.

**STRATEGY:** Limit development to densities that can be supported by existing transportation networks with minor upgrades.

**STRATEGY:** Provide a cluster development option with incentives to limit access to transportation networks while minimizing new infrastructure needs to support development and preserving both natural and rural landscapes.

**STRATEGY:** Identify rural villages and village crossroads outside of the designated growth area where concentrated development should occur as well as identify the types of development that should be permitted to support the needs of local residents.

**STRATEGY:** Promote conservation-based development to protect natural resources, agricultural lands and viewsheds/viewscapes.



The MPC provides the following guidance with respect to preservation and conservation of rural resources such as definitions, tools and techniques.

- **Rural resource area** is an area within which rural resource uses including, but not limited to, agriculture, timbering, mining, quarrying and other extractive industries, forest and game lands and recreation and tourism are encouraged and enhanced, development that is compatible with or supportive of such uses is permitted and public infrastructure services are not provided except in villages.

*Source: Pennsylvania Municipalities Planning Code*

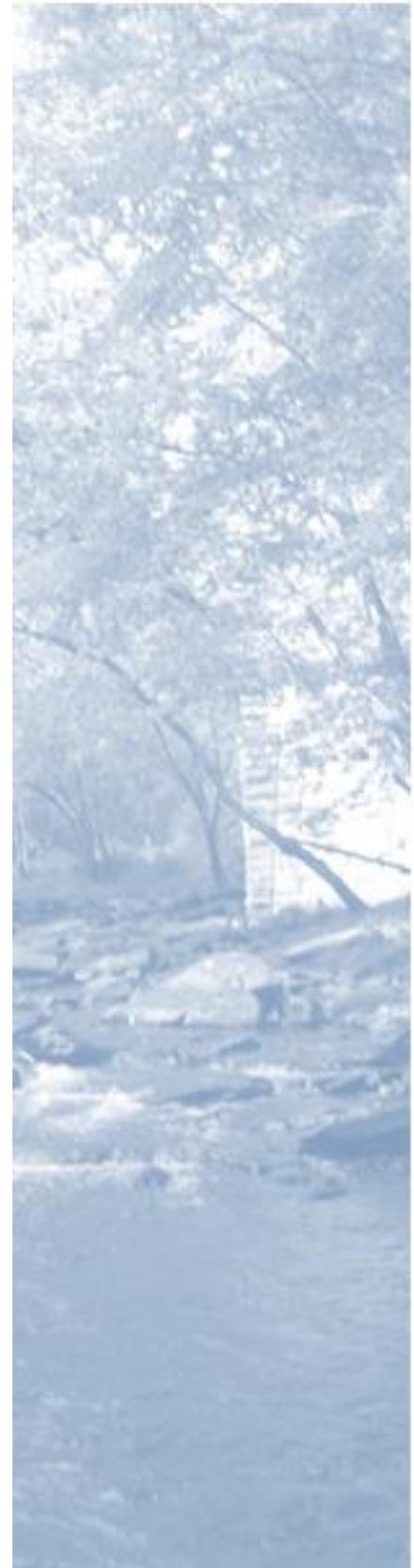
- **Rural Village** is an unincorporated settlement that is part of a township where residential and mixed use densities of one unit to the acre or more exist or are permitted and commercial, industrial or institutional uses exist or are permitted.

*Source: Pennsylvania Municipalities Planning Code*

- **Rural crossroads** is a community consisting of a group of people primarily using land for cultivation and pasturage or a small group of dwellings in a rural area. The center of these villages is typically located at a crossroads.
- **Agricultural land** is land used for agricultural purposes that contains soils of the first, second or third class as defined by the United States Department of Agriculture natural resource and conservation services county soil survey.

*Source: Pennsylvania Municipalities Planning Code*

- **Conservation-based Development** requires the consideration and preservation of resources on the site within the development process. The process involves the identification of resources through a site analysis plan and the design of a proposed development in the least intrusive manner. This tool is appropriate for the Township who seeks to protect and retain natural resources and character in the face of development pressure. Overall benefits or advantages to this approach include: minimal disruption to natural systems with the introduction of development; resource protection with little public cost while accommodating context sensitive development patterns; retention of resources and community character within the development process; quality permanent open space and desirable, livable and walkable neighborhoods; a clear process for achieving conservation subdivisions; a practical alternative to conventional, tract development; and, reduction of takings arguments that may occur in large-lot zoning or other preservation requirements.
  - **Cluster development** is used to preserve and conserve natural features and environmentally sensitive areas including viewsheds or viewsapes while reducing the amount of



infrastructure improvements required in support of this development pattern. This development pattern can be used in both suburban and rural landscapes.

### Section 5.3.4 Rural Residential Landscapes

Rural residential landscapes are located within the Growth Boundary encompassing lands that are either serviced or can be serviced by logical extensions of existing infrastructure including roads, water, sewer and a variety of services to support development. Rural residential landscapes are areas within and around the fringes of urban landscapes where predominantly residential neighborhoods are located and planned with connections to retail shopping, employment centers and institutional facilities. These uses are typically located in close proximity to each other with residential development clustered to preserve and conserve natural resources and open space. Developments include a variety of housing types and densities with appropriate linkages to eliminate sprawl and traffic congestion. The land use pattern should be designed to support alternative modes of transportation such as future transit opportunities, bicycling/hiking and pedestrians. Park and recreational facilities should be accessible to all residential neighborhoods via sidewalks, greenways, paths/trails and roadways. Transportation corridors within these areas should provide access to major employment and commercial areas. Use of access management tools and techniques will maintain corridor function and improve safety as well as preserve scenic byways for future generations.

**STRATEGY:** Provide a cluster development option with incentives to limit access to the transportation network.

**STRATEGY:** Plan and program public improvements that offer multi-modes of transportation and provide linkages to suburban centers and park and recreation facilities.

**STRATEGY:** Promote suburban center development consisting of mixed uses.

**STRATEGY:** Provide tools and techniques to promote access management.

**STRATEGY:** Develop redevelopment and infill development standards consistent with neighborhood scale, design and land use patterns for suburban landscapes and walkable communities.



*Rural Residence*

The MPC provides the following guidance with respect to preservation and conservation of natural resources such as definitions, tools and techniques.

- **Cluster development** is used to preserve and conserve natural features and environmentally sensitive areas including viewsheds or veiwscapes while reducing the amount of infrastructure improvements required in support of this development pattern. This development pattern can be used in suburban and all rural landscapes.
  - **Rural crossroads** is a community consisting of a group of people primarily using land for cultivation and pasturage or a small group of dwellings in a rural area. The center of these villages is typically located at a crossroads.

### Section 5.3.5 Rural Village Landscapes

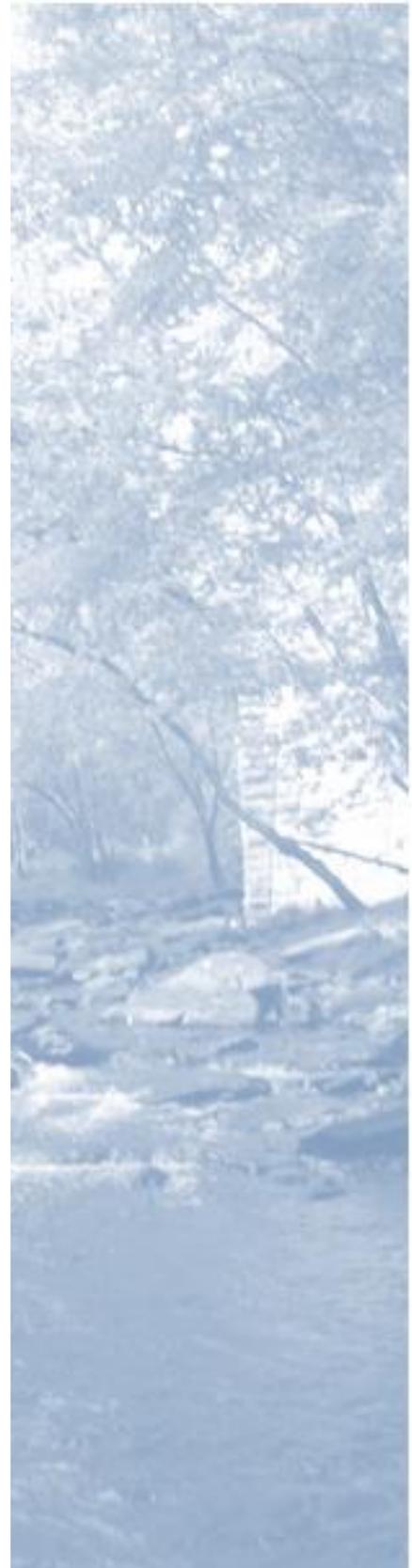
Rural village landscapes are located within the Growth Boundary encompassing lands that are serviced by existing infrastructure including roads, water, sewer and a variety of services to support development. Rural village landscapes are areas where there is a concentration of a high density of mixed uses. These areas have typically developed historically around a variety of economic opportunities including rail operations, manufacturing, tourism/resorts, commerce and/or historic villages offering basic goods and services to rural communities.

**STRATEGY:** Coordinate redevelopment and infill development strategies to enhance the village core with improvements characteristic of traditional neighborhood developments.

**STRATEGY:** Plan and program public improvements that offer multi-modes of transportation and provide linkages from neighborhoods to the village core, community facilities, and goods and services.

**STRATEGY:** Plan and program transportation improvements sensitive to the context of neighborhoods and varying landscapes along major corridors.

- **Village Core** is the heart of the Township. The village core is an area characteristic of diverse, concentrated development patterns occurring over time, offering a walkable/pedestrian friendly environment. A mixed-use village core should include a variety of retail and commercial services, civic and residential uses as well as public open space. Future mixed-use development of the village core should consider combining ground-floor and upper-story offices or residential uses. The main street of the village core is a diverse and densely developed area with transitions to less dense and less diverse development patterns traveling outward from the center to the remaining areas within the village. The village core should be enhanced with linkages to village neighborhoods and other



development. Sidewalks, greenways and paths with consistent landscaping treatments create linkages between older and newer segments of the village should be part of development standards.

- **Traditional Neighborhood Development (TND)** is an area of land developed for a compatible mixture of residential units for various income levels and nonresidential commercial and workplace uses, including some structures that provide for a mix of uses within the same building. Residences, shops, offices, workplaces, public buildings, and parks are interwoven within the neighborhood so that all are within relatively close proximity to each other. Traditional neighborhood development is relatively compact, limited in size and oriented toward pedestrian activity. It has an identifiable center and discernable edges. The center of the neighborhood is in the form of a public park, commons, plaza, square or prominent intersection of two or more major streets. Generally, there is a hierarchy of streets laid out in a rectilinear or grid pattern of interconnecting streets and blocks that provides multiple routes from origins to destinations and is appropriately designed to serve the needs of pedestrians and vehicles equally.

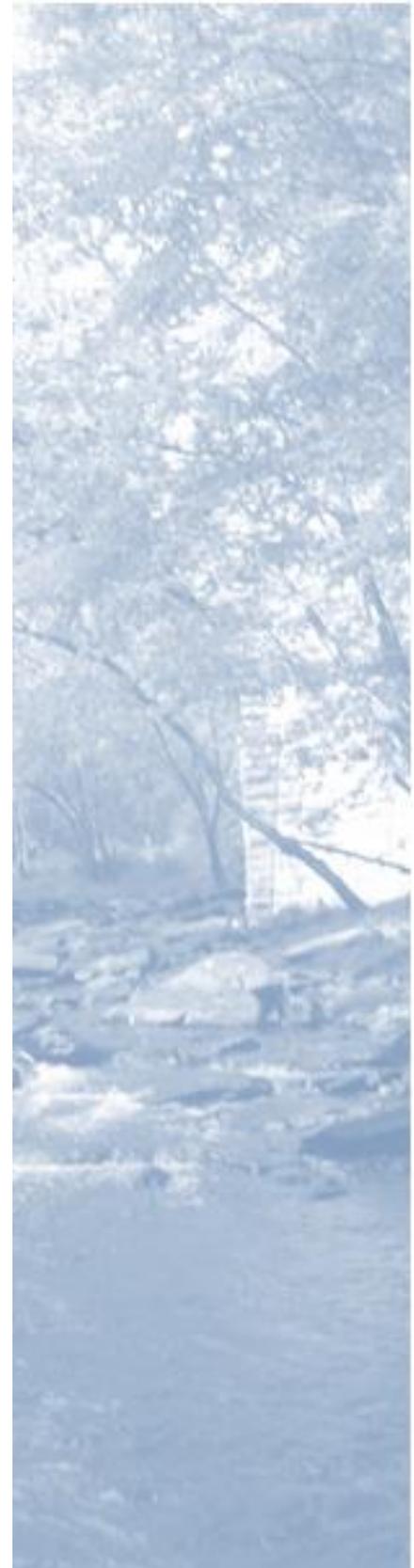
### Section 5.3.6 Preservation of Historic Resources

Preservation of historic resources is crucial to the preservation of neighborhood character. Historic resources define the essence of local communities and neighborhoods as well as provide opportunities for economic development such as tourism. Preservation of historic resources also improves property values as well as contributes to the aesthetics of desirable communities with a higher quality of life for residents.

**STRATEGY:** Identify and document historic resources in accordance with Pennsylvania Historic Museum Commission (PHMC) standards.

**STRATEGY:** Establish Historic Districts using tools such as National Register Districts, local historic districts, and Historic Architectural Review Board Districts (zoning overlays) to protect clusters of historic resources.

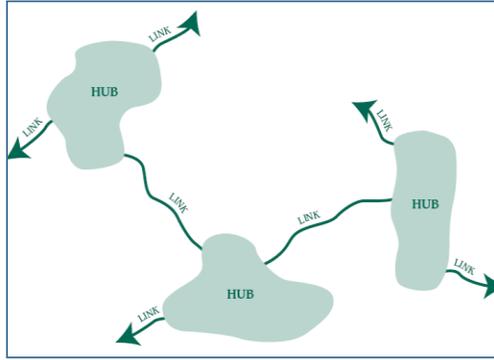
**STRATEGY:** Develop architectural standards as part of neighborhood design elements for infill or redevelopment of sites and rehabilitation of structures to preserve historic integrity and character of historic neighborhoods.



### Section 5.3.7 Greenways

All **Landscapes** can benefit from the Department of Conservation and Natural Resources' (DCNR) greenways initiative. DCNR provides guidance with respect to the role greenways play in preserving and conserving natural landscapes.

Greenways are corridors of open space. Greenways vary greatly in scale, from narrow ribbons of green that run through urban, suburban and rural areas to wider corridors that incorporate diverse natural, cultural and scenic features. Greenways can incorporate both public and private property, and can be land or water-based, following old railways, canals, or ridge tops,



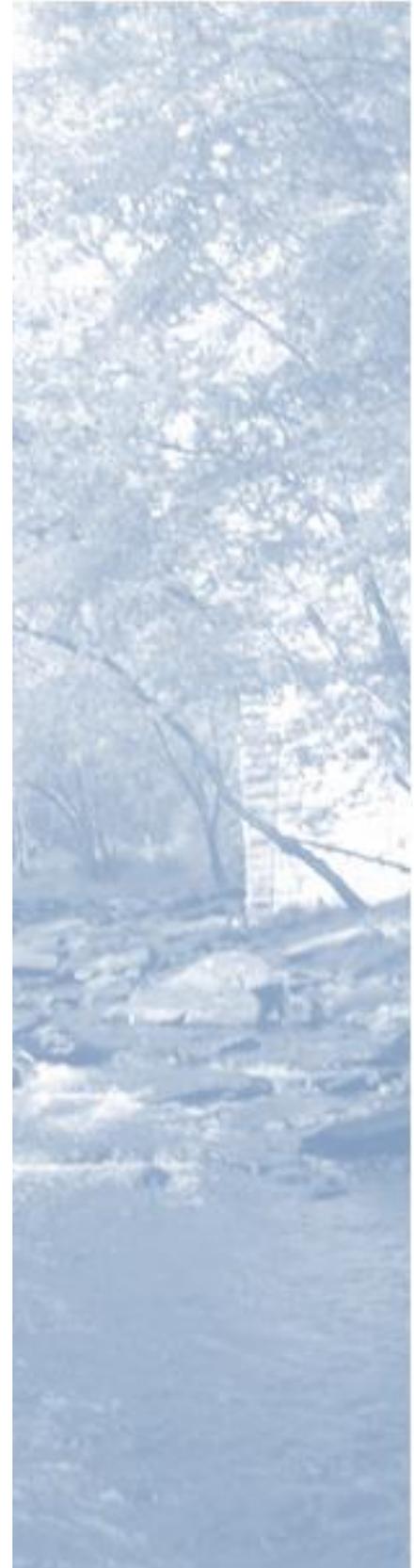
or they may follow stream corridors, shorelines, or wetlands, and include water trails for non-motorized craft. Greenways differ in their location and function, but overall, a greenway will protect natural, cultural, and scenic resources, provide recreational benefits, enhance natural beauty and quality of life in neighborhoods and communities, and stimulate economic development opportunities.

One method used to preserve and conserve local and regional natural resources is to create a network of greenways consisting of *hubs* and *spokes*. According to DCNR, the hubs of the network are the state parks, forests, game lands, lakes and other destination areas. The spokes of the network are greenways connecting natural areas and recreational and cultural destinations with the places where we live, work and play. Greenways will establish a green infrastructure as part of the future land use plan consisting of open space vital to the health of both ecological systems and communities. Greenways contribute significantly to the quality of life and provide a focal point for community design and land use strategies as well as yield economic benefits. The following is a listing of benefits as outlined in Pennsylvania's Greenways Plan:

- greenways enhance the sense of place in a community or region;
- greenways accentuate the scenic beauty and majesty of our state, region and municipality;
- greenways protect water resources by buffering non-point sources of pollution;
- greenways provide opportunities to protect and manage wildlife, forests and ecological systems;
- greenways provide recreation opportunities for families and individuals of all ages and abilities;
- greenways provide alternatives to automotive transportation, reducing traffic congestion and pollution;

- greenways add positively to our economic climate, including tourism;
- greenways are a core component of strategies to foster health and wellness.

*Source: DCNR – Pennsylvania Greenways: An Action Plan for Creating Connections*



## SECTION 6.0 CONSERVATION / PRESERVATION PLAN

Conserving the Lackawaxen/Shohola region's remarkable natural surroundings is crucial to preserving a high quality of life for residents, visitors and businesses. Conservation and preservation efforts can be supported by the growth management concepts and strategies previously outlined.

**Preservation or protection** when used in connection with natural and historic resources, shall include means to conserve and safeguard these resources from wasteful or destructive use, but shall not be interpreted to authorize the unreasonable restriction of forestry, mining or other lawful uses of natural resources.

*Source: Pennsylvania Municipalities Planning Code*

The Townships intend to build upon State and County conservation and preservation policies by the implementing concepts and strategies previously outlined in the Growth Management Concepts and Strategies section of this plan. The implementation concepts and strategies are presented to be used as a menu of options based upon circumstances, partnership opportunities and collaboration by property owners. The conservation/preservation policy focuses on using these concepts and strategies to accomplish the following objectives:

- Protecting environmentally sensitive areas.
- Management of existing conservation and preservation lands.
- Usage of temporarily preserved lands for public open space, recreation and greenways, cluster development/conservation-by-design or permanent preservation.
- Protection and buffering of existing lands in conservation from existing and proposed development for the purpose of minimizing both on- and off-site environmental impacts.
- Preservation of agricultural lands.
- Application of sensitive forest management practices.

### Section 6.1 Conservation Areas and Protected Areas

The Lackawaxen and Shohola Townships Natural Resources Conservation and Open Land Preservation Reports reference an important tool for the evaluation of development projects referred to as a *Map of Potential Conservation Lands*. Creation of a *Map of Potential Conservation Lands* calls for a visual accumulation of data and layers which render a hardcopy map illegible. Therefore, the map is best viewed using GIS technology such as ArcReader and other tools where the user can click on and off each of the prescribed datasets (layers) needed to make a determination regarding preservation, conservation or development. For purpose of providing this information in a readable format for inclusion in this document, all features contributing to defining *potential conservation lands* are contained on a series of maps referenced below organized by three categories of conservation

*Lackawaxen and Shohola Townships are endowed with remarkable natural surroundings that generate a high quality of life for our residents.*

**The cultural, historic and natural resources of a community create a "sense of place" for both residents and visitors.**

#### Historic and Natural Resources Goal

*Create a plan for the protection of natural and historic resources consistent with county, regional and state plans and regulations.*

#### Historic and Natural Resources Objectives

- ① Identify natural and historic resources for protection, preservation and conservation and enhance access to the public to support tourism.
- ② Identify various tools and techniques for preservation and conservation of resources.
- ③ Identify **best management practices** for the conservation of natural resources and environmentally sensitive areas.

areas: existing protected areas, primary conservation areas and secondary conservation areas.

### Section 6.1.1 Existing Protected Areas

Features associated with *Existing Protected Areas* such as lands subject to conservation easements, state and federal forest and park lands, municipal parks and conservancy properties are depicted on Map 1: Existing Conservation & Preservation areas. Existing protected lands form the core areas around which the Townships future open land network could grow.

### Section 6.1.2 Primary Conservation Areas

Features associated with *Primary Conservation Areas* such as floodplain, wetlands, streams and steep slopes are depicted on Map 2: Environmentally Sensitive Areas. Primary conservation areas are deemed to be inherently unsuitable for development due to extremely severe environmental constraints. Zoning and Subdivision/Land Development Ordinance (SALDO) regulations should restrict development in these areas.

### Section 6.1.3 Secondary Conservation Areas

Features associated with *Secondary Conservation Areas* such as Natural Area Inventory sites, stream buffers, steep slopes, forested areas, historic sites and other important features are depicted on Map 3: Existing Historic Sites & Natural Areas. Secondary conservation areas contain lands that can be developed but that are significant at some level and worthy of consideration for conservation. Zoning and SALDO regulations should limit development in these areas with preservation of natural resources through conservation subdivision and design standards.

### Section 6.1.4 Opportunities for Preservation of Open Space

Opportunities for preservation of open space are identified on Map 4: Opportunities for Preservation of Open Space. This map combines lands currently in conservation easements, Upper Delaware Scenic and Recreational River legislative boundary, township recreation facilities and parks, state game lands, state parks and lands, Natural Area Inventory sites, private hunting/fishing clubs and steep slopes. Most of these features are contained in either existing protected areas or primary and secondary conservation areas with exception to private hunting/fishing clubs. Private hunting and fishing clubs are considered as opportunities for additional preservation and conservation of lands.

**Community sustainability and green infrastructure are interrelated with respect to economic development and preservation of natural resources for use by current and future generations.**

#### Open Space, Greenway and Recreation Goal

*Create a plan to address local and regional recreation, preservation and conservation needs including parks and recreation facilities and programs, greenways and open space.*

#### Open Space, Greenways and Recreation Objectives

- ❶ Preserve and conserve natural resources.
- ❷ Identify public park and recreation facilities and programs.
- ❸ Identify opportunities to utilize greenways to provide connections/linkages to a variety of hubs or destinations.
- ❹ Preserve and conserve open space and greenways through private preservation opportunities.

*Refer to the Multi-Municipal Open Space, Greenways and Recreation Plan for the Lackawaxen/Shohola Region for details.*

## Section 6.2 Natural Resource Conservation / Preservation Strategies

Future development opportunities should be based upon the continued conservation and preservation of natural lands, historic resources and environmentally sensitive areas using tools, techniques and strategies to meet these policy objectives. Tools, techniques and strategies for consideration are further described in this section.

### Section 6.2.1 Conservation by Design through Zoning and Subdivision/Land Development Regulations

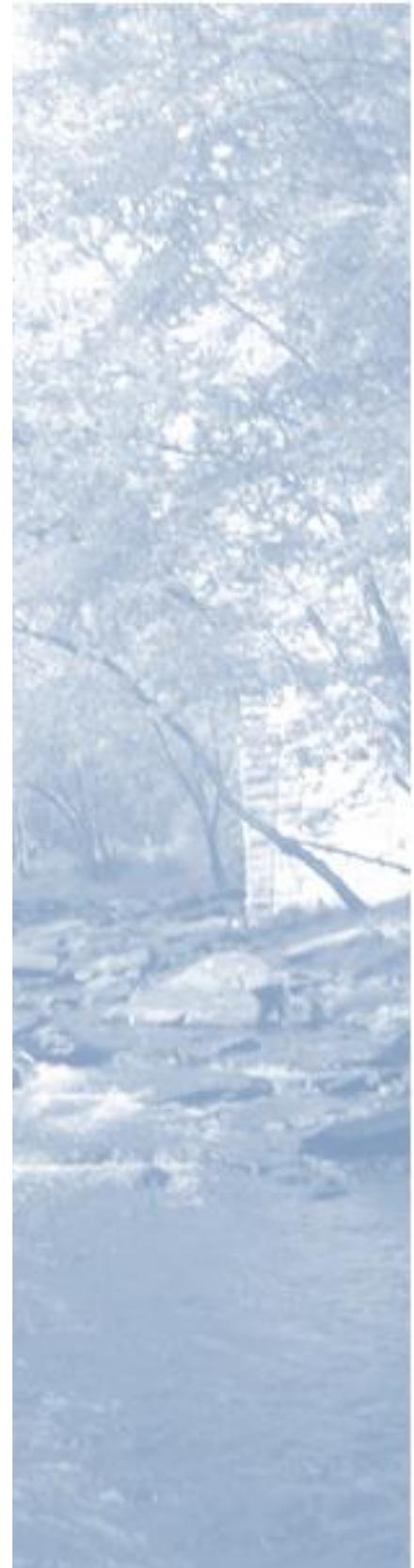
There are many ways to conserve land. One method is to develop land using conservation by design standards to allow for limited development with preservation of open space, natural resources and/or environmentally sensitive lands. Conservation by design offers municipalities a legally-defensible system that works within existing land-use regulations to conserve land as development occurs. This design method promotes the clustering of development allowing for preservation of open space networks for recreation, preservation of scenic views, management of stormwater and flooding, preservation of ecological habitats and enhances property values. Clustering of development is the result of allowing the maximum permitted number of dwellings on smaller lots thereby allowing for the dedication of a portion of the property as permanently protected open space. Conservation by design enables communities to help manage growth and conserve land at a lower cost to the public resulting in public benefit.

Source: *Shaping DCNR's Future*,  
<http://www.dcnr.state.pa.us/info/shapefuture/05-lc.aspx>

### Section 6.2.2 Conservation through Zoning

There are a variety of zoning tools and techniques that can be used to accomplish conservation/preservation goals resulting in low impact development (LID) patterns. Those identified in the MPC include the use of transfer of development rights (TDRs), traditional neighborhood development (TND) districts and other techniques outlined below. The following definitions have been provided from the Pennsylvania Municipalities Planning Code (MPC).

- **Transferable Development Rights (TDR)** – TDR is the attaching of development rights to specified lands which are desired by a municipality to be kept undeveloped, but permitting those rights to be transferred from those lands so that the development potential which they represent may occur on other lands where more intensive development is deemed to be appropriate. Source: MPC
- **Traditional Neighborhood Development (TND)** – TND is an area of land developed for a compatible mixture of residential units for various income levels and nonresidential commercial and workplace uses, including some structures that provide for a mix of uses within the same building. Residences, shops, offices, work places, public



buildings and parks are interwoven within the neighborhood so that all are within relatively close proximity to each other. Traditional neighborhood development is relatively compact, limited in size and oriented toward pedestrian activity. It has an identifiable center and a discernible edge. The center of the neighborhood is in the form of a public park, common plaza, square or prominent intersection or two or more major streets. Generally, there is a hierarchy of streets laid out in a rectilinear or grid pattern of interconnecting streets and blocks that provides multiple routes to destinations, and street networks are appropriately designed to serve the needs of pedestrians and vehicles equally. *Source: MPC*

- **Open Space and Conservation Districts** – Municipalities have the ability to identify and define various zoning districts. Districts can be established to promote open space and conservation of natural resources.
- **Community Development Objectives** – The Zoning Ordinance must contain community development objectives. These objectives should incorporate the purpose for conservation design initiatives.
- **Natural Resources Conservation & Environmental Protection Standards** – Municipalities can strengthen existing regulations to address conservation of floodplains, maintaining forest and vegetation, preserve the Upper Delaware National Scenic and Recreational River Corridor, protect groundwater and maintain groundwater recharge areas, wellhead protection, riparian buffers, steep slopes, management of stormwater, protect and maintain water supply, and reduce erosion and sedimentation.
- **Performance and Protective Zoning** – Zones can be defined by permitted impacts as opposed to permitted uses and zones that delineate environmentally sensitive areas for the purpose of protection, preservation and conservation.
- **Cluster Development** – Zoning and development standards that typically permits higher densities of development in parts of a subdivision to protect sensitive lands.
- **Conservation districts** and **agricultural zoning** can provide opportunities for preservation and conservation.

A detailed description of these items with specific recommendations is provided in the Lackawaxen and Shohola Township Natural Resources Conservation and Open Lands Preservation Reports. Please reference these reports for a better understanding of the benefits and how these planning tools are implemented as well as detailed recommendations for each Township with respect to plans, policies and regulations. Several recommendations from these reports have already been addressed by the Townships.



### Section 6.2.3 Conservation Subdivision/Land Development Design

Conservation subdivision/land development design can be used for all types of development patterns. The design process involves a multi-step procedure that starts with the development of an existing resources site analysis plan followed by an on-site inspection by the Planning Commission and staff. Collaboration with the developer will result in voluntary preparation of a sketch plan. The final step of this process, a preliminary and final plan submission process, is what is typically outlined in municipal ordinances. Yet, the first three steps, outlined later in this section, are crucial to achieving conservation and preservation goals and objectives resulting in a conservation design subdivision or land development.

- **Recreation Land and Fees** – The MPC allows municipalities to require developers to dedicate recreation land for public use, or upon agreement of the developer, to construct recreation facilities or pay fees for the construction and maintenance of recreation facilities accessible to the residents of the proposed residential development. Recreation fees collected must be used for facility development within three years of collection.
- **Natural Resources Conservation & Environmental Protection Standards** – Municipalities can strengthen existing regulations to address conservation of floodplains, maintain forest and vegetation, preserve the Upper Delaware National Scenic and Recreational River Corridor, protect groundwater and maintain groundwater recharge areas, wellhead protection, riparian buffers, steep slopes, manage stormwater, protect and maintain water supply, and reduce erosion and sedimentation.

A detailed description of various subdivision and land development design process, site amenities and improvements as well as recommendations are outlined in the Lackawaxen and Shohola Township Natural Resources Conservation and Open Lands Preservation Report. Please reference these reports for a better understanding of the benefits and how these planning tools are implemented as well as detailed recommendations.

*Source: Lackawaxen and Shohola Township Natural Resources Conservation and Open Lands Preservation Reports.*

### Section 6.2.4 Growing Greener Initiative: Conservation by Design

The Growing Greener: Conservation by Design Workbook, as developed in part by the Natural Lands Trust provides a summary of the municipal development process and methods for protection of environmental features:

*“...municipalities can use the development process to their advantage to protect interconnected networks of open space: natural areas, greenways, trails and recreational lands. Communities can take control of their destinies so that their conservation goals are achieved in a manner fair to all parties concerned. All that is needed*



*are some relatively straightforward amendments to municipal comprehensive plans, zoning ordinances and subdivision ordinances”.*

The workbook identifies four key components necessary for conservation, describes and details the components, and provides answers to commonly asked questions about using conservation by design concepts. A copy of the document has been provided for reference and is available in Appendix 5. Note the following concerning the document:

*“Growing Greener: Conservation by Design is a collaborative program of the Pennsylvania Department of Conservation and Natural Resources (DCNR); the Governor’s Center for Local Government Services; Natural Lands Trust, Inc., a regional land conservancy located in Media, PA; and an advisory committee comprised of officials from state and local agencies including the Pennsylvania Environmental Council, the Pennsylvania State University Cooperative Extension, and other non-profits and the private sector. The program is based on the work of Randall Arendt, Senior Conservation Advisor at Natural Lands Trust, and Michael Clarke, former president of Natural Lands Trust.”*

*Source: Growing Greener: Conservation by Design, Natural Lands Trust, 2001.*

The description of the fourth key component (Conservation Subdivision Design) is significant to the Lackawaxen Township and Shohola Township area. The steps describe a recommended process for conservation of primary conservation areas as well as secondary conservation areas; all of which have been identified by the townships as scenic resources in the Multi-Municipal Open Space, Greenways and Recreation Plan. A synopsis of the process follows.

**Step 1. Identify the land that should be permanently protected.**

Usually these lands include areas which a municipality has otherwise identified for protection such as wetlands, Flood-prone lands, and steep slopes. The Growing Greener initiative refers to these as Primary Conservation Areas. Secondary Conservation Areas would include features of the property that are typically unprotected under current codes but that a community has warranted as worth conservation such as: mature woodlands, greenways and trails, river and stream stonewall corridors, prime farmland, hedgerows and individual freestanding trees or tree groups, wildlife habitats and travel corridors, historic sites and structures, scenic viewsheds, etc. The Growing Greener initiative refers to the area that’s left after identification of the above attributes as the “Potential Development Area” for the site. Note too that the Growing Greener Initiative recommends use of a “Map of Potential Conservation Lands” which may have already identified most of these features community-wide.



**Step 2. Locate Sites of Individual Houses.**

This step involves locating homes within the Potential Development Area so that their views of the open space are maximized, where the number of homes placed is based on the yield plan approach (whereby the developer calculates the maximum number of lots permitted under Zoning). The Growing Greener Initiative also provides suggestions for questionable locations based on water and sewer suitability.

**Step 3. Align Streets and Trails.**

After the completion of steps 1 & 2, locate road and trail patterns that enhance the results of steps 1 & 2. Then seek to place roads that preserve and conserve the Primary Conservation Areas and Secondary Conservation Areas and which are located within the Potential Development and identify trail locations that enhance the location of individual homes.

**Step 4. Draw in the Lot Lines.**

Complete the layout of lots where lot sizes are able to conform to zoning regulations of the district.

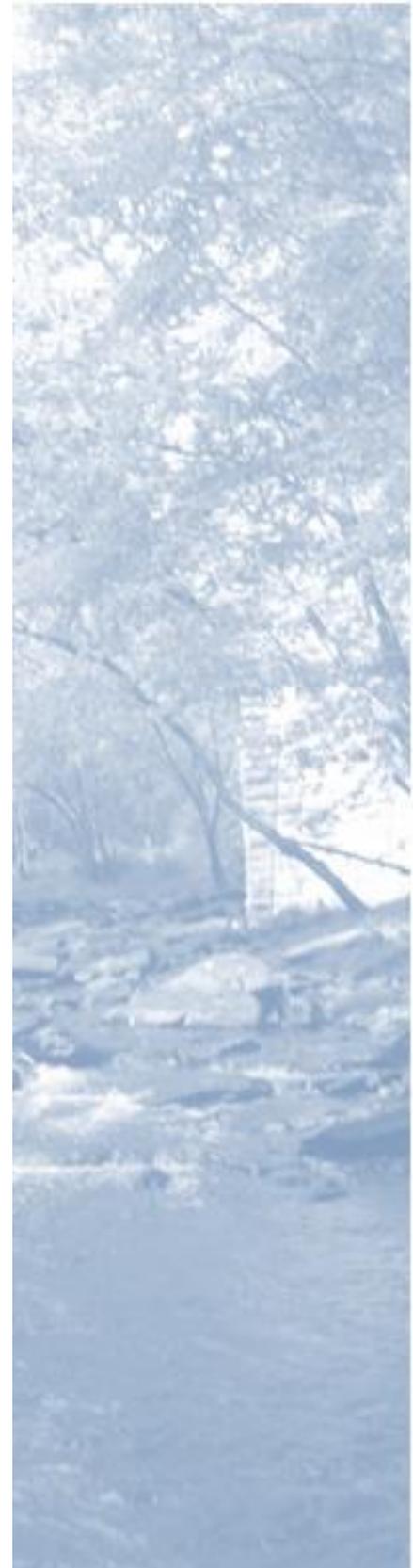
Essentially the four-step approach can be effective in laying out new full-density developments where all the significant natural and cultural features have been preserved. The process can enhance and preserve a community's natural features while not limiting the developer.

**Section 6.2.5 Shohola Township Conservation by Design**

In April of 2006, Shohola Township adopted two key ordinances, Ordinance No. 56 and Ordinance No. 60, to address preservation and conservation of open space and natural features through conservation by design regulations. These ordinances amended the Township's Zoning Ordinance of 1999.

Ordinance No. 56 added several key definitions clarifying conservation easement and conservation open space as well as other definitions and created the Upper Delaware Overlay District to preserve the unique character of the Upper Delaware River Corridor. This ordinance addressed use, densities, amenities, site design and conservation of open space for the Upper Delaware Overlay District. Refer to the ordinance for additional details.

Ordinance No. 60 also added several key definitions to clarify primary and secondary conservation areas, conservation design development and transfer of development rights (TDR) and created a Conservation Design Development Overlay District. This ordinance addressed use, densities, amenities, site design and conservation of open space such as using an optional TDR for conservation of open space. Refer to the ordinance for additional details.



### Section 6.3 Other Conservation Tools

Other conservation tools include the adoption of an Official Map and use of conservation easements. The following provides a brief description of each.

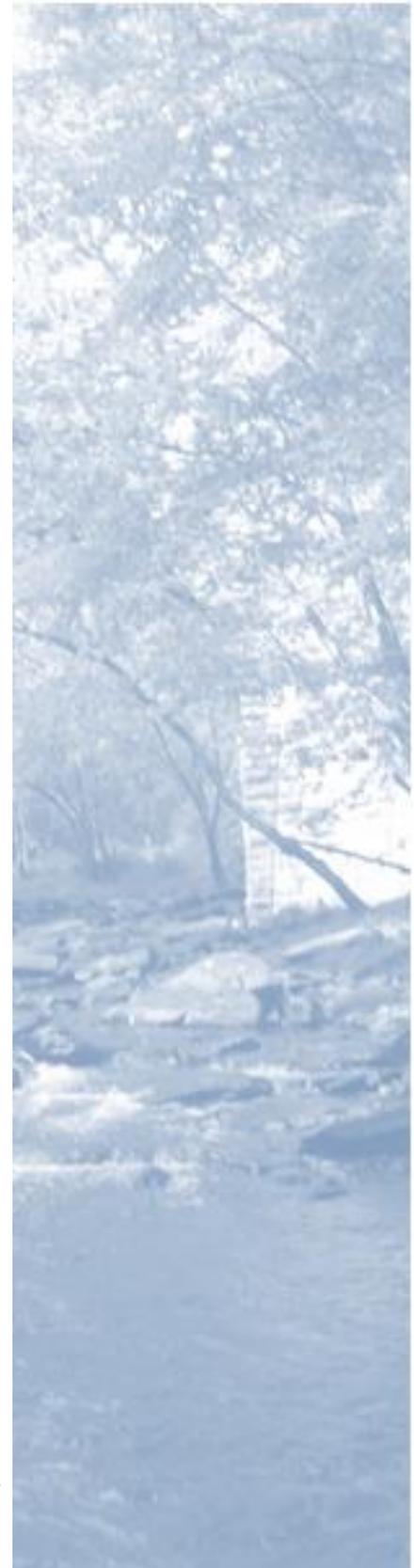
- **Official Map** – A map adopted in accordance with Article IV of the MPC. An Official Map shows the location of areas that the municipality has identified as necessary for future public streets, recreation areas and other public grounds, or areas for open space acquisition, in fee or by easement. By showing the areas on the Official Map, the municipality puts the landowner on notice that the property has been identified for potential future acquisition for a public facility or purpose. The municipality has one year to purchase the property upon notice by the owner of intended development and may refuse to issue a permit for any building or development on the designated parcel during this timeframe.
- **Conservation Easement** – A conservation easement is a legal agreement between a landowner and a land trust or government agency. The easement may be sold or donated by the property owner and places permanent restrictions on the use or development of land in order to protect its conservation values.

Additional conservation/preservation tools, techniques and strategies are outlined in the Lackawaxen/Shohola Region Open Space, Greenways, Park and Recreation Plan. Please refer to this document to review these options. A detailed description and list of advantages of an Official Map and Conservation Easements are provided in the Lackawaxen and Shohola Township Natural Resources Conservation and Open Lands Preservation Reports.

### Section 6.4 Evaluation of Preservation / Conservation Tools & Techniques

A variety of conservation-based development tools and techniques that promote sustainability through preservation and conservation have been evaluated in the following tables with respect to key advantages and disadvantages and ease of implementation. Specific tools and techniques will be identified in the implementation section of the plan for various landscapes and situations. Careful consideration of advantage, disadvantages and implementation requirements should be given prior to implementation of various tools and techniques.

For key tools and techniques outlined in this plan including, but not limited to Planned Residential Developments, Traditional Neighborhood Development (TND) and Transfer of Development Rights (TDRs), the table provides an evaluation of advantages, basis of implementation and disadvantages of techniques with respect to achieving goals and objectives set forth in the Growth Management Policy for various landscapes (*natural landscapes, rural and rural residential landscapes and village landscapes*).



**Table 2: Evaluation of Preservation/Conservation Tools & Techniques**

Key Tools/Techniques	Key Advantages	Implementation	Key Disadvantages
<p><b>Preserve and Repair Riparian Buffers</b></p>	<ul style="list-style-type: none"> <li>• Reduction of peak storm flow.</li> <li>• Filtering pollutants.</li> <li>• Reduction of nutrients in waterways.</li> <li>• Streambank stabilization</li> <li>• Stream temperature control</li> </ul>	<ul style="list-style-type: none"> <li>• Legal basis to establish is founded in the MPC.</li> <li>• Establish buffers, greenways, open space and recreational areas through Comprehensive Plan.</li> <li>• Support local watershed groups.</li> <li>• Riparian Corridor Conservation District – zoning overlay district.</li> <li>• Consistency between zoning, subdivision/land development and stormwater management ordinances.</li> <li>• Best Management Practices should be developed for implementation by landowners in natural and rural landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>• Establishments of buffers must be clearly tied to health, safety and welfare issues and environmental protection.</li> <li>• A strong buffer awareness program may be required to educate development community and property owners.</li> </ul>
<p><b>Stormwater Management Best Management Practices (BMPs)</b></p>	<ul style="list-style-type: none"> <li>• Provides acceptable practices for compliance with regulation of stormwater management.</li> <li>• Minimizes the increase of surface volumes, rates and frequencies resulting from development.</li> <li>• Minimizes increases to downstream flooding.</li> <li>• Increases recharge to groundwater.</li> <li>• Increases treatment and pollutant removal for groundwater recharge and surface water discharge.</li> <li>• Decreases erosion, scour and streamdowncutting in upper reaches and sedimentation in lower reaches.</li> <li>• Contributes to the aesthetic amenities of new development.</li> <li>• Reduces infrastructure requirements, space requirements and maintenance costs for stormwater handling facilities.</li> <li>• Enhances stream and riparian corridor management.</li> </ul>	<ul style="list-style-type: none"> <li>• Adoption of County Stormwater Management Plan Act 167.</li> <li>• Legal basis to allow these standards in subdivision and land development ordinance is founded in the MPC.</li> <li>• Include a hierarchy of BMPs in Stormwater Management Ordinance and/or Subdivision/Land Development Ordinance.</li> <li>• Reference most current BMP manuals.</li> <li>• Stormwater management plans should be included as part of the Preliminary Plan submission.</li> <li>• Inspection and enforcement procedures.</li> <li>• Adopt low impact development (LID) standards using Integrated Management Practices (IMPs) for rural residential landscapes and village landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluating and selecting BMPs is complex.</li> <li>• Must be an individual, organization or agency responsible for operation and maintenance of BMPs along with demonstration of financial ability and commitment to fulfill responsibilities.</li> <li>• Requires increased application review and increased inspections and enforcement (may require additional staffing).</li> <li>• Some BMPs require additional capital costs but may reduce lifecycle costs.</li> <li>• Continued education is required for planners, reviewers and designers to keep up to date with new practices.</li> <li>• Homeowners will be required to be more educated about practices and techniques.</li> </ul>

**Table 2: Evaluation of Preservation/Conservation Tools & Techniques**

Key Tools/Techniques	Key Advantages	Implementation	Key Disadvantages
<p><b>Wellhead Protection Areas</b></p>	<ul style="list-style-type: none"> <li>Protects existing water supply and maintains safe sources of drinking water.</li> <li>Preserves longevity of sources of water supply and reduces the need and cost to develop new sources.</li> <li>Reduces the need for increased treatment technologies to purify water.</li> <li>Places restrictions on development in identified areas that contribute water directly to wells.</li> <li>Reduces or eliminates potential well contaminant sources.</li> </ul>	<ul style="list-style-type: none"> <li>Legal basis is founded in the MPC.</li> <li>Delineation should be done by a professional hydro-geologist or engineer.</li> <li>Applicable to landscapes consisting of wellhead protection areas.</li> </ul>	<ul style="list-style-type: none"> <li>Assessments can be costly.</li> <li>Owners and operators of small water systems must be evaluated.</li> </ul>
<p><b>Conservation Easements</b></p>	<ul style="list-style-type: none"> <li>Land is preserved as open space for public and private access.</li> <li>Inexpensive method for protecting natural resources and/or establishing greenways.</li> <li>Landowner retains all other property rights, land remains on tax rolls.</li> </ul>	<ul style="list-style-type: none"> <li>Decision by private property owner.</li> <li>May or may not allow public access to support establishment of greenways.</li> <li>Applicable to all landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>Public access may be restricted.</li> <li>Easement must be monitored and enforced.</li> <li>Easement may lower resale value.</li> </ul>
<p><b>Locating Sewage Systems in Open Space</b></p>	<ul style="list-style-type: none"> <li>Provide flexibility to create variable lots sizes and layouts to achieve preservation goals.</li> <li>Best match between land use needs and specific site characteristics.</li> <li>Reserves the best soils suitable for subsurface disposal.</li> <li>Allow for a subdivision design where some lots are served by on-lot systems and other by off-lot systems.</li> </ul>	<ul style="list-style-type: none"> <li>Subdivision/land development ordinance amendments.</li> <li>Promote sketch plan submissions and reviews.</li> <li>Adopt a sewage facilities management program.</li> <li>Applicable to development occurring in rural, rural residential and village landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>Implementation requires municipal involvement in sewage facilities planning and management.</li> </ul>

**Table 2: Evaluation of Preservation/Conservation Tools & Techniques**

Key Tools/Techniques	Key Advantages	Implementation	Key Disadvantages
<p><b>Conservation Subdivision or Cluster Development Standards</b></p>	<ul style="list-style-type: none"> <li>Alternative to conventional development patterns that allow for preservation/conservation.</li> <li>Fewer environmental impacts.</li> <li>Potential reduction in infrastructure costs.</li> <li>Ability to create walkable neighborhoods and sense of community.</li> <li>On-lot systems can be used if designed and maintained properly.</li> </ul>	<ul style="list-style-type: none"> <li>Legal basis founded in the MPC.</li> <li>Amendment of zoning ordinance and subdivision/land development ordinance.</li> <li>Sketch plan process.</li> <li>Use of Map of Potential Conservation.</li> <li>Can be applied to all landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>May result in the need for community sewer systems.</li> <li>Continued use of agricultural uses in open spaces of cluster development creates conflict.</li> <li>Transportation and air quality impacts are the same as conventional development.</li> <li>Poor design can result in greater visual impacts than conventional design.</li> <li>May require more site inspections.</li> </ul>
<p><b>Natural Features Conservation Standards or Conservation Zoning</b></p>	<ul style="list-style-type: none"> <li>Protection of floodplains, forests and vegetation.</li> <li>Preserve the Upper Delaware National Scenic and Recreational River Corridor.</li> <li>Protect groundwater and maintain groundwater recharge areas.</li> <li>Protect wellheads, riparian buffers, steep slopes and manage stormwater.</li> <li>Protect and maintain water supply and reduce erosion and sedimentation.</li> <li>Protection of environmentally sensitive areas.</li> </ul>	<ul style="list-style-type: none"> <li>Legal basis is founded in the MPC.</li> <li>Delineation of water resource features should be done by a professional hydro-geologist or engineer.</li> <li>Coordination with update of Natural Areas Inventory.</li> <li>Use of Map of Potential Conservation.</li> <li>Can be applied to all landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>Assessments can be costly.</li> </ul>
<p><b>Floodplain Ordinance</b></p>	<ul style="list-style-type: none"> <li>Protection of floodplain and water quality.</li> <li>Protection from flood damage.</li> <li>Creates riparian buffers to support wildlife habitats, greenways and access for recreation.</li> <li>Allowable and unallowable uses are defined in the ordinance.</li> </ul>	<ul style="list-style-type: none"> <li>Map and ordinance regulations.</li> <li>Implemented as part of Zoning Ordinance.</li> <li>Land Development Plans subject to requirements and floodways, floodplain, flood areas and/or riparian buffers must be shown on plans.</li> </ul>	<ul style="list-style-type: none"> <li>Cost associated with development of floodplain map and ordinance.</li> <li>Requires establishment of ordinance.</li> <li>Limitations on allowable uses may be too restrictive.</li> </ul>

**Table 2: Evaluation of Preservation/Conservation Tools & Techniques**

Key Tools/Techniques	Key Advantages	Implementation	Key Disadvantages
<p><b>Resource Management Plan</b></p>	<ul style="list-style-type: none"> <li>• Protection of natural environment.</li> <li>• Preservation of open space.</li> <li>• Ability to create greenways or connections.</li> <li>• Provides proper context for environmental regulations, pre-emptive statues and forest management techniques.</li> </ul>	<ul style="list-style-type: none"> <li>• DCNR Funding available to prepare plan.</li> <li>• Plan can build upon Comprehensive Plan and Open Space, Greenways, Park and Recreation Plan.</li> <li>• Utilizes map of Potential Conservation.</li> <li>• Applicable to all landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>• Cost associated with development of the plan.</li> <li>• Cost associated with implementation (management of resources) of the plan.</li> <li>• May result in development of additional local land use regulations and environmental regulations.</li> <li>• Forest succession may not be attractive to all residents.</li> </ul>
<p><b>Purchase of Development Rights (PDR)</b></p>	<ul style="list-style-type: none"> <li>• Municipal or state control of land through purchasing the rights of more intensive land use from current landowner.</li> <li>• Landowner derives financial benefit from selling rights.</li> <li>• Lower property value reduces taxes to owner.</li> <li>• Property owner permitted to continue lower intensity use of property.</li> </ul>	<ul style="list-style-type: none"> <li>• Financial resources or tax incentive program to support ability to purchase development rights (state, county and local municipalities).</li> <li>• Tracking mechanism.</li> <li>• Supports conservation and preservation of rural resource areas (natural and rural landscapes).</li> </ul>	<ul style="list-style-type: none"> <li>• Tracking properties and regulation of land use.</li> <li>• Loss of tax revenue.</li> </ul>
<p><b>Community Water &amp; Sewer Systems</b></p>	<ul style="list-style-type: none"> <li>• May provide alternative to conventional development patterns and can allow for preservation/conservation.</li> <li>• Fewer environmental impacts.</li> <li>• Fewer health impacts.</li> <li>• Potential reduction in infrastructure costs.</li> <li>• Enhances Cluster Development opportunities if designed properly.</li> </ul>	<ul style="list-style-type: none"> <li>• Legal Basis found in Act 537 Plans</li> <li>• Amendment of zoning ordinance and subdivision/land development ordinance (requiring tie in to existing or future services).</li> <li>• Applicable to village landscapes and planned residential developments in rural residential landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation may require municipal involvement in sewage facilities planning and management.</li> <li>• Motivating owners and operators of existing small water /sewer systems to participate may be difficult.</li> <li>• Motivating existing owners to tie-in may be difficult.</li> <li>• Cost associated with system installation and maintenance.</li> </ul>
<p><b>Use of Nitrate Levels to Restrict Development (Develop a Nitrates Map)</b></p>	<ul style="list-style-type: none"> <li>• Guides development supported by on-lot systems to appropriate areas.</li> <li>• Contributes to public health, safety and welfare.</li> <li>• Identifies areas for expansion of public water and sewer systems or restriction of development.</li> </ul>	<ul style="list-style-type: none"> <li>• Development of a Nitrates Map.</li> <li>• Identification of appropriate site analysis and testing.</li> <li>• Part of plan review and permitting.</li> <li>• Applicable to all landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>• Cost associated with development of a nitrates map.</li> <li>• Additional cost to developer/property owner.</li> </ul>

**Table 2: Evaluation of Preservation/Conservation Tools & Techniques**

Key Tools/Techniques	Key Advantages	Implementation	Key Disadvantages
<p><b>Map of Potential Conservation</b></p>	<ul style="list-style-type: none"> <li>Protects interconnected networks of open space including natural areas, greenways, trails and recreational lands.</li> <li>Identifies areas for permanent preservation and conservation.</li> <li>Identifies optimum areas for development.</li> <li>Results in context sensitive design.</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate into SALDO regulations.</li> <li>Requires a sketch plan phase.</li> <li>Requires developer and township collaboration early in the planning process to support development.</li> <li>Applicable to all landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>Requires developer and township collaboration early in the planning process to support development.</li> <li>Developer's perceive this level of site planning and design as more costly and extends development review process.</li> </ul>
<p><b>Official Map Development &amp; Adoption</b></p>	<ul style="list-style-type: none"> <li>Identifies municipal intentions for conservation, preservation, and acquisition of land for public use.</li> <li>Provides opportunity for municipal involvement in development negotiations.</li> <li>Can provide official street names and road ownership.</li> <li>Official Map is only triggered when property owner provides notice of development.</li> </ul>	<ul style="list-style-type: none"> <li>Legal basis found in MPC.</li> <li>Development of Official Map and Ordinance.</li> <li>Map is updated as development plans are approved.</li> <li>Applicable to all landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>Municipalities that do not readily respond to request for development can delay property owners from developing.</li> <li>Cost associated with development of Official Map and update of Map.</li> <li>Must be established by ordinance.</li> </ul>
<p><b>Transfer of Development Rights (TDR)</b></p>	<ul style="list-style-type: none"> <li>Cost of preservation absorbed by property owner who purchases rights.</li> <li>Allows local government to direct density and growth away from sensitive landscapes and rural resource areas.</li> </ul>	<ul style="list-style-type: none"> <li>Legal basis is found in MPC.</li> <li>Defined as part of Zoning Ordinance and Zoning Map.</li> <li>Adequate planning to ensure adequate public facilities to support development in receiving areas.</li> <li>Appropriate to preserve rural resource areas while guiding development to designated growth areas (rural residential and village landscapes).</li> </ul>	<ul style="list-style-type: none"> <li>Difficult to implement.</li> <li>Can be controversial.</li> <li>Often hard to identify areas where increased density is desirable.</li> <li>Must be established by ordinance.</li> </ul>
<p><b>Planned Residential Development</b></p>	<ul style="list-style-type: none"> <li>Development standards are specified prior to development approval and applicable to all phases of development through agreement.</li> <li>Allows for provision of adequate public facilities as part of development.</li> </ul>	<ul style="list-style-type: none"> <li>Legal basis is found in MPC.</li> <li>Adequate planning and implementation of public facilities is part of the development.</li> <li>Applicable to rural residential landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>All phases of development are defined by a legal instrument and must develop in that manner regardless of change in economic market and/or changes in desired land use patterns.</li> <li>Legal agreements and extensive Solicitor involvement.</li> </ul>

**Table 2: Evaluation of Preservation/Conservation Tools & Techniques**

Key Tools/Techniques	Key Advantages	Implementation	Key Disadvantages
<p><b>Traditional Neighborhood Development (TND)</b></p>	<ul style="list-style-type: none"> <li>• Development pattern emulates smaller, older communities.</li> <li>• Pedestrian oriented community.</li> <li>• Streets are laid out in a grid pattern.</li> <li>• More community open space is provided.</li> <li>• Variety of housing types with small or no front yards are provided.</li> <li>• Mixed use neighborhood.</li> <li>• Environment where residents can walk from home to jobs and commercial establishments.</li> <li>• Minimize environmental impacts due to less use of automobile and close proximity of uses.</li> <li>• Can be used in existing villages, boroughs and mixed use neighborhoods to preserve historic resources and architectural integrity.</li> </ul>	<ul style="list-style-type: none"> <li>• Legal basis found in MPC.</li> <li>• Standards are typical of villages or small urbanized areas.</li> <li>• Established through Zoning Ordinance and Zoning Map.</li> <li>• Applicable for village landscapes (existing and proposed villages).</li> </ul>	<ul style="list-style-type: none"> <li>• Perception of public in rural areas results in hesitation to apply technique to residential communities that may require some level of mix use due to remote locations or lack of access to goods and services within existing community.</li> <li>• Regulation of impacts and site design of non-residential uses must be addressed.</li> </ul>
<p><b>Historic Preservation Regulations</b></p>	<ul style="list-style-type: none"> <li>• Preservations standards can be established.</li> <li>• Preservation of historic resources to enhance eco-tourism opportunities.</li> <li>• Historic resources contribute to creating a “sense of place” for villages and areas throughout the region.</li> <li>• Potential increase in property values.</li> </ul>	<ul style="list-style-type: none"> <li>• Legal basis found in federal and state law.</li> <li>• Established through HARB, Historic Overlay District in Zoning and through National Register Districts.</li> <li>• Applicable for historic resources and village landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>• Rehabilitation, restoration and renovation standards can be costly.</li> <li>• Cost to Townships associated with developing standards and administering these standards.</li> </ul>

## Section 6.5 Community Design Elements

New development must incorporate design elements that create continuity, compatibility and consistency between existing man-made and natural environments for the purpose of establishing and maintaining a sustainable community. Sustainable communities apply principles of sustainable development such as:

- Balancing and integrating the social, economic and environmental components of the community;
- Meeting the needs of existing and future generations;
- Respecting the needs of other communities in the greater region to make their own communities sustainable.

Sustainable communities are places where people want to live and work, now and in the future. They are communities that meet the diverse needs of existing residents, protect the environment and contribute to a high quality of life. Sustainable communities are:

- Active, inclusive and safe – fair, tolerant and cohesive with strong local culture and other shared community activities;
- Well run – with effective and inclusive participation, representation and leadership;
- Environmentally sensitive – providing places for people to live that are considerate of the environment;
- Well designed and built – featuring quality built environment compatible with the natural environment.
- Well connected – with good transport services and communication linking people to jobs, schools, health and other services;
- Thriving – with a flourishing and diverse local economy;
- Well served – with public, private, community and voluntary services that are appropriate to people’s needs and accessible to all; and,
- Fair for everyone – including those in other communities, now and in the future.

Source: *Communities and neighborhoods.*

<http://www.communities.gov.uk/archived/general-content/communities/whatis/>

Community design elements outlined in this plan reinforce characteristics and principles of a sustainable community through strategies that address villages and hamlets, conservation by design, traditional neighborhood development standards, public open space, park and recreation standards, access management techniques, and preservation/conservation tools and techniques. Community design elements are a key component to building a sustainable community.



*Sustainable communities provide places for people to live that are considerate of the environment.*

### Section 6.5.1 Village Design Guidelines

Definitions of a village are provided to offer a description of those areas within the Townships with particular development patterns and characteristics which provide opportunities for future concentration of development.

A general definition of a village is provided to give context to a clustered, mixed use grouping of activities.

- A village is a clustered community, larger than a hamlet but smaller than a town, with a developed village center or core that was originally established due to a geographic feature, transportation route, human activity or service facility.

A legal definition of a village is provided in the MPC for areas described in the general terms as a village.

- A village is an unincorporated settlement that is part of a township where residential and mixed use densities of one unit to the acre or more exist or are permitted and commercial, industrial or institutional uses exist or are permitted. *Source: Pennsylvania Municipalities Planning Code.*

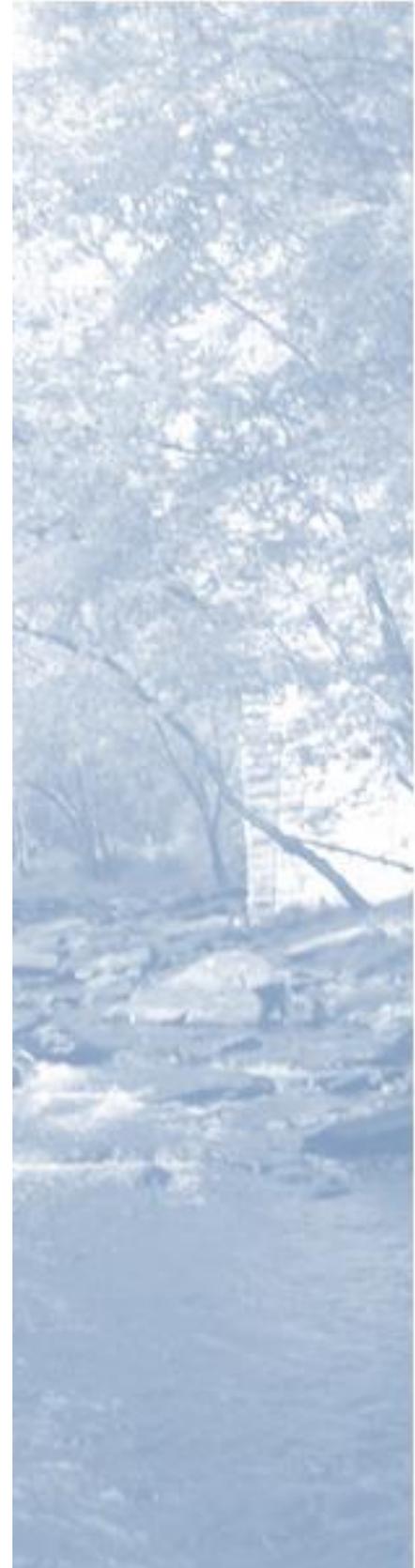
As a matter of definition, several villages were identified through the planning process. Those villages identified include: Lackawaxen, Shohola, Rowland and Greeley. Further enhancement of these villages should focus development of rural traditional neighborhoods.

Lackawaxen and Shohola Villages provide remaining examples of history and early community development within the region. General village design guidelines are provided for the continued enhancement, redevelopment, rehabilitation and preservation. The design standards are consistent with Traditional Neighborhood Design (TND) principles meant to create villages that provide a mix of uses, protect environmental resources and facilitate neighborhood and social functions. Design standards include defining village edges, using gateways to announce arrival, emphasizing pedestrian activity, allowing shallow setbacks and on-street parking, historic and architectural preservation, dense development patterns and amenities such as street trees, access to the waterfront, aesthetically pleasing signage and common driveways or alleyways. An explanation for each design element is provided in this section.

- **Edges:** Define the village edges or fringes to create the transition and buffer area that delineates the edge of the village from the surrounding forested areas and natural resources. Protecting open space surrounding a rural village is an important element of preserving the village character and setting. Logical expansion of the village should be permitted.



- **Gateways:** Gateways should be established at entranceways to village. Gateways can include signage, structures, plantings or combination of all. Gateways are used to identify a village, create a sense of place and announce to visitors that they have arrived.
- **Pedestrian Ways:** These facilities serve to link various elements, attractions and natural amenities within villages. Pedestrian ways can include, but are not limited to: paths, sidewalk, walkways and boardwalks.
- **Setbacks:** Narrow and deep lots and shallow front yards setbacks are typical of villages. Shallow setbacks help to create a visually contained space where buildings are separated across a street to promote a human scale relationship between pedestrians and outdoor space. In areas where setbacks are established, infill development should align with existing buildings to reinforce village development patterns.
- **On-Street Parking:** In appropriate locations, on-street parking provides a separator between moving traffic and pedestrian ways.
- **Trees:** Trees provide a buffer between pedestrian ways and the street, a unified visual effect along a street and protection of pedestrians from various elements such sun glare and reflective heat from paved surfaces.
- **Access to Waterfront:** Establish designated areas for public access and/or reinforce existing public access to the water.
- **Historic Preservation:** The historic character of a property is important to preserving village and regional heritage. Deteriorated historic features should be repaired rather than replaced.
- **Density:** Historically, lot sizes in the village are smaller in comparison to those typically required for rural subdivision. Minimum lot sizes should be determined by the requirements for on-lot water and sewer systems, shared systems and community systems.
- **Signage:** Sign standards addressing appropriate size and design should reflect the unique characteristics of the village.
- **Architectural Design:** New construction and additions should consider proportion and scale, massing, directional expression, materials and colors consistent with historic development of the village.
- **Proportion and Scale:** Scale includes the height, width and mass of the buildings. Additions should be in proportion to and maintain the level of proportion and scale as the existing building and the neighboring structures.



- **Massing:** Massing refers to the volume created by the combined sections of a building. Various architectural styles have different massing such as boxlike structures versus varied massing. Respect for the predominant styles of the village should be demonstrated in new construction and additions.
- **Common Private Drives:** As development occurs in the village consideration should be given to common private drives to the rear of buildings where appropriate to support traditional neighborhood design. On-site parking should be oriented to the rear of the property accessible from common private drives.
- **Traffic Calming:** Traffic calming measures should be established in villages for safety purposes.

### Section 6.5.2 Village Enhancement Concepts

A village concept for Lackawaxen and Shohola Villages were developed based upon community input and through work sessions with the CAC. The village concept emphasize enhancement using the previously outlined village development design guidelines with opportunities for additional development identified by opportunity scenarios. Exhibits for each village depict graphically those opportunities conceptually to provide ideas for future enhancement of the villages.

#### Lackawaxen Village Enhancement Concept

There are opportunities to enhance Lackawaxen Village with infill development and redevelopment opportunities with support infrastructure such as community water and sanitary sewer systems. Additional enhancements include gateways, park improvements, a commuter rail station and boardwalk along the Delaware River. Refer to Section 7.3 for details outlined on the Lackawaxen Village Enhancement Concept.

#### Shohola Village Enhancement Concept

There are opportunities to enhance Shohola Village with infill development and redevelopment opportunities with support infrastructure such as community water and sanitary sewer systems. Additional enhancements include gateways, riverfront open space and recreation areas, streetscape improvements and potential expansion opportunities. Refer to Section 7.3 for details outlined on the Shohola Village Enhancement Concept.

### Section 6.5.3 Hamlet Enhancement Guidelines

Historically, development patterns have resulted in establishment of hamlets across the rural landscape within the region. Hamlets possess unique characteristics as well as provide opportunities for future concentration of development to establish additional village centers.

A **hamlet** is a community smaller than a village usually developed around a crossroads and originally established due to a geographic feature, transportation route, human activity or service facility.



The following guidelines for enhancement of hamlets provide a framework for identification, expansion and safety. The following guidelines are consistent with village design standards and are intended to be applied to areas for potential concentration of growth with possibilities of future establishment of a village.

- **Gateways:** Gateways should be established with signage identify hamlets by name at entranceways.
- **Expansion:** Hamlets should expand along major transportation routes in logical locations to support surrounding population. As expansion occurs the hamlet should be enhanced with an emphasis on applicable village design guidelines for various features.
- **Traffic Calming:** Traffic calming measures should be established in hamlets for safety purposes.

#### Section 6.5.4 Traditional Neighborhood Development (TND)

A Traditional Neighborhood Development (TND) is designed to result in a compact, mixed-use, pedestrian-oriented community. TNDs are typically limited in size and oriented toward pedestrian activity. The majority of the population is within a 5-minute walking distance (approximately ¼ mile) of the neighborhood center. If destinations are located more than 1,500 feet apart, people will drive. *Source: Lewisburg, Pennsylvania*

Article VII-A of the MPC outlines characteristics of TNDs and provisions for TND regulations. The MPC has included this form of development pattern as a tool to encourage innovation in residential and nonresidential development and renewal consisting of a mixed-use form of development that will result in better housing, recreation and access to community goods and services and employment opportunities. Section 706-A contains a variety of standards and conditions for this type of development that is typically applied to new development, an outgrowth or extension of existing development, infill development or any combination of these types of development. When establishing standards, conditions and plans for this type of development many planners, designers and developers make the mistake of applying typical standards for infrastructure improvements with respect to roadway and streetscape design.

*Source: Pennsylvania Municipalities Planning Code Article VII-A, Section 706-A.*

#### Hamlets

Hamlets within the region include:

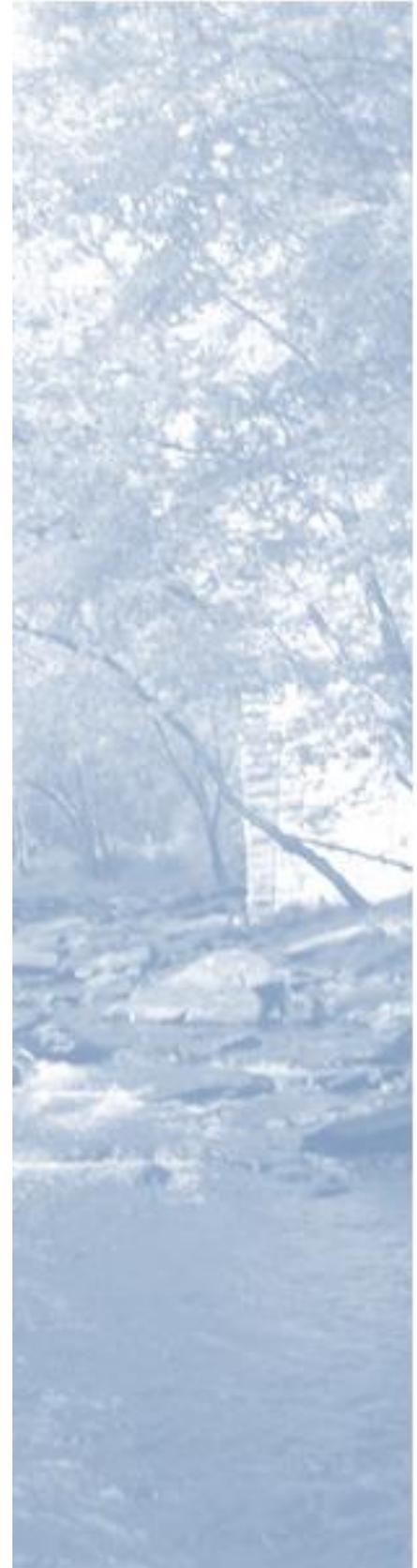
##### Lackawaxen Hamlets

- Greeley
- Rowland
- Westcolang
- Bayoba
- Bohemia
- Masthope
- Kimbles

##### Shohola Hamlets

- Parkers Glen
- Pond Eddy

The table on the following page outlines standard streetscape design requirements compared to the suggested TND or New Urbanism design requirements. The TND or New Urbanism design requirements should be considered for existing urban landscapes and developing urban landscapes and densely developed suburban landscapes or areas that are desired to be walkable communities.



**Table 3: Comparison of Standard Street Design Requirements with TND/New Urbanism Street Design Requirements**

Street Design Element	Standard Design Requirement	TND or New Urbanism Design Requirement
Basic layout	Dendritic	Interconnected grid
Alleys	Often Discouraged	Encouraged
Design speed	Typically 25-30 mph	Typically 25 mph or lower if traffic laws permit
Street width	Generally wider	Generally narrower, 16 foot travelway for on street parking, additional width may be required for bike lanes or wider lanes for share the road
Curb radii	Selected to ensure in-lane turning	Selected for pedestrian crossing times and vehicle types
Intersection geometry	Designed for efficiency, safety, vehicular speed	Designed to discourage through traffic, for safety
Tree, landscaping	Strictly controlled	Encouraged, Trees should not violate clear sight triangles
Street lights	Fewer, tall, efficient luminaries	More, shorter, closely spaced lamps
Sidewalks	4-ft minimum width, outside right of way or to indulate	5-ft minimum, within ROW and parallel to street
Building setbacks	15 ft or more	No minimum
Parking	Off-street preferred	On-street encouraged
Trip generation	Developed from a sum of the users	Developed from a reduced need for vehicular trips

Source: *Engineering News Record*, May 9, 1994.

### Section 6.6 Public Open Space, Park & Recreation Standards

Well-configured public spaces such as squares, plazas, greens, landscaped streets, greenways, and parks are woven into the pattern of neighborhoods and contribute to the social activity, recreation and visual enjoyment of residents. Neighborhood design should create a hierarchy of useful open spaces including a formal square in the center of the neighborhood, parks and playgrounds located throughout the neighborhoods and street environments designed to promote walking and casual meetings between residents.

Article V of the MPC allows for a municipal subdivision and land development ordinance to include provisions requiring the public dedication of land suitable for use and improvement as recreation facilities or payment of fees in lieu thereof. The MPC does not include standards or guidance for how much land should be dedicated based upon amount, type or density of development. The MPC does require that municipalities prepare and adopt a recreation



plan as a prerequisite to requiring the dedication of recreation land or the payment of a fee in lieu thereof. Those standards are typically contained in the subdivision and land development ordinance. The National Park and Recreation Association provides standards for various park facilities as described in Table 4: Park Facility Standards.

**Table 4: Park Facility Standards**

Park Facilities		
Facility Type	Standards	
	Recommended Size	Formula Acres/Persons
Regional Park	250 Acres	5 Acres/1,000
Community Park	20 Acres	3 Acres/1,000
Neighborhood Park	5 Acres	5 Acres/1,000

Source: National Park and Recreation Association

### Section 6.7 Access Management Techniques

Access management is a means of controlling the ways in which vehicles can access major roadways, using techniques such as limiting the number of driveways and intersections along local roadways. The balancing of local accessibility and the need for overall mobility is sometimes difficult. The National Highway Institute indicates that “an effective access management program can reduce collisions as much as 50 percent, increase roadway capacity by 23 to 45 percent, and reduce travel time and delay as much as 40 to 60 percent.” Properly managed access is vital to the safety and efficiency of the Township’s road network.

Access management focuses on balancing mobility and accessibility. Mobility is the movement of traffic while accessibility is the ability of traffic to enter and exit a roadway from adjacent properties. Without applying access management techniques, studies show that corridors experience: diminished roadway capacity, resulting in greater congestion; an increase in the number of collisions with other vehicles, as well as pedestrians and cyclists; reduced community character; an unfriendly environment for those who walk or bicycle; commercial strip development; overburdened arterials resulting in more cut-through traffic in residential areas; homes and businesses adversely affected by a continuous cycle of widening roads; and, increased commute times, fuel consumption and vehicular emissions. The following is a summary table of benefits prepared by PennDOT.



**Table 5: Benefits of Access Management**

Stakeholders	Benefits of Access Management
Community/ Neighborhoods	<ul style="list-style-type: none"> <li>▪ Safer transportation system</li> <li>▪ More attractive roadway corridors</li> <li>▪ Lower taxes for future roadway investment</li> <li>▪ Preservation of property values</li> <li>▪ Safer pedestrian and bicycle travel</li> <li>▪ Improved appearance of the built environment</li> <li>▪ Reduced fuel consumption and air emissions</li> </ul>
Business Community	<ul style="list-style-type: none"> <li>▪ More efficient roadway system captures a broader market area</li> <li>▪ Stable property values</li> <li>▪ More consistent development environment</li> <li>▪ Reduced transportation and delivery costs</li> </ul>
Pedestrians	<ul style="list-style-type: none"> <li>▪ Safer walking routes due to fewer conflicts with traffic</li> <li>▪ Refuge areas created by medians</li> </ul>
Bicyclists	<ul style="list-style-type: none"> <li>▪ Fewer conflicts with traffic</li> <li>▪ More predictable traffic patterns</li> <li>▪ Greater choice of alternative travel routes</li> </ul>
Motorists	<ul style="list-style-type: none"> <li>▪ Fewer traffic conflicts which increases driver safety</li> <li>▪ Fewer traffic delays</li> </ul>
Governmental Agencies	<ul style="list-style-type: none"> <li>▪ Lower cost of providing a safe and efficient roadway</li> <li>▪ Improved internal and intergovernmental coordination</li> <li>▪ More success in accomplishing transportation goals</li> <li>▪ Lowered accident and accident response costs</li> </ul>

Access management ordinances are designed to provide vehicular access to land development in a manner that preserves the safety and efficiency of the transportation system.

*Source: PennDOT, Access Management, Model Ordinances for Pennsylvania Municipalities Handbook.*

### **Section 6.8 Low Impact Development (LID) Standards**

Low Impact Development (LID) is an innovative stormwater management approach with a basic principle that is modeled after nature with an emphasis on managing rainfall at the source using small, cost effective landscape features located at the lot level. Landscaping features are known as Integrated Management Practices (IMPs). This includes not only open space, but also rooftops, streetscapes, parking lots and sidewalks. LID is a versatile approach that can be applied to all types of development. LID has numerous benefits and advantages over conventional stormwater management approaches such as:



- Environmentally sound technology and more economically sustainable approach to addressing the adverse impacts of development.
- Intelligent site design can manage runoff close to the sources resulting in enhancement of the environment, protection of public health, and improvement of community liability with cost savings to the developer.

The need for this approach to development enables a wide array of complex and challenging ecosystem and human health protection goals to be addressed as outlined in this section of the plan. Site design practices include preserving natural drainage features, minimizing impervious surface area, reducing the hydraulic connectivity of impervious surfaces, and protecting natural depression storage.

### Section 6.9 Gas Well Drilling and Development Standards

Gas well drilling in Pennsylvania is based upon the presence of Marcellus shale. Marcellus Shale, also referred to as Marcellus Formation, is a Middle-Devonian-age black, low density, carbonaceous (organic rich) shale that occurs predominantly in the subsurface beneath much of Ohio, West Virginia, Pennsylvania and New York. The Pennsylvania Department of Environmental Protection (PADEP) indicates that drilling permits are up strongly since 2005 and much of this activity is associated with wells targeting Marcellus shale. The map exhibit in this section indicates areas where Marcellus shale is present across the Northeast Region of the United States.



#### Section 6.9.1 Economic Significance of Marcellus Shale Gas Fields

The presence of an enormous volume of potentially recoverable gas in the eastern United States has a great economic significance. And, the proximity of location of gas fields in conjunction with large concentrations of population in the New Jersey, New York and New England region give Marcellus gas a distinct transportation advantage in the marketplace. In 2008, geoscientists have estimated that the Marcellus in Pennsylvania might contain more than 500 trillion cubic feet of natural gas with approximately 10% of this gas (approximately 50 trillion cubic feet) able to be recovered. This amount of natural gas is estimated to be enough to supply the entire United States for two years and have a wellhead value of about one trillion dollars.

Land owners within the region may be approached with offers to lease their land for the purposes of gas well drilling. In late 2007, signing bonuses were reported to be a few hundred dollars per acre. As the technology to extract

the gas has developed, signing bonuses rose in 2008 to over \$2,000 per acre for the most desirable properties in areas across the state where Marcellus shale is present.

Source: <http://geology.com/articles/marcellus-shale.shtml>

### Section 6.9.2 Impacts of Gas Drilling Operations

The following are several environmental and community impacts of gas drilling operations with respect to extract of natural gas from Marcellus shale deposits:

- Deep drilling is required to obtain natural gas in Marcellus shale formations sometimes as drilling is as deep as 9,000 feet below the ground.
- Use of large volumes of water at high pressures to force fracturing to access gas deposits followed by the use of sand to keep fractures open after the injection stops.
- Significant amounts of waste water are created due to drilling process resulting in waste water that requires off-site treatment due to the content of brine, hydrocarbons, metals and possibility of radioactive content.
- Other impacts include:
  - roadway deterioration due to heavy hauling, noise associated with non-stop operations associated with drilling;
  - runoff of contaminated waste water;
  - impacts on wetlands, streams and other environmentally sensitive areas;
  - impacts on private wells and public water supplies;
  - impact of transportation of hazardous materials via truck and rail through communities; and
  - proper disposal of hazardous materials.



Example of Gas Drilling Operation

### Section 6.9.3 Local Regulation of Gas Drilling Operations

The Commonwealth Court of Pennsylvania has issued two decisions that reject local municipal regulation of oil and gas extraction; *Huntley & Huntley, inc. v. Borough Council of Oakmont* and *Great Lakes Energy Partners v. Salem Township*. The decision of the Pennsylvania Supreme Court has been appealed by both municipalities; yet, ***there is judicial trend to suggest that local regulations that go beyond items of local concern and attempt to regulate gas drilling operations will be susceptible to invalidation.***

Municipalities across the state are focusing on the regulation of issues of local concern with respect to the following concepts in conjunction with mineral extraction, timbering/forestry operations and similar activities that impact municipal infrastructure, access, the environment and public health, safety and welfare:

- Standards for private access roads.
- Tire cleaning prior to accessing public right-of-ways.
- Stormwater Management Plan and standards.

- Removal of access roads and restoration of the surface to its natural preconstruction condition within 60 days of cease of operations.
- Bonding for removal of access roads and restoration activities.
- Locking gates where an access road crosses or intersects with a public roadway.
- Noise standards for operation.
- Construction of transmission lines/pipes in a straight line from well site to the closest point near a public right-of-way.
- Within 90 days of abandonment of transmission lines or drilling operations, owner/operator must remove all above-ground appurtenances to line depth and provide notice to the municipality of such abandonment.
- Placement of water treatment facility or waste water treatment facility must be as close to the public right-of-way as possible.
- Water/Wastewater Treatment facilities must meet PADEP requirements.
- Bonding requirement for removal of the water/wastewater treatment facility and restoration of the surface.
- Well heads must be constructed in accordance with requirements by the Oil and Gas Act.
- Well recovery rate (flow) and quality testing for affected water wells or developed springs on the property with DEP submission requirement in accordance with state and federal regulations.

Please note that the above items have been offered based upon research and are subject to further research and review by legal staff of the Townships prior to utilizing these concepts in greater definition and detail as part of a local ordinance.



## SECTION 7.0 FUTURE LAND USE PLAN

Article III of the MPC requires a plan for land use, which may include provisions for the amount, intensity, character and timing of land use proposed for all classifications of land use. The Future Land Use Plan designates the proposed distribution and general location for residential, commercial, industrial, open space/recreation, community facilities and other categories of public and private uses of land. The Future Land Use Plan (Map 5) illustrates the land use policy and future strategy for regional growth management. The Future Land Use map is based on the Build-Out Analysis Report in Appendix 2 for a potential future (Low-Density Build-Out with some modifications).

### Section 7.1 Future Land Use Distribution

A Future Land Use Plan was developed based upon community input, guidance from the CAC, identification of growth areas and results of Build-Out Analysis with respect to Fiscal Analysis. For comparison purposes, the following tables identify the distribution of existing and future land use patterns for the Lackawaxen/Shohola Region.

**Table 6: Existing General Land Use - 2007**

General Land Use	Lackawaxen/ Shohola Region		Lackawaxen Township		Shohola Township	
	Acres	% Total	Acres	% Total	Acres	% Total
Agriculture/Woodland	24,602	30.3%	13,264	25.6%	11,338	38.8%
Commercial	1,058	1.3%	547	1.0%	511	1.8%
High Density Residential	714	0.9%	104	0.2%	610	2.1%
Medium Density Residential	3,661	4.5%	3,467	6.6%	194	0.7%
Low Density Residential	5,686	6.9%	4,351	8.3%	1,335	4.6%
Rural Residential	11,066	13.6%	8,052	15.4%	3,014	10.3%
Private Open Space (Hunt Clubs, Private Recreation)	14,800	18.2%	11,848	22.7%	2,952	10.1%
Industrial	155	0.2%	155	0.3%		
Public Lands/Open Space/Municipal Parks	16,303	20.1%	8,131	15.6%	8,171	28.0%
Utilities	31		29		2	
Roads	2,111	2.6%	1,418	2.7%	693	2.4%
Water	1,154	1.4%	814	1.6%	340	1.2%
<b>Total</b>	<b>81,340</b>	<b>100%</b>	<b>52,180</b>	<b>100.0%</b>	<b>29,160</b>	<b>100%</b>
<b>Conserved and Preserved Lands</b>	<b>18,601</b>	<b>22.9%</b>	<b>8,183</b>	<b>15.7%</b>	<b>10,418</b>	<b>35.7%</b>

Source: Pike County Tax Assessment Office – Refer to Appendix 1: Existing Conditions Report, Section 3.2 Land Use and Section 3.4.1 Preservation/Conservation Initiatives

Currently, the predominant land use in the region is agriculture / woodlands (30.3%), public land / open space / municipal parks (20.0%), and private open space (hunt clubs, private recreation) (18.2%). Residential land uses of all types comprise approximately 21,127 acres or 26 percent (26%) of the land area.



Commercial Space

**A delicate balance of land use is required to create a desired level of local and regional sustainability.**

#### Land Use Goal

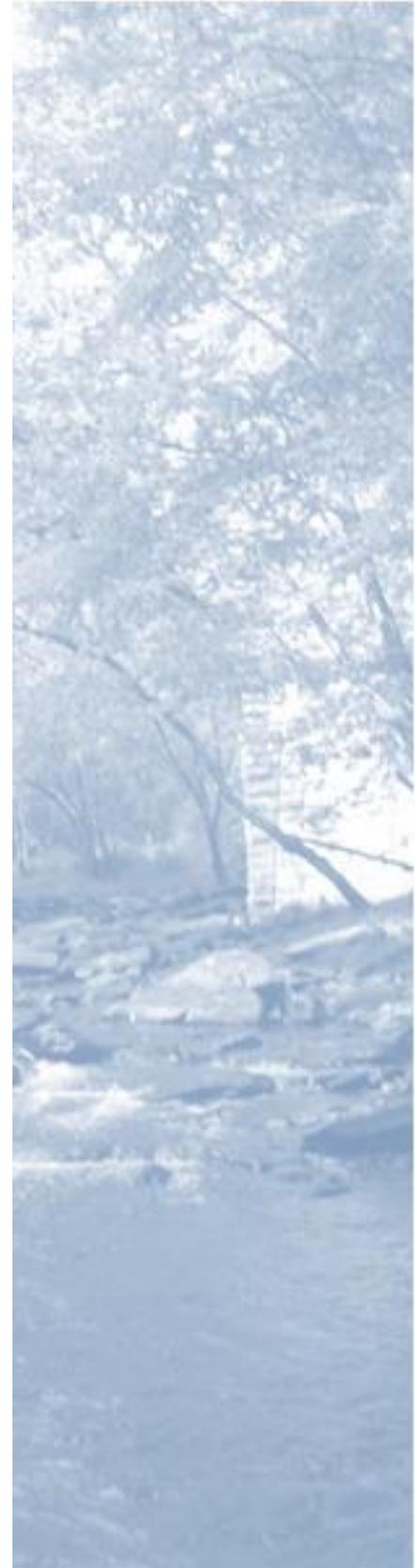
Create a land use plan that includes provisions for amount, intensity, character and timing of land use proposed for use categories such as residential, commercial, industrial, agricultural, transportation facilities, utilities, community facilities, public grounds, parks and recreation, environmentally sensitive areas and other areas of special interest.

#### Land Use Objectives

- ❶ Designated growth areas and potential future growth areas.
- ❷ Growth management strategy.
- ❸ Strategies for preservation and conservation.
- ❹ Minimize impacts from developments of regional significance.
- ❺ Standards for low-impact development or conservation-based development.
- ❻ Enhanced village centers.

A Build-Out Analysis method coupled with results of public input and CAC guidance to identify a preferred future land use pattern distributed across various land use classifications as described in Table 7. In order to determine the desired future land use, lands available for development were identified based upon conservation/preservation of environmentally sensitive areas or “constrained land” and accounting of existing development patterns. Lands available for development include approximately 24,004.5 acres within Lackawaxen Township and 9,548.7 acres in Shohola Township for a total of 33,553.2 acres within the region.

In 2030, the preferred predominant land use remains residential at 21,329 acres (*an increase from 25.9% of total lands to 26.2%*) with the preservation of an additional 5,130 acres of environmentally sensitive lands or primary and secondary conservation areas as described in Chapter 6.0 Conservation/Preservation Plan (*an increase from 22.9% of total lands to 29.18%*). The public and private preservation/conservation of lands including private open space, public lands/open space/parks and constrained land is projected to be approximately 58% (47,311 acres); a 65.7% increase in preservation/conservation of land.



**Table 7: Potential Future Land Use for Lackawaxen/Shohola Region**

Potential Future Land Use (Study Area)	Land Use 2007		2030 Land Use Based upon Build-Out Analysis under Low Density Scenario	
	Acres	Percent of Total	Acres	Percent of Total
Agriculture / Woodland	24,602	30.2%	7,631	9.4%
Commercial	1,058	1.3%	1,638	2.0%
<b>Very Low Density Residential With Rural Commercial</b>			4,152	5.1%
High Density Residential	714	0.9%	443	0.5%
Medium Density Residential	3,661	4.5%	2,768	3.4%
Low Density Residential	5,686	6.9%	3,271	4.0%
Rural Residential	11,066	13.6%	10,695	13.2%
Private Open Space (Hunt Clubs, Private Recreation)	14,800	18.2%	7,277	9.0%
Industrial	155	0.2%	136	0.2%
Public Lands / Open Space / Municipal Park	16,303	20.1%	16,303	20.0%
Utilities	30	~	30	~
Roads	2,111	2.6%	2,111	2.6%
Water	1,154	1.4%	1,154	1.4%
<b>“Constrained” Land*</b>			<b>23,731</b>	<b>29.2%</b>
<b>Total</b>	<b>81,340</b>	<b>100.0%</b>	<b>81,340</b>	<b>100.0%</b>
<i>Square Miles</i>	<i>127.1</i>		<i>127.1</i>	

*\*Note: Constrained Lands for purpose of build-out analysis have been identified above as a separate land use.*

*Source: Based on Lands Available for Development as built-out under current Zoning and Build-Out Analysis Process.*

## Section 7.2 Land Use Classifications

This section outlines the definitions employed for land use by classifications. The various land use classifications include categories of human activities on the land and active and passive management of land along with all water areas to account for the entire surface defined by the townships' boundaries. The following provides an explanation of each classification with categories of uses depicted on Map 5: Future Land Use Plan.



**Land Use Classification**

**Description**

**Agriculture / Woodland**

Areas not in public lands that are used for pasture, forestry, tillage, or crop production; and forest, shrub, and scrub areas.

**Commercial**

Includes retail and service establishments, hotels, motels, restaurants and taverns, professional offices, medical and health care facilities, and commercial based recreational facilities and recreational vehicle parks where lots are owned by individual RV unit owners. Not included are trades operated out of residential facilities or home occupations.

**Residential**

Residential uses include single family and multi-family attached or detached units, and mobile home parks. For general land use purposes residential uses were further refined according to Pike County Tax Assessment Office parcel land use codes and parcel size (acres).

**High Density Residential** – Clusters of residential parcels less than 0.5 acres.

**Medium Density Residential** – Clusters of residential parcels between 0.5 and 1.5 acres.

**Low Density Residential** – Clusters of residential parcels between 1.5 and 5.0 acres.

**Rural Residential** – Residential parcels greater than 5.0 acres and non-cluster rural residential parcels.

**Very Low Density Residential With Rural Commercial / Agriculture**

Rural residential parcels with rural commercial uses which may include green houses, tree farms, and other agricultural related commercial uses, and small scale commercial and industrial uses.

**Private Open Space (Hunt Clubs, Private Recreation)**

Lands classified as hunt clubs, private recreation, ski resorts, and golf courses.



*Industrial Use*

**Land Use Classification**

**Description**

**Industrial**

Includes industrial and manufacturing operations and quarries.

**Public Lands/Open Space/  
Municipal Parks**

Includes State Game Lands, State Parks, municipal parks, fire houses, municipal buildings, and schools.

**Utilities**

Includes telephone, telecommunications, water companies, and power companies as well as sewerage treatment facilities.

**Roads and Water**

Lands classified as road or water in Pike County Tax Assessment Office parcel land use codes.

Achieving the Future Land Use Plan may be accomplished using growth management concepts and strategies and preservation/conservation tools and techniques as described previously. One of the methods recognized by the Townships as a viable tool for management of future development is the establishment of Growth Areas.

**Section 7.3 Growth Areas**

The MPC provides two distinctions with respect to growth areas: designated growth areas and future growth areas. The following are definitions for each.

- **Designated growth area** is a region within the county that preferably includes and surrounds a city, borough or village, and within which residential and mixed use development is permitted or planned for at densities of one unit to the acre or more and commercial, industrial and institutional uses are permitted or planned for and public infrastructure services are provided or planned.

*Source: Pennsylvania Municipalities Planning Code*

- **Future growth area** is an area outside of and adjacent to a designated growth area where residential, commercial, industrial and institutional uses and development are permitted or planned at varying densities and public infrastructure services may or may not be provided, but future development at greater densities is planned to accompany the orderly extension and provision of public infrastructure services.

*Source: Pennsylvania Municipalities Planning Code*

Section 1103 of the MPC requires multi-municipal comprehensive plans such as this plan to identify designated growth areas and potential future growth areas. This same section requires multi-municipal comprehensive plans such as this plan to identify Growth Areas to include designation of rural resource areas as well as a plan for the conservation and enhancement of the natural, scenic, historic and aesthetic resources within the area of the plan. The



Rural Resource Area along with other components of this plan meets this state objective.

Section 7.2 provides data from the Build-out Analysis contained in Appendix 2 regarding growth areas as illustrated on Map 3: Conceptual Growth Areas. This map provides the basis for Table 8: Acreages Identified for Future Development or Preservation / Conservation. Growth areas do include some conservation easement areas within their boundaries. Inclusion of conservation easements within a growth area does not preclude conservation of the land or negate the conservation easement, rather it infers that the conservation easement may play an important role in balancing land uses within the growth area to not only provide development opportunities but to encourage open space and recreation opportunities in proximity to growth, where open space is achieved via the conservation easement. A conservation easement within the growth area may, in the future, be considered for passive parks, recreation, or open space.

### Section 7.3.1 Rural Resource Areas

Rural resource areas are often used to protect natural areas and environmentally sensitive areas by regulating the type and density of uses. The identification of Rural Resource Areas is part of the Conservation/Preservation Plan and Future Land Use Plan elements of this document. Identification of Rural Resource Areas as an integral part of this plan provides a number of growth management benefits such as:

- Protection of the natural environment.
- Preservation of open space (public and private).
- Protection of groundwater and recharge areas.
- Protection of environmentally sensitive areas such as wetlands, steep slopes and other similar areas.
- Protection of wildlife habitats.
- Protection of permanently preserved/conserved lands from adjacent development.
- Protection of state game lands, forests and parks.
- Protection of agricultural lands.
- Allowance for timbering, mining, quarrying and other extractive industries.
- Opportunities for recreation and tourism.

The MPC provides a definition of rural resource areas as well as requires identification of such areas as part of this multi-municipal comprehensive plan.

**Rural resource area** is an area within which rural resource uses including, but not limited to, agriculture, timbering, mining, quarrying and other extractive industries, forest and game lands and recreation and tourism are encouraged and enhanced, development that is compatible with or supportive of such uses is permitted and public infrastructure services are not provided except in villages.

Source: *Pennsylvania Municipalities Planning Code*



Delaware River  
Waterfront

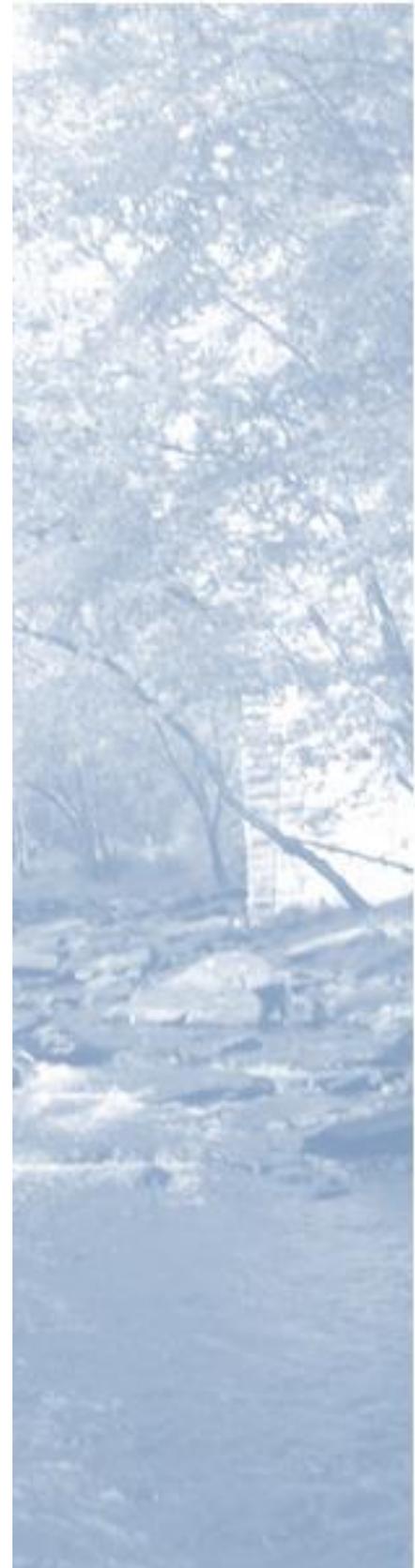
Section 1103 of the MPC requires multi-municipal comprehensive plans such as this plan to identify designated rural resource areas as well as a plan for the conservation and enhancement of the natural, scenic, historic and aesthetic resources within the area of the plan. The Rural Resource Area along with other components of this plan meets this state objective.

Map 6: Conceptual Growth Areas identifies Rural Resource Areas in both Lackawaxen and Shohola Townships. These areas have been identified considering a number of factors such as the desire to preserve and conserve natural beauty of the region, promote rural economic opportunities and minimize potential environmental and fiscal impacts identified if desired build-out under the Future Land Use Plan were to be achieved. The Future Land Use Plan takes into account the characteristics of these areas and identifies uses and densities compatible with the environment, types of water and sewer systems to support existing and future development of these areas

These areas referred to as Rural Resource Areas should be conserved and preserved for use and enjoyment by future generations understanding both environmental and economic benefits to the region and future development should be limited to those types of uses identified in the MPC definition of these areas.

#### **Section 7.4 Potential Village Enhancement Scenarios**

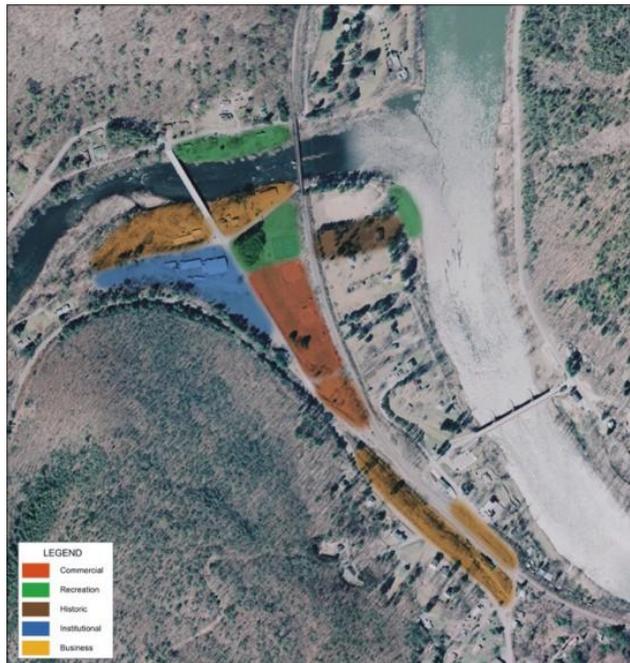
The community visioning process included participation by the Citizen Advisory Committee and general public in a “Place Making” Activity for the villages to identify assets and opportunities and then to generally map out potential land use patterns for Lackawaxen Village and Shohola Village. The diagrams depicted on the following pages generally show the various land use patterns identified through the visioning activity. There were two possible land use patterns identified by the participants as opportunities for the Lackawaxen Village. There was considerable discussion about redevelopment of the park as park space mixed with commercial development and possibly the location of the Township’s municipal building in the village (*refer to Opportunity Scenario #1 and Opportunity Scenario #2*). Participants identified one opportunity concept for land use patterns for Shohola Village (*refer to Opportunity Scenario #1*). These concepts were further developed to depict the results of identification of assets, opportunities, village design standards and suggested land use patterns for future enhancement of the villages (*refer to the Lackawaxen Village Concept and Shohola Village Concept on the following pages*).



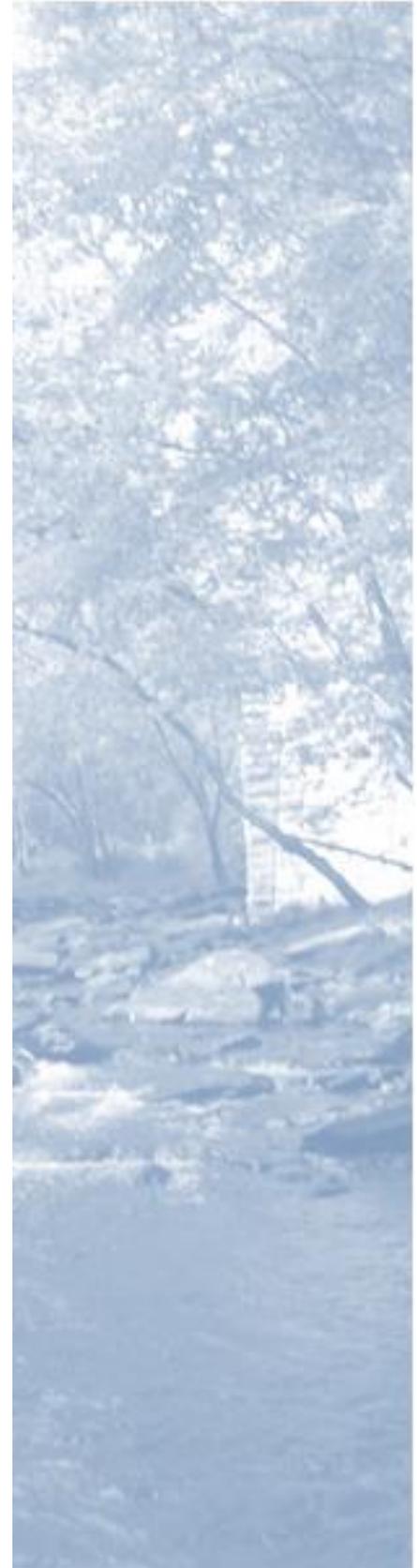
*Lackawaxen Village Concepts*



**OPPORTUNITY SCENARIO #1**



**OPPORTUNITY SCENARIO #2**



*Shohola Village Concept*



**OPPORTUNITY SCENARIO**

**Section 7.5 Village Enhancement Concepts**

The potential concepts identified through the public involvement process depicted in the previous section provided the basis for further development of village enhancement concepts for each Lackawaxen and Shohola Villages depicted on the following pull-out exhibits. Village enhancement concepts consider land use, village development design guidelines and potential pedestrian connections. These concepts should be used as a guide when considering village improvements and development and/or redevelopment opportunities.

**Section 7.6 Fiscal Impacts of Future Development**

The following fiscal impacts are those as developed for the Build-Out Analysis Report. Table 9: Potential Net Impacts- Revenue provides the estimated net fiscal impacts of the build-out analysis plus existing conditions. The table was developed by adding existing housing units and current valuation data to build-out results to generate the projected net revenue. Refer to the Build-Out Analysis Report for additional information.



**Table 8: Acreages Identified for Future Development or Preservation / Conservation**

Future Development & Preservation / Conservation		Lackawaxen Township	Shohola Township	TOTAL
		Acres	Acres	Acres
<b>Growth Areas</b>	Designated Growth Area (DGA)	17,099.1	4,211.5	21,310.6
	Potential (Future) Growth Area (FGA)	3,757.0	2,426.9	6,183.9
	<b>Subtotal Acres</b>	<b>20,856.1</b>	<b>6,638.4</b>	<b>27,494.5</b>
<b>Preservation / Conservation Lands</b>	State Forest	2,759.0	1,164.0	3,923.0
	State Game Lands	5,072.0	7,643.0	12,715.0
	Natural Areas Inventory Areas Not included In Growth Areas or State Forest or State Game Lands*	2,028.4	349.0	2,377.4
	<b>Conservation Easements Not included in Growth Areas</b>	<b>228.1</b>	<b>1,236.6</b>	<b>1,464.7</b>
	<i>Note: Conservation Easement within Growth Areas</i>	<i>124.4</i>	<i>374.7</i>	<i>499.1</i>
	<i>Note: Total Conservation Easements (Within &amp; Outside of Growth Areas)</i>	<i>352.5</i>	<i>1,611.3</i>	<i>1,963.8</i>
	<b>Subtotal Acres</b>	<b>10,087.5</b>	<b>10,392.6</b>	<b>20,480.1</b>
<b>Rural Resource Areas</b>	All Other Areas within Municipalities Not Otherwise Classified	21,236.8	12,128.6	33,365
<b>TOTAL</b>		<b>52,180.4</b>	<b>29,159.6</b>	<b>81,340.0</b>

\* Some Natural Areas Inventory Areas overlapped with State Parks, and or State Game Lands; for these instances the overlapping area was included in state Park or State game Land data.

Source: Existing Conditions Report, Appendix 1.

Tables 9: Potential Net Impacts – Revenue

Variable	Low Density Residential Build-Out			Potential or Maximum Build-Out		
	Lackawaxen Township	Shohola Township	Total	Lackawaxen Township	Shohola Township	Total
<b>Total Housing Units: Existing Plus Projected</b>	7,342	8,357	15,699	15,150	8,357	23,507
<b>Estimate Square Footage of New Non-Residential Development</b>	16,744,328	34,840,533	51,584,861	31,712,325	34,840,533	66,552,858
<b>Pike County Valuation (25% of Market Value) Total: Existing Valuations* Plus Valuation for New Homes and New Non-Residential Space**</b>	\$ 295,731,485	\$ 329,778,248	\$ 625,509,733	\$ 635,117,565	\$ 329,778,248	\$ 1,142,895,633
<b>POTENTIAL REVENUE</b>	Lackawaxen Township	Shohola Township	Total	Lackawaxen Township	Shohola Township	Total
Pike County (13.17 mils)	\$ 3,894,784	\$ 4,343,180	\$ 8,237,963	\$ 8,364,498	\$ 4,343,180	\$ 12,707,678
Pike County Debt (2.0 mils)	\$ 591,463	\$ 659,556	\$ 1,251,019	\$ 1,270,235	\$ 659,556	\$ 1,929,792
School District *** (W = 61.28 mils DV= 100.87 mils )	\$ 18,123,815	\$ 33,264,732	\$ 51,388,547	\$ 38,922,989	\$ 33,264,732	\$ 72,187,721
Township (L = 5.0 mils S= 8.0 mils)	\$ 1,478,657	\$ 2,638,226	\$ 4,116,883	\$ 3,175,588	\$ 2,638,226	\$ 5,813,814
Fire (L=2.0 mils S= 1.75 mils)	\$ 591,463	\$ 577,112	\$ 1,168,575	\$ 1,270,235	\$ 577,112	\$ 1,847,347
Ambulance (L = 1.5 mils S = NA)	\$ 443,597	NA	\$ 443,597	\$ 952,676	NA	\$ 952,676
<b>Subtotal: Amount collected by Townships</b>	<b>\$ 2,513,718</b>	<b>\$ 3,215,338</b>	<b>\$ 5,729,056</b>	<b>\$ 5,398,499</b>	<b>\$ 3,215,338</b>	<b>\$ 8,613,837</b>
<b>Potential Revenue Per Township</b>	<b>\$ 25,123,780</b>	<b>\$ 41,482,806</b>	<b>\$ 66,606,585</b>	<b>\$ 53,956,222</b>	<b>\$ 41,482,806</b>	<b>\$ 95,439,028</b>

\*Included in these totals are the 2007 valuations PLUS the additional estimated residential and non-residential valuations based on build-out scenario.

\*\*Valuation Values are used to determine revenue per tax; for instance in Lackawaxen Township the valuation of existing properties PLUS valuation of projected residential plus the valuation of projected non-residential property is \$295,731,485 and is equivalent to the amount upon which to tax; therefore Pike County would receive \$3,894,784 in revenue (taxes) based on 13.17 mils.

\*\*\* School District: Lackawaxen Township = Wallenpaupack School District at 61.28 mils & Shohola Township = Delaware Valley School District at 100.87 mils  
L = Lackawaxen Township and S = Shohola Township

### Section 7.6.1 Low Density Build-Out Scenario Impacts

Table 9: Potential Net Impacts – (Revenue), illustrates that under the Low Density Residential Build-Out Scenario the projected 7,342 total homes plus current assessment of non-residential space in Lackawaxen Township plus the approximate 16.7 million square feet of additional non-residential development may yield Lackawaxen Township a total approximate \$2.5 million in revenue. The table also illustrates that the projected 8,357 total homes plus current assessment of non-residential space in Shohola Township plus the approximate 34.8 million square feet of additional non-residential development may yield Shohola Township a total approximate \$3.2 million in revenue.

### Section 7.6.2 Maximum Build-Out Scenario Impacts

Table 9: Potential Net Impacts – (Revenue), illustrates that under the Maximum Build-Out Scenario the projected 15,150 total homes plus current assessment of non-residential space in Lackawaxen Township plus the approximate 31.7 million square feet of additional non-residential development may yield Lackawaxen Township a total approximate \$5.4 million in revenue. The table also illustrates that the projected 8,357 total homes plus current assessment of non-residential space in Shohola Township plus the approximate 34.8 million square feet of additional non-residential development may yield Shohola Township a total approximate \$3.2 million in revenue.

***Community sustainability and green infrastructure are interrelated with respect to economic development and preservation of natural resources for use by current and future generations.***

#### **Open Space, Greenways and Recreation Goal**

*Create a plan to address local and regional recreation, preservation and conservation needs including parks and recreation facilities and programs, greenways and open space.*

#### **Open Space, Greenways and Recreation Objectives**

- ❶ Preserve and conserve natural resources.
- ❷ Identify public park and recreation facilities and programs.
- ❸ Identify opportunities to utilize greenways to provide connections/linkages to a variety of hubs or destinations.
- ❹ Preserve and conserve open space and greenways through private preservation opportunities.

*Refer to the Multi-Municipal Open Space, Greenways and Recreation Plan for the Lackawaxen/Shohola Region for details.*

## SECTION 8.0 FUTURE TRANSPORTATION PLAN

Article III of the MPC requires the plan to include an element that plans for the movement of people and goods. The following describes transportation improvements needed to support anticipated short-term and long-term growth as identified in the Future Land Use Plan. The Future Transportation Plan identifies existing and future roadways, intersection improvements and improvements for non-vehicular modes of transportation.

### Section 8.1 Projected Transportation Conditions

The projected transportation conditions for the Townships are based on existing conditions with consideration for future trips as based on the projected development from the Build-Out Analysis Report and data presented in the Existing Conditions Report. Projected transportation conditions are also based on data and issues presented in the Pike County Comprehensive Plan and community identified issues. Currently there is no Long-Range Transportation Plan for Pike County but there is a Transportation section of the Pike County Comprehensive Plan that provides additional direction of transportation trends and priorities.

*“As the County’s population continues to grow and traffic volumes continue to increase, it is critical to work to prevent decline of the County’s transportation system and proactively work to improve the system. Crucial to maintaining and enhancing the transportation system is implementing corridor improvement programs. State and federal road corridors are key elements in moving traffic from residential subdivisions to destinations within and outside the County, carrying through traffic, serving tourists, connecting centers within the County, and providing access to commercial development.”*

*Source: 2006 Pike County Comprehensive Plan, Chapter 15, p 1.*

The 2006 Pike County Comprehensive Plan further describes primary road corridors in the County including some which are within or adjacent to Lackawaxen Township and Shohola Township (bolded text is within study area):

*“The **primary road corridors** within the County, other than I-84, are **Route 6**, Route 209, Route 6/209, Route 739, SR 2001, Route 507, Route 402, Route 390, as well as Route 191, Route 447, **Route 590**, **Route 434**, **SR 1005 (Twin Lakes Road)**, SR 2004 (Silver Lake Road), SR 2006 (Log Tavern Road), and SR 2003 (Bushkill Falls Road). As these are all State roads, the ability of PennDOT to maintain roads as passable, especially during the winter months, is very important for mobility within the County.*

*Source: 2006 Pike County Comprehensive Plan, Chapter 15, p 2.*



Rural Roadway

**Safety, mobility and accessibility for all modes of travel are key indicators of sustainability.**

#### Transportation Goal

Create a transportation plan for the movement of people and goods including facilities for all modes of transportation.

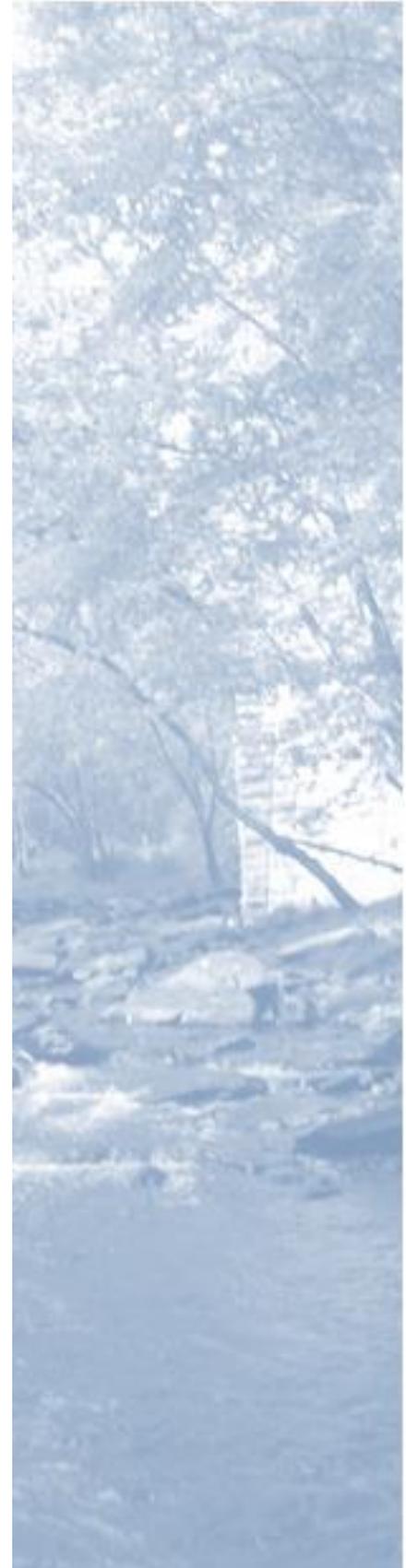
#### Transportation Objectives

- 1 Provide adequate transportation network.
- 2 Provide adequate maintenance.
- 3 Restore rail access to the region.

Transportation trends identified by the 2006 Pike County Comprehensive Plan include the following:

- There are a number of **scenic drives** within the County due to the beautiful rural landscapes. There are also a number of roads within the County which have narrow cartways or no shoulders. It is necessary to strike a balance between maintaining the scenic, rural character of roads and providing for safe travel.
- During the **summer tourism season**, the County experiences increased traffic volumes. The 1992 County Comprehensive Plan applied a 1.7 multiplier to AADT to estimate summer traffic volumes. The US6/209 corridor as well as Route 507 and Route 739 are particularly subject to congestion in the summer months.
- The **increasing congestion** within the Route 6/209 corridor has drawn much attention, including the US 6/US 209 Congested Corridor Improvement Program (CCIP) study, but other corridors such as Route 739, Route 6, and Route 507 are likely to become further congested as additional commercial and residential development occurs. The US 6/209 corridor was nominated for the CCIP due to population and retail growth over the last 20 years. Weekend travel is particularly difficult, causing residents to schedule simple travel and chore trips around peak congestion times. In addition to heavy congestion, safety has been cited as a serious issue along the corridor.
- Within corridors, particularly those with areas of vertical alignment constraints and acute intersections, **intersection improvements** are important to facilitating mobility. Managing access is also important to prevent congestion. Typically, as access decreases, mobility increases.

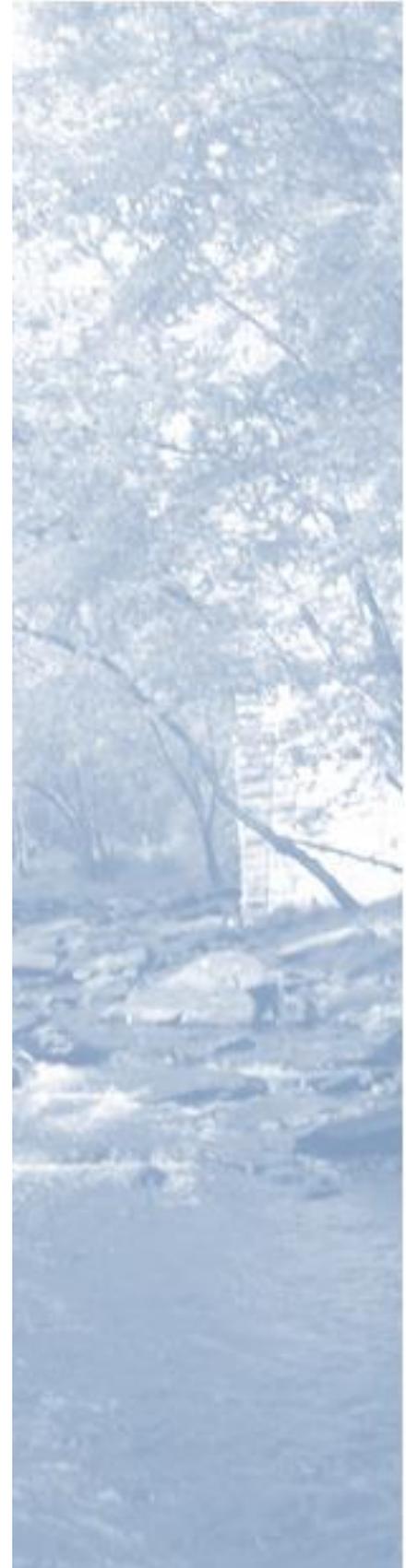
This section of the plan should be updated with the results of future traffic forecasting along with recommendations for transportation improvements based on future Long-Range Transportation Plans.



## Section 8.2 Roadway Classification

Land use is an important determinant of the function of an area's roads and the classification of roadways can change over time as well as change along roadway segments based upon "levels of development", the roadway characteristics and travel patterns. Both PennDOT and FHWA recognize the change of roadway classification along various roadway segments associated with changes in "levels of development" or land use patterns. Local roadways identified in this plan have been assigned roadway classifications defined by roadway sections based upon "levels of development", usage (levels of service) and function within the study area or within the Lackawaxen/Shohola Region.

Urban and rural functional classification systems and design standards as derived from PennDOT Functional Classification tables were modified for rural areas such as Lackawaxen and Shohola Townships and are described in Table 10. This table should be used to assist with future classification or reclassification of local roadways as future development occurs and usage increases.



**Table 10: Urban and Rural Functional Classification Systems and Design Standards**

URBAN AND RURAL FUNCTIONAL CLASSIFICATION SYSTEMS AND DESIGN STANDARDS							
				LANES			
Urban System Classification	Rural System Classification	Average Daily Traffic	Right-of-Way Width (feet)	Number	Minimum Width (Feet)	Shoulder Width (Feet)	Type of Shoulder
Arterial Interstate/Freeway Other Principal Minor	Arterial Interstate/ Freeway Other Principal Minor	All Volumes 6,000 - 20,000 3,000 - 6,000	120 plus median 120 plus median 80	4 or more	12	10 - 12	Paved/Stabilized Paved/Stabilized Paved/Stabilized
				4	12	8 - 10	
				2	12	8 - 10	
Collector	~	800 - 3,000	60	2	11	8	Stabilized
				(36 Feet minimum pavement includes parking lanes)			
~	Collector Major Minor	800 - 3,000 800 - 3,000	60 60	2	10	4	Stabilized
				(28 Feet minimum pavement)			
Local	~	Less than 800	50	2	10	6-8	Stabilized
				(36 Feet minimum pavement including parking lanes)			
~	Local	Less than 800	50	2	10	4	Stabilized
				(28 Feet minimum pavement)			

*Note: The Roadway Classification section is illustrated on Map 2 Future Transportation Plan.*

Map 7: Future Transportation Plan was developed in part using the standards presented in Table 10. The proposed upgrades in Functional Classification of roads were based on meeting current transportation needs as well as anticipated increases in traffic volumes. Table 11: Proposed Changes in Functional Classification, lists the road segments anticipated to have an increase in traffic volume and therefore change in functional classification.

**Table 11: Proposed Changes in Functional Classification**

Lackawaxen Township			
Township Road Name	State / Township Road Number	Current Functional Classification	Proposed Future Functional Classification
Lackawaxen Rd.	SR 1012	Rural Minor Collector	Rural Major Collector
Masthope Rd.	SR 1014	Rural Local	Rural Minor Collector
Rowland Rd	SR 1003	Rural Local	Rural Major Collector

Shohola Township			
Township Road Name	State / Township Road Number	Current Functional Classification	Proposed Future Functional Classification
Bee Hollow Rd.	SR 1008	Rural Local	Rural Minor Collector
Knealing Rd.	SR 1006	Rural Local	Rural Minor Collector
Twin lakes Rd.	SR 1005	Rural Major Collector	Rural Minor Arterial

### Section 8.3 Proposed Transportation Improvements

In addition to proposed functional classification changes to reflect current transportation needs and anticipated increases in traffic volumes, the community coupled with Township input, have identified areas of concern pertaining to transportation. The following are identified intersections of concern and road segments of concern.

#### Section 8.3.1 Intersections of Concern

The following intersections were identified as having poor sight distance and poor alignment. These intersections are experiencing increases in traffic volume and may be considered for signalization or changes in intersection geometry. Note that these were identified by the community and may or may not meet technical criteria for warranted improvements.

#### LACKAWAXEN TOWNSHIP

Intersections of concern within Lackawaxen Township include:

- Welcome Lake Road (SR 4003) and PA 590
- Towpath Road (SR 4006) and Hendricks Road (T 367)
- Towpath Road (SR 4006) and Kimbles Road
- Towpath Road (SR 4006), Williams Road (T 433), Schoolhouse Road (T 489)
- SR 590 and Lackawaxen Road (SR 1012)



- SR 590 and Greeley Lake Road (SR 1002)
- Greeley Lake Road (SR 1002) and Rowland Road (SR 1003)
- Shohola Road (PA 434) and PA 590

### SHOHOLA TOWNSHIP

Intersections of concern within Shohola Township include:

- Shohola Road (PA 434) and McKean Valley Road (T 401)
- Shohola Road (PA 434) and German Hill Road (T 448)
- Shohola Road (PA 435) and Richardson Avenue (T 456)
- Shohola Road (PA 434) and Chauncey Thomas Road (T 415)
- Knealing Road (SR 1006) and Twin Lakes Road (SR 1005)
- US Route 6 and Shohola Falls Road (T 440)
- US Route 6 and Little Walker Road (T 426)
- US Route 6 and Owego Turnpike (Old US Route 6)

### Section 8.3.2 Road Segments of Concern

The following road segments were identified as having poor horizontal and vertical alignment, inadequate cart-way, travel-way and shoulder widths, uncontrolled access, or drainage issues. These road segments are experiencing increases in traffic volumes and may be considered for improvements. Note that these road segments were identified by the community and may or may not meet technical criteria for warranted improvements.

### LACKAWAXEN TOWNSHIP

- Towpath Road (SR 4006) from PA 590 heading east through Kimbles, Bayoba, and Rowland, along PA 590 and into Lackawaxen Village.
- PA 590 and Towpath Road (SR 4006) in Rowland heading northwest along PA 590 approximately 4,500 feet.

### SHOHOLA TOWNSHIP

- Along Shohola Road (PA 434) approximately 1,300 feet south of Lackawaxen Road (SR 1012) and heading north into Shohola Village.
- Along Twin Lakes Road (SR 1005) from Knealing Road (SR 1006) and heading north into Shohola Village.
- Along Twin Lakes Road (SR 1005) between Don Drive and Little Walker Road (T 426).



### Section 8.4 Transportation Considerations

A per capita expenditure for streets and roads as well as parks and recreation are provided which can be used to estimate the per capita expenditure for the same services using build-out projections. Table 12: Per Capita Expenditure for Streets Roads and Parks illustrates the impact of projected population on municipal budgets for these services. Data for expenditures are based on budget expenditures as reported to the Department of Community and Economic Development as of 2005.

For example, these estimated per capita expenditures can be used as a guide for calculating potential fiscal impacts of development related to transportation using \$148 per capita annually for Lackawaxen Township and using \$130 per capita annually for Shohola Township.



**Table 12: Per Capita Expenditure for Streets Roads and Parks**

Service*	Lackawaxen Township						Shohola Township					
	2005 Budget and 2007 Population Adjustment		Estimated Expenditure to Provide Services for Low Density Residential Build-Out Population	Difference Low Density Residential Build-Out & Current Conditions	Estimated Expenditure to Provide Services for Maximum Build-out Population	Difference Maximum Build-Out & Current Conditions	2005 Budget and 2007 Population Adjustment		Estimated Expenditure to Provide Services for Low Density Residential Build-Out Population	Difference Low Density Residential Build-Out & Current Conditions	Estimated Expenditure to Provide Services for Maximum Build-out Population	Difference Maximum Build-Out & Current Conditions
	Budgeted Amount*	Calculated Per Capita Expenditure to Provide Service					Budgeted Amount*	Calculated Per Capita Expenditure to Provide Service				
Streets and Roads	\$734,195	\$148	\$1,201,464	\$(467,269)	\$2,212,034	\$(1,477,839)	\$292,180	\$130	\$735,629	\$(443,449)	\$735,629	\$(443,449)
Parks and Recreation	\$ 1,492	\$0.30	\$2,442	\$(950)	\$4,495	\$(3,003)	\$2,232	\$0.99	\$5,620	\$(3,388)	\$5,620	\$(3,388)
<b>Total</b>	<b>\$735,687</b>	<b>\$148</b>	<b>\$1,203,905</b>	<b>\$(468,218)</b>	<b>\$2,216,529</b>	<b>\$(1,480,842)</b>	<b>\$294,412</b>	<b>\$131</b>	<b>\$741,249</b>	<b>\$(446,837)</b>	<b>\$741,249</b>	<b>\$(446,837)</b>
<b>Population**</b>	<b>4,973</b>		<b>8,138</b>		<b>14,983</b>		<b>2,246</b>		<b>5,656</b>		<b>5,656</b>	

\*Budgeted amounts based on 2005 budgets

\*\*Population based on 2007 adjusted population or projected population based on build-out analysis.  
Source: Department of Community and Economic Development (DCED) Datasets as of October 2007

Table 12: Per Capita Expenditure for Streets Roads and Parks, illustrates that Lackawaxen Township expends approximately \$148 per capita on streets and roads, and \$0.30 per capita on parks and recreation. Lackawaxen Township would need to increase its budget by approximately \$468,000 to provide the same level of service to its projected Low Density Residential Build-Out population and approximately \$1.5 million for its projected Maximum Build-Out population. The table also illustrates that Shohola Township expends approximately \$130 per capita on streets and roads, and \$0.99 per capita on parks and recreation. Shohola Township would need to increase its budget by approximately \$447,000 to provide the same level of service to its projected build-out population.

*Note that the per capita expenditure estimates do not consider costs for new or additional roads, increased maintenance of existing or additional roads; park renovations, or park or trail expansions, the expenditure represents a ratio of current expenditure per capita as applied to a projected population. The per capita expenditure is also an annually estimate of cost per person based upon 2005 budget figures available at the time of this analysis.*

### Section 8.5 Pending Transportation Improvements

Several transportation improvement projects are listed in the current (2006-2007) Pike County list of Transportation Improvement Projects (TIP) and are presented in Table 13: Planned Transportation Improvement Projects include bridge replacements or bridge rehabilitation. There are no planned roadway improvements within the study area as identified by the Pike County TIP. There are also no known planned intersection, bridge, or roadway improvements as identified by either Municipality.

**Table 13: Planned Transportation Improvement Projects**

Planned Improvement	Narrative	FY	Budgeted Amount (\$000)
Bridge Replacement	PA 434 bridge over Balliard Creek	2009	300
Bridge Rehabilitation	SR 1005 Bridge over Shohola Creek	2008-2009	400
Bridge Replacement	NY-PA Joint Project, Bridge #2 over the Delaware River (at Pond Eddy)	2009	241
Bridge Replacement	SR 4003 over Rattlesnake Creek	2009	800
Bridge Replacement	Aumeller Bridge over Balliard Creek	2007-2010	874
<b>Total in Lackawaxen / Shohola Area</b>			<b>2,615</b>



### Section 8.6 Transportation Needs with Short Term Solutions

Other than the identified areas of concerns (intersections and road segments), there are additional transportation needs identified by the community. Included in those needs are:

- Striping and or shoulder improvements along the designated State Bike Routes (Bike Routes Y and Y1) as illustrated on Map 7;
- Designating Twin Lakes Road (SR 1005) as a localized Scenic Byway and the Towpath as a Scenic Byway with a proposed greenways trail along the Towpath (*refer to Map 11*); and
- Improving scenic pull-offs at key locations along Towpath Road, Route 590, Route 6, Route 434 and Twin Lakes Road.

Some of these identified transportation needs and issues are further addressed in the Open Space, Greenways and Recreation Plan.

In general, there is a gap in coordination of transportation needs, and therefore prioritization of needs and projects. The completion of a regional or county-wide traffic impact study could address proposed developments which may have direct impact on transportation routes. The study may better be able to project traffic impacts for key corridors and make recommendations for improvements to ensure proper management of traffic flow and better prioritization of limited funding. Based upon analysis conducted, the study could provide recommendations for traffic signal improvements, left-turn lane warrants, and recommended intersection improvements. The regional approach toward transportation planning could assist municipalities with coordinating and prioritizing localized projects. This should be coordinated through the Northeastern PA Rural Transportation Planning Organization (NPRTPO).

### Section 8.7 Alternative Solutions to Intersection Signalization

Recommendations in previous sections are based upon previous studies undertaken by the Township for key intersections along major corridors. The following are alternative solutions to intersection signalization that address key transportation considerations and land use strategies. These items should be considered as part of a detailed study and analysis prior to determining that a traffic signal is the best solution for particular locations.

- Improved Accessibility
  - Service roads for non-residential development to reduce the number of driveways limiting the need for additional traffic signals along a corridor
  - Improve existing signalized intersections (if established) with turn lanes and technology upgrades
    - Restricted turning movements at intersections where appropriate
    - Left and right turn lanes where appropriate

#### Benefits of Striping and Shoulder Widening

*Striping and shoulder widening along designated State Bike Routes provide a safer travel area for bicyclists and pedestrians.*

- Interconnectivity between and within residential development
  - Cul-de-sacs should only be used where appropriate with lot design situated so future connections/extensions can be made to support interconnectivity
  - Connector roads between residential developments
- Access Management Strategies
  - Shared driveways
  - Turn lanes
  - Acceleration and deceleration lanes
- Growth Management Strategies
  - Land use and site design provisions to reduce the need for signalized intersections (i.e. shared driveways and density/intensity of land use patterns along major transportation corridors)
  - Provision of adequate public facilities including new roadways, upgraded roadways and multi-modal facilities where and when necessary
- Safety Improvements
  - Adequate sight distances and other geometric improvements at intersections
- Multi-Modalism
  - Pedestrian facilities and safety improvements to reduce dependency on vehicular travel
  - Access to transit
- Education/Consideration of Non-Traditional Solutions
  - Roundabouts where appropriate

*Reference PennDOT's Access Management, Model Ordinances for Pennsylvania Municipalities Handbook.*

### Section 8.8 Scenic Pull-offs Concept

This Scenic Pull-off Concept depicted on the following page can be applied in full or in part for a variety of locations throughout the region along proposed state and local scenic byways identified on Map 11 (i.e. Towpath Road, Route 590, Route 6, Route 434 and Twin Lakes Road). This concept was designed to provide amenities for pedestrians, bicyclists and to provide locations for viewing of natural beauty and historic features such as the remains of the Delaware & Hudson Canal.



## SECTION 9.0 FUTURE COMMUNITY FACILITIES, SERVICES & UTILITIES PLAN

Community facilities, services and utilities are basic services that promote the overall health, welfare and safety of individual communities and the region as a whole. This plan element concentrates on water and sewer service areas, impacts on emergency services (fire services), and development impacts on school districts and libraries. Additional services typically offered by utilities have been addressed in the Existing Conditions Report. Map 8 depicts the various Future Community Services to be provided in the context of existing conditions and planned future development.

### Section 9.1 Water & Sewer Services

Good or high water quality is now, and is even more so in the future, considered a necessity for quality of life. A decrease in quality may be considered a threat to public health, safety, and welfare. Since water used for consumption should be routinely monitored for contaminants according to Federal and State Laws and in order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Drinking water, including bottled water, may reasonably be expected to contain at least a small amount of some contaminants. The presence of contaminants does not necessarily indicate the water poses a health risk. The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and also can come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants which can be naturally occurring or be the result of oil and gas production and mining activities.

Lackawaxen Township and Shohola Township each have Sewage Enforcement Officers (SEO). Current sewage inspection and maintenance activities are complaint driven (meaning that people call in when there is a

***Community facilities and utilities include land, buildings and services to help meet public health, safety and welfare, and educational and social needs.***

#### **Community Facilities & Utilities Goal**

*Create a community facilities and utilities plan addressing a wide array of community facilities, services and public and private utilities necessary to meet community needs.*

#### **Community Facilities & Utilities Objectives**

- ❶ Expand police protection and emergency services.
- ❷ Provide adequate public facilities and services.
- ❸ Obtain access to or enhance existing regional facilities.
- ❹ Enhance access to all forms of the communication.
- ❺ Provide community water and sewer facilities where appropriate.

problem) and generally pertain to failing, older metal tanks for on-lot septic systems. The enforcement abilities of the officers could be strengthened by incorporation of DEP's recommended inspection and maintenance schedule into local ordinances. The recommended schedule calls for maintenance and inspection of on-lot septic systems at least once every three years.

The Pennsylvania Department of Environmental Protection offers SEO certification, training, and guidance for SEOs. A SEO Field Manual contains instructions and procedures to assist SEOs with their duties in the field and may also serve as a resource to help others understand what the SEO must do to follow the Department of Environmental Protection sewage regulations (PA Code Title 25, Chapters 72 and 73). One copy of the SEO Field Manual is provided free of charge to SEOs who are employed or contracted by a municipality, township, county, or any group that is considered a local agency by DEP under the PA Sewage Facilities Act (Act 537). More information is available on-line at [www.seotraining.org](http://www.seotraining.org)

### Section 9.2 Water & Sewer Service Conditions

Community water and sewer service area data for Lackawaxen Township and Shohola Township are based on the current (2007) water and sewer service areas as delineated on Map 12: Existing Community Services from the Existing Conditions Report. The estimate housing unit data and estimate population data for the service areas are based on Pike County Office of Community Planning datasets, 2000 Census data, and the 2007 Build-Out Report. Included in the datasets are approximate locations of structures (housing units) with an interpolated population estimate.

The interpolated estimates include multiplying the number of housing units in the service areas by the current (2000) population per housing unit values. The current persons per housing unit values include 1.11 persons per unit in Lackawaxen Township and 0.675 persons per unit for Shohola Township. Note that the persons per unit values account for seasonal housing units; whereas the population per unit values for **occupied units** is 2.45 persons per occupied unit for Lackawaxen Township and 2.50 persons per occupied unit for Shohola Township. By using the lower persons per unit values the seasonal units within the service areas have been accounted.



**Table 14: Estimate Population & Housing Units in Service Areas**

Type of Community Service Area	Lackawaxen Township			Shohola Township			TOTAL		
	Acres	Estimate Population Served	Estimate Housing Units Served	Acres	Estimate Population Served	Estimate Housing Units Served	Acres	Estimate Population Served	Estimate Housing Units Served
Current Water & Sewer Service Areas	3,742.7	1,821	1,645	708.9	833	1,243	4,451.6	2,654	2,888
Current Water Service Area Only	1,545.8	716	647	373.0	129	193	1,918.8	846	840
<b>Total Acres</b>	<b>5,288.5</b>			<b>1,081.9</b>			<b>6,370.4</b>		
<b>Total Square Miles</b>	<b>8.3</b>			<b>1.7</b>			<b>10.0</b>		
<b>Total Estimate Served</b>		<b>2,537</b>	<b>2,292</b>		<b>962</b>	<b>1,436</b>		<b>3,499</b>	<b>3,728</b>

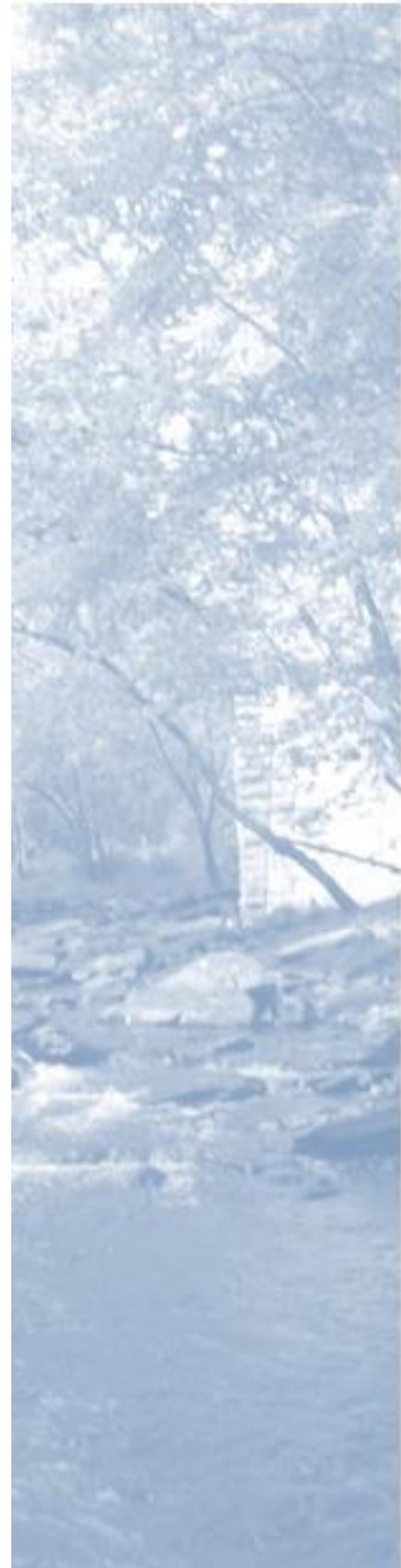
According to Table 14: Estimate Population & Housing Units in Service Areas, within Lackawaxen Township there are approximately 1,800 people and approximately 1,650 housing units that are serviced by a community water and or community sewer service area; and there are an additional approximately 720 people and 650 housing units receiving community water services only. Also according to Table 14, within Shohola Township there are approximately 850 people and approximately 1,250 housing units that are serviced by a community water and or community sewer service area; and there are an additional approximately 130 people and 200 housing units receiving community water services only.

The data presented in Table 14 has limitations such as: population estimates are for year round residents and do not include seasonal residents; the seasonal housing units are accounted for but the number of seasonal residents is not. Since the “rule of thumb” for residential usage is 250-300 gallons per unit per day, application of the rule of thumb to Lackawaxen Township’s and Shohola Township circumstance may artificially inflate actual service system usage but accurately reflect potential service system demand. Further limitations are that the data assumes that all units within the service areas are connected to the service, and as the community has indicated, this is not necessarily the case. Additional investigation and analysis would be needed to more accurately depict service area usage, service area capacity, and efficiency of the community service systems.

### **Section 9.3 Water & Sewer Services – Future Considerations**

Widespread use and high volume discharge from septic systems have the potential to pollute groundwater, lands and streams if located improperly or if they fail. Properly functioning septic systems can be a substantial source of nutrient loads in some settings and most are not regulated as closely to determine impacts on public health, safety and the environment. Therefore, future considerations for water and sewer services have been estimated using the Conceptual Growth Areas (Designated Growth Area, and Potential (Future) Growth Area) identified on Map 6: Conceptual Growth Areas and Map 8: Future Community Services Plan.

Table 15: Estimate Population & Housing Units in Projected Service Areas, depicts the results of the growth area delineation in capturing existing conditions, as well as the inclusion of areas likely to develop plus the potential additional units (as allowed under current Zoning) within those additional areas. The potential additional units were derived from the projections as presented in the Low-Density Build-Out Scenario of the Build-Out Analysis Report.



**Table 15: Estimate Population & Housing Units in Projected Service Areas**

Growth Area	Lackawaxen Township			Shohola Township			TOTAL		
	Acres	Estimate Projected Population Served	Estimate Projected Housing Units Served	Acres	Estimate Projected Population Served	Estimate Projected Housing Units Served	Acres	Estimate Projected Population Served	Estimate Projected Housing Units Served
<b>Designated Growth Area (DGA)</b>	17,099.1	6,196	4,145	4,211.5	1,675	2,246	21,310.6	7,871	6,391
Potential (Future) Growth Area (FGA)	3,757.0	1,586	1,002	2,426.9	1,824	871	6,183.9	3,410	1,873
<b>Total Acres</b>	<b>20,856.1</b>			<b>6,638.4</b>			<b>27,494.5</b>		
<b>Total Square Miles</b>	<b>32.6</b>			<b>10.4</b>			<b>43.0</b>		
<b>Total Estimate Served (DGA &amp; FGA)</b>		<b>7,782</b>	<b>5,147</b>		<b>3,499</b>	<b>3,117</b>		<b>11,281</b>	<b>8,264</b>

According to Table 15, Lackawaxen Township projections indicate there could be approximately 6,200 people and approximately 4,150 housing units within the Designated Growth Area that could be serviced by a water and or sewer service system; with the potential of an additional approximately 1,600 people and 1,000 housing units by inclusion of the Potential (Future) Growth Area. Also according to Table 15, within Shohola Township projections indicate there could be approximately 1,700 people and approximately 2,250 housing units within the Designated Growth Area that could be serviced by a water and or sewer service system; with the potential of an additional approximately 1,900 people and 900 housing units by inclusion of the Potential (Future) Growth Area.

The limitations of the data in Table 15: Estimate Population & Housing Units in Projected Service Areas are similar to the limitations of the data presented in Table 14: Estimate Population & Housing Units in Service Areas; however, population estimates for projected units, those projected from the build-out analysis, assume year round occupancy and therefore the higher occupancy rate was applied (2.45 people per unit in Lackawaxen Township and 2.50 people per unit in Shohola Township). The application of the lower occupancy rates for existing units and the application of higher occupancy rate for new (projected) units, therefore, attempts to depict seasonal occupancy rates of existing housing units and year round occupancy of new units, a circumstance that was described by the community. This approach may provide more accurate estimates than assuming one type of occupancy rate for all units (current or projected).

Both Tables 14 and 15 provide opportunity for comparison of data as presented in the Build-Out Analysis Report and which is also presented in Table 16: Residential Build-Out Results. The data in Table 16 present adjustments for development (population and housing units) in the community between 2000 and 2007 as well as projection of development (population & housing) using build-out assumptions.



**Table 16: Residential Build-Out Results**

Variable	Lackawaxen Township						Shohola Township			
	Year 2000 Data	Estimated 2007 Population & Housing Units	Build-Out Low Density Results Based on Current Zoning (2007 Plus Build-Out)	ADDITIONAL HOUSING UNITS & POPULATION Difference: Build-Out Low Density Minus Year 2007 Estimates	Maximum Build-Out Results Based on Current Zoning (2007 Plus Build-Out)	ADDITIONAL HOUSING UNITS & POPULATION Difference: Maximum Build-Out Minus Year 2007 Estimates	Year 2000 Data	Estimated 2007 Population & Housing Units	Build-Out Low Density or Maximum Build-Out Results Based on Current Zoning (2007 Plus Build-Out)	ADDITIONAL HOUSING UNITS & POPULATION* Difference: Build-Out Low Density or Maximum Build-Out Minus Year 2007 Estimates
<b>Total Population</b>	4,154	4,973	8,138	3,164	14,983	10,010	2,088	2,246	5,656	3,410
<b>HOUSING OCCUPANCY</b>										
<b>Total housing units</b>	3,750	4,487	7,342	2,855	13,518	9,031	3,089	3,319	8,357	5,038
Occupied housing units	1,694	2,028	3,319	1,290	6,110	4,082	836	899	2,265	1,365
Vacant housing units	2,056	2,459	4,023	1,565	7,408	4,949	2,253	2,420	6,092	3,673
For seasonal, recreational, or occasional use	1,863	2,230	3,649	1,419	6,718	4,488	2,055	2,207	5,557	3,350
Persons Per <b>Occupied</b> Housing Units	2.45	2.45	2.45		2.45		2.50	2.50	2.50	
Persons Per Housing Unit	1.11					2,062	0.67			

\*There is no difference between the Build-Out Low Density and Maximum Build-Out for Shohola Township.  
Source: 2000 US Census Data, Pike County Building Permits, and 2007 Build-Out Analysis Report.

A comparison between Table 14: Estimate Population & Housing Units in Service Areas and Table 16: Residential Build-Out Results, reveals that within Lackawaxen Township approximately half (51.1%) of the **estimate 2007 housing units** currently have access to some type of community services (either water and sewer services or water service only) [2,292 housing units in the service area / 4,487 estimate 2007 housing units]. The table also reveals that within Shohola Township less than half (43.3%) of the **estimate 2007 housing units** currently have access to some type of community services (either water and sewer services or water service only) [1,436 housing units in the service area / 3,319 estimate 2007 housing units].

A comparison between Table 15: Estimate Population & Housing Units in Projected Service Areas and Table 16: Residential Build-Out Results, reveals that within Lackawaxen Township slightly more than half (56.5%) of the **estimate Low Density Build-Out housing units** would have some type of access to community services (either water and sewer services or water service only) if water and sewer services were extended to just the Designated Growth Area [4,145 housing units in service area / 7,342 projected housing units]. Also within Lackawaxen Township nearly three-quarters (70.1%) of the **estimate Low Density Build-Out housing units** would have some type of access to community services (either water and sewer services or water service only) if water and sewer services were extended to the entire growth area (Designated Growth Area and the Potential (Future) Growth Area [5,147 housing units in service area / 7,342 projected housing units]).

Further comparison between Table 15 and 16 reveals that within Shohola Township one-quarter (26.9%) of the **estimate build-out housing units** would have some type of access to community services (either water and sewer services or water service only) if water and sewer services were extended to just the Designated Growth Area [2,246 housing units in service area / 8,357 projected housing units]. Also within Shohola Township just over one-third (39.7%) of the **estimate build-out housing units** would have some type of access to community services (either water and sewer services or water service only) if water and sewer services were extended to the entire growth area (Designated Growth Area and the Potential (Future) Growth Area [3,317 housing units in service area / 8,357 projected housing units]).

### Section 9.4 Water & Sewer Services Summary

Several conclusions can be inferred from data presented thus far and from the comparison between Table 14: Estimate Population & Housing Units in Service Areas and Table 16: Residential Build-Out Results. For Lackawaxen Township, improvements to existing services within current service areas and extension of services to Conceptual Growth Areas could accommodate approximately 57% - 70% of the projected housing units in the Township. For Shohola Township, improvements to existing services within current service areas and extension of services to Conceptual Growth Areas could accommodate approximately 26.9% - 39.7% of the projected housing units in the Township. Both Townships could accommodate even greater percentages by directing growth within Conceptual Growth Areas.



Lackawaxen Township's Conceptual Growth Areas and build-out assumptions provide for greater inclusion of projected development than does Shohola Township's; however additional considerations (restrictions) for areas in the Rural Resource Area (refer to Map 3: Conceptual Growth Area) within Lackawaxen Township through policies and practices could better accommodate growth and enhance service areas.

Shohola Township's Conceptual Growth Areas provide for greater inclusion of existing and therefore currently under serviced development. Shohola Township's build-out assumptions and delineated Conceptual Growth Areas further highlight the need to monitor and manage development, by directing growth away from Rural Resource Areas (refer to Map 3: Conceptual Growth Area) and toward identified Conceptual Growth Areas.

### Section 9.5 Water & Sewer Services Plan of Action

With the probable increase of housing units within the current water and sewer service areas and with the potential expansion of those sewer service areas to include existing development and potential development adjacent to water and sewer service areas it is essential to consider updating an Act 537 (Sewage Facilities) Plan, with subsequent application for National Pollutant Discharge Elimination System (NPDES) permits from the Pennsylvania Department of Environmental Protection (DEP) as applicable. According to the DEP website, Lackawaxen Township has an Act 537 Plan current as of 8/31/2006, document reference number 52905, and Shohola Township has an Act 537 Plan current as of 8/13/1974, document reference 52912.

The following are excerpted from the Pennsylvania Department of Environmental Protection's website [www.depweb.state.pa.us](http://www.depweb.state.pa.us) [Accessed 12 DEC 07].

*Act 537, enacted by the Pennsylvania Legislature in 1968, **requires that every municipality in the state develop and maintain an up-to-date sewage facilities plan.** The Act provides the requirements for these plans and allows the payment of a 50 percent grant for the eligible costs incurred in preparing the plans. Act 537 base plans are broad in scope and address existing sewerage needs as well as future growth and development needs.*

*The main purpose of a municipality's sewage facilities plan is to protect the health, safety and welfare of the citizens living in the municipality. All proposed wastewater facilities must demonstrate consistency with local wastewater facilities plans and conform to state laws. This is accomplished in part by the municipality updating its official sewage plan or by the municipality, owner, subdivider or agent of the proposed land development completing "Planning Modules for Land Development." The modules, including completion instructions, can be supplied by the Department. The municipality will act on the completed modules and submit them to DEP for review and subsequent approval or denial.*

*The procedure for approval of sewerage facilities may involve several steps. **First you must obtain planning approval of the amendment to the municipal Sewage Facilities Plan under PA Act 537.** Planning modules*



for land development must be submitted through the municipality to the regional DEP office.

Please note that permits for construction of on-lot subsurface sewage disposal systems handling less than 10,000 gpd are approved by the local municipalities in each County. However, you must obtain planning approval under Act 537 before a permit can be issued.

For publicly owned sewage facilities, a construction permit is required for new sanitary sewer systems, extensions to existing sewer systems serving more than 250 equivalent dwelling units (about 66,000 gpd), and for interceptors and pumping stations. A permit is also required for privately owned sanitary sewers if the facilities will serve more than 250 equivalent dwelling units. If the facilities are to be dedicated to the local municipality or authority, the application must be submitted in the name of the municipality or authority.

If proposed sewerage facilities will involve a direct discharge to surface waters, a Part I NPDES permit application must be submitted after approval of the amendment to the local municipality's Sewage Facilities Plan. Upon issuance of the Part I NPDES permit, the final step is to submit a Part II application to construct and operate the facilities.

If the proposed discharge is greater than 50,000 gpd, the Delaware River Basin Commission (DRBC) must also approve the project.

In order to preserve and improve the purity of the waters of the Commonwealth, the law requires that any municipality or person contemplating the construction of a new sanitary sewer or sewer system, the extension of an existing sanitary system, or the wastewater treatment works and related appurtenances shall, with the exception of certain sewer extensions, **first obtain Permit(s) from the Department of Environmental Protection.**

Refer to Section 1 (Act of the General Assembly of Pennsylvania) for sewer extension exempted from the permit requirement.

**An NPDES Part I Permit**, when issued, constitutes approval by the Department and is its authorization for the discharge of treated wastewater to Commonwealth waters. **The Part II Permit**, when issued, constitutes approval of the plans by the Department and is the authorization for the construction and operation of the proposed facilities. State institutions planning the construction of sewerage facilities discharging to waters of the Commonwealth are required to file applications and to obtain permits, except that the filing and processing fees are not required.

**Approval by Other Agencies:** Federal Government - Federal laws and regulations require that permission be obtained from proper federal authority (such as the Army Corps of Engineers) for any outfall or structure which discharges into or enters waters on which there is commercial navigation. Additional approval may be needed from **Pennsylvania Department of Labor and Industry, Pennsylvania Public Utility Commission (PUC)**,



*Delaware River Basin Commission, DEP Bureau of Air Quality Control for all features requiring air pollution control, and possibly the Pennsylvania Council on the Arts, Pennsylvania Historical and Museum Commission, Pennsylvania State Police (Fire Marshall), Pennsylvania Department of Transportation, and local utilities. A Users' Guide to DEP Permits is available to review the requirements of all DEP permits.*

Although the update of an Act 537 Plan and subsequent application for permits seems daunting, the action results in a framework to ensure compliance with county, state and federal regulations that can protect the health, safety, and welfare of Lackawaxen Township and Shohola Township residents, businesses, and visitors. The action also can be used to manage growth and ensure sustainability within the Township's and the region.

### Section 9.6 Wastewater Programs

The following Environmental Protection Agency (EPA) Waste Water Programs for Small Communities provide guidance, financing, solutions, and training opportunities for small wastewater facilities and communities considering the implementation of smaller wastewater facilities.

- **Management of Onsite/Decentralized Systems**  
This effort provides voluntary national management guidelines and other information to regulators, community and business leaders, and citizens in small communities served by a variety of onsite wastewater technologies, including septic systems.  
Source: [www.epa.gov/owm/onsite](http://www.epa.gov/owm/onsite)
- **Clean Water State Revolving Loan Fund Program**  
All 50 states and Puerto Rico operate loan programs that provide low-interest financing for wastewater and other water quality projects. All of these programs provide assistance to small communities, and over half of the states have developed special programs for disadvantaged communities.  
Source: [www.epa.gov/owm/cwfinance/cwsrf](http://www.epa.gov/owm/cwfinance/cwsrf)
- **National Small Flows Clearinghouse (NSFC)**  
The Clearinghouse collects and distributes information about small wastewater treatment solutions. Services include a toll-free technical assistance hotline, an Internet-based discussion group, computer databases, newsletters, and other publications.  
Source: [www.nesc.wvu.edu/nsfc](http://www.nesc.wvu.edu/nsfc)
- **Rural Community Assistance Program (RCAP)**  
This network of nonprofit organizations provides community-specific information and technical assistance at no cost. The goal of the program is to improve the ability of rural communities to plan, design, operate, and maintain wastewater systems.  
Source: [www.rcap.org](http://www.rcap.org)
- **Small Communities Outreach and Education Network (SCORE)**



SCORE information and outreach help small communities build and operate self-sufficient wastewater facilities that meet clean water standards.

Source: [www.epa.gov/owm/mab/smcomm/scmore.htm](http://www.epa.gov/owm/mab/smcomm/scmore.htm)

### Section 9.7 Emergency Services

Emergency Management is a legal responsibility and function of local, county, state and federal government. Over the past two decades, federal and state laws were amended to include natural, technological and man-made disaster mitigation, preparedness, and response and recovery programs. National attention to emergency management began in the early 1950s with emphasis on civil defense or enemy attack preparedness.

Pennsylvania's Emergency Management Services Code (35 Pa. C. S. Section 7101-7707) became law in 1978 and replaced the State Council of Civil Defense Act of 1951. The 1978 Act consolidated existing state laws and updated the role of emergency management within the Commonwealth. Amendments to this Act in 1988 and 1989 further focused the role of emergency management personnel, organizations and responsibilities.

This state law requires that every county and municipal government develop and maintain an emergency management program consistent with the state and federal emergency management program. An emergency management coordinator who is appointed by the Governor based upon the recommendation of the county or municipal elected officials administers each county and municipal program. The coordinator is an employee of the county or municipality and is responsible for implementing the program. The contact information for the Emergency Management Program Coordinator in Pike County includes:

Roger K Maltby  
Administration Building 506 Broad Street  
Milford, 18337  
Office: 570-296-6714  
Fax: 570-296-3550  
Email: [rmaltby@pikepa.org](mailto:rmaltby@pikepa.org)

For information on your community's legal requirements to development and maintain and effective program, contact: Jose Morales, Chief Counsel, [jmorales@state.pa.us](mailto:jmorales@state.pa.us), (717) 651-2010

Source: [www.pema.state.pa.us](http://www.pema.state.pa.us) [Accessed 13 FEB 08]

Additionally, each of Pennsylvania's 67 counties is required, in accordance with the provisions of the Commonwealth of Pennsylvania Emergency Management Services Code or Title 35, Pa. C.S.A. Section 7503 (1), to prepare, maintain and keep current an emergency operations plan for the prevention and minimization of injury and damage caused by disaster, prompt and effective response to disaster and disaster emergency relief and recovery in consonance with the Commonwealth Emergency Operations Plan (CEOP).



Using the same format as the CEOP, county EOP are functional plans containing several hazard-specific annexes. These EOP define the organization, concept of operations and responsibilities of the departments and agencies of county governments and their municipalities in mitigation of, preparedness for, response to and recovery from disasters.

Pennsylvania Emergency Management Agency (PEMA) provides direction and assistance for plan format and content via the Generic County EOP. New information or changes to current plans are distributed as amendments to the generic plan. The generic plan represents the minimum required policies and procedures. Counties are encouraged to tailor the information in the generic plan to meet their own unique requirements, e.g., additional appendices and county-specific data and procedures. PEMA Regions review the county plans to ensure two-year currency.

Pike County has developed a Hazardous Mitigation Plan which both Lackawaxen and Shohola Townships have signed agreements with the County in partnership for implementation of this plan.

### Section 9.7.1 Fire Service

The Insurance Organization Office (ISO) collects information on municipal fire-protection efforts in communities throughout the United States. In each of those communities, ISO analyzes the relevant data using our Fire Suppression Rating Schedule (FSRS). By classifying communities' ability to suppress fires, ISO helps the communities evaluate their public fire-protection services. The program provides an objective, countrywide standard that helps fire departments in planning and budgeting for facilities, equipment, and training. And by securing lower fire insurance premiums for communities with better public protection, the Public Protection Classification (PPC) program provides incentives and rewards for communities that choose to improve their firefighting services.

Many insurance companies use ISO's PPC evaluations as a factor in setting the premiums they charge for property insurance; the better the community's PPC grade, the lower the premiums the insurance company would charge for property insurance in that community. ISO's data on fire losses indicates that communities with better fire protection as evaluated by the PPC have lower losses from fire damage than other communities.

The PPC Ratings are based on several factors including water supply, equipment, personnel, training, and alarm and dispatch. Water supply accounts for at least 40% of the total rating. One of the standards set by the PPC is that *"the departments must be able to deliver the minimum fire flow to at least 85% of the built-upon areas of the community within five road miles of a recognized fire station"*. There are however allowances made for the communities that do not meet the water-supply requirement of 250 gpm for two hours necessary for PPC Class 8 or better.

Sources: [www.isomitigation.com](http://www.isomitigation.com) and [Accessed 13 FEB 08]



- **National Fire Protection Association (NFPA)**

The mission of the international nonprofit NFPA is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education. As part of their mission the NFPA also provides guidance for fire response times for rural areas and that departments be *"able to reach 80 percent of building fires within fourteen minutes"*. Note that standard is a guideline not law based on the NFPA's estimates.

Source: [www.nfpa.org](http://www.nfpa.org) [Accessed 13 FEB 08]

### Section 9.7.2 Strategies to Recruit and Retain Volunteer Firefighters

The Lackawaxen/Shohola Region, like many other rural communities across the Commonwealth, relies heavily on volunteer firefighters. In order to better understand the needs of rural communities such as this region, The Center for Rural Pennsylvania conducted a study in 2004 focusing on firefighter recruitment and retention issues and strategies that may help increase firefighter volunteerism in rural areas.

The following findings of this study are provided to help provide some level of understanding and solution to the needs of the Lackawaxen/Shohola Region with respect to this issue.

- Volunteer firefighters are dedicated to community service and working hard to support the tradition of volunteer firefighting.
- There are great difficulties in obtaining sufficient funds and staff for fire emergency operations.
- Volunteer firefighters spend most of their time fundraising, while they should be spending more time on training.
- Lack of local or regional training facilities.
- Shortage of funding for new apparatus and equipment, personal safety equipment, training, leadership and management, recruiting and retention.
- Lack of state and municipal incentives for volunteer firefighters.
- Volunteer Fire Companies must be managed like a business if they are to survive.

Several strategies offered to address recruitment and retention for the state and local municipalities' consideration includes:

- Financial support for training and related travel expenses.
- Grant funds for new personal fire protective gear.
- Provide line of duty death benefits, life insurance and medical insurance.
- Offer state income tax credits.
- Offer college tuition assistance.



Map 9: Existing Fire Service Areas provides the location of fire houses in Lackawaxen Township and Shohola Township with a 2 mile radius and a 5 mile radius shown around the facilities. The 2 mile and 5 mile radii on the Map are for visual purposes only and do not equal the five road miles as recommended by ISO nor does it represent the response time of the facilities. Map 9 infers that there may be adequate fire station coverage for existing developed areas as well as projected development areas (Conceptual Growth Areas) in both municipalities. However, the map is for visual purposes only and further assessment of the facilities and responses would be needed to accurately depict actual response areas and assess readiness.

### Section 9.7.3 Fire and Emergency Services Resources

The National Volunteer Fire Council (NVFC) provides a variety of resources to volunteer fire, EMS and rescue services. The NVFC serves as the information source regarding legislation, standards and regulatory issues. The NVFC also provides vital resources and information to volunteer fire and emergency services organizations. NVFC provides the following services:

- Developed voluntary consensus standards that can be adopted by states or individual departments.
- Developed National EMS Education Standards.
- Created a framework for an EMS Illness and Injury Surveillance System.
- Promotes a number of legislative initiatives including bills that would benefit volunteer EMS personnel by providing them with tax benefits and job protection.
- Advocate on behalf of grant programs that provide funding for EMS equipment, training and apparatus. Grant programs are identified on their website.
- Administration of the Fire Corps program to gain community members support and education about fire prevention and helping with fundraising and apparatus maintenance.
- Provides Heart-Healthy Firefighter Kits.

Additional information about these resources can be obtained on the HVFC website.

[http://nvfc.org/page/633/About\\_the\\_NVFC.htm](http://nvfc.org/page/633/About_the_NVFC.htm)

Additional resources and grant programs for emergency services are provided by FEMA and PEMA. Grant programs and applications are outlined on various agency websites.

Sources: <http://www.fema.gov/news/newsrelease.fema?id=7360>  
<http://www.pema.state.pa.us/pema/cwp/view.asp?a=7&q=256378>  
<http://www.firerescue1.com/grants/>



**Section 9.7.4 Future EMS Considerations**

A per capita expenditure for police, fire and ambulance services was provided in the Existing Conditions Report (October 2007), which can be used to estimate the per capita expenditure for the same services using build-out projections. Table 17: Per Capita Expenditure for Emergency Services illustrates the impact of projected population on municipal budgets for emergency services.

**Table 17: Per Capita Expenditure for Emergency Services**

Service*	Lackawaxen Township						Shohola Township					
	2005 Budget and 2007 Population Adjustment		Estimated Expenditure to Provide Services for Low Density Residential Build-Out Population	Difference Low Density Residential Build-Out & Current Conditions	Estimated Expenditure to Provide Services for Maximum Build-Out Population	Difference Maximum Build-Out & Current Conditions	2005 Budget and 2007 Population Adjustment		Estimated Expenditure to Provide Services for Low Density Residential Build-Out Population	Difference Low Density Residential Build-Out & Current Conditions	Estimated Expenditure to Provide Services for Maximum Build-Out Population	Difference Maximum Build-Out & Current Conditions
	Budgeted Amount*	Calculated Per Capita Expenditure to Provide Service					Budgeted Amount*	Calculated Per Capita Expenditure to Provide Service				
Police	\$ -	\$0	\$ -	\$ -	\$ -	\$ -	\$ 53,873	\$24	\$ 135,638	\$ (81,765)	\$ 135,638	\$ (81,765)
Emergency Services (Fire and Ambulance)	\$ 215,299	\$43	\$ 352,323	\$ (137,024)	\$ 648,668	\$ (433,369)	\$ 99,331	\$44	\$ 250,088	\$ (150,757)	\$ 250,088	\$ (150,757)
<b>Total</b>	<b>\$ 215,299</b>	<b>\$43</b>	<b>\$ 352,323</b>	<b>\$ (137,024)</b>	<b>\$ 648,668</b>	<b>\$ (433,369)</b>	<b>\$ 153,204</b>	<b>\$68</b>	<b>\$ 385,726</b>	<b>\$ (232,522)</b>	<b>\$ 385,726</b>	<b>\$ (232,522)</b>
<b>Population**</b>	<b>4,973</b>		<b>8,138</b>		<b>14,983</b>		<b>2,246</b>		<b>5,656</b>		<b>5,656</b>	

\*Budgeted amounts based on 2005 budgets

\*\*Population based on 2007 adjusted population or projected population based on build-out analysis.  
Source: Department of Community and Economic Development (DCED) Datasets as of October 2007

Table 17: Per Capita Expenditure for Emergency Services, illustrates that Lackawaxen Township would need to increase its emergency services budget by approximately \$137,000 to provide the same services as was provided in 2005 to the projected Low Density Residential Build-Out population, and approximately \$433,000 to the projected Maximum Build-Out population. The table also illustrates that Shohola Township would need to increase its police and emergency services budget by approximately \$232,500 to provide the same services to the projected population as was provided in 2005.

*Note that the per capita expenditure estimates do not consider costs for any changes in services, such as the addition of police coverage, increases in volunteers, paid staff, or increased equipment needs, the expenditure represents a ratio of current expenditure per capita as applied to a projected population.*

### Section 9.8 School Impacts

Impacts to Wallenpaupack School District and Delaware Valley School District were developed based on the assumptions of the Build-Out Analysis Report. Impacts are based on the potential number of school aged children anticipated to reside in the region, projected housing units, projected family size residing within the projected housing units, and current expenditure to educate a student in either school district for one year. At this time, no considerations were made for the capacity of the school facilities, or the demand placed on the facilities as a result of growth. A study concerning the capacity and adequacy to accommodate students requires a separate study.

Current and projected enrollment at the Wallenpaupack and Delaware Valley School Districts as presented in the Existing Conditions Report October 2007 are also provided in Table 18: School District Enrollment and Projections.

**Table 18: School District Enrollment and Projections**

Year	Wallenpaupack Area School District	Delaware Valley School District
	LACKAWAXEN TOWNSHIP	SHOHOLA TOWNSHIP
2000-2001	3806/ <b>3711</b>	5051
2001-2002	3765/ <b>3798</b>	5182
2002-2003	3866/ <b>3858</b>	5182/ <b>5378</b>
2003-2004	3967/ <b>3908</b>	5378/ <b>5510</b>
2004-2005	3956/ <b>4005</b>	5519/ <b>5681</b>
2005-2006	4036/ <b>4097*</b>	5647/ <b>5763*</b>
2006-2007	4003/ <b>4084**</b>	5802/ <b>5838**</b>
2007-2008	<b>4046/4264</b>	<b>5858/5913</b>
2008-2009	<b>4096/4349</b>	<b>5988/6035</b>
2009-2010	<b>4118/4435</b>	<b>6095/6109</b>
2010-2011	<b>4120/4523</b>	<b>6215/6192</b>
2011-2012	<b>4153/4613</b>	<b>6362/6283</b>
2012-2013	<b>4208/4705</b>	<b>6519/6390</b>
2013-2014	<b>4272/4799</b>	<b>6673/6452</b>
2014-2015	<b>4341/4894</b>	<b>6838/6656</b>

Source: Pennsylvania Department of Education September 2005 Data.

\*School District total enrollment verified April 2006.

\*\*School District current enrollment verified March 2007.

Projected enrollment data in **Bold** text.

In order to determine the impact of Build-Out Scenarios on the school district, the projected number of school aged children (from Table 15: Population and Housing Adjustments and Table 14: Residential Build-Out Results) are added to the current 2006-2007 enrollment. The assumption is that all children of school age will be attending a facility in either the Wallenpaupack or the Delaware Valley School District. The following table illustrates the potential change in enrollment as a result of the additional students.



**Table 19: Enrollment and Expenditure Projections – Build-Out Results**

Variable	CURRENT 2006-2007 School District Enrollment	Potential Additional School Aged Children from Low Density Residential Build-Out Results Based on Current Zoning	Potential Additional School Aged Children from Maximum Build-Out Results Based on Current Zoning	TOTAL Potential Enrollment Under Low Density Residential Build-Out Scenario (Existing Enrollment 2006- 2007 Plus Potential Additional)	TOTAL Potential Enrollment Under Maximum Build- Out Scenario (Existing Enrollment 2006- 2007 Plus Potential Additional)
School Aged Children Wallenpaupack School District <b>(LACKAWAXEN TOWNSHIP)</b>	4,084	652	2,062	4,736	6,146
School Aged Children Delaware Valley School District <b>(SHOHOLA TOWNSHIP)</b>	5,838	692	692	6,530	6,530
<b>TOTAL</b>	<b>9,922</b>	<b>1,344</b>	<b>2,754</b>	<b>11,266</b>	<b>12,676</b>
Total Expenditure Per Student (\$8,856 per student in the Delaware Valley School District and \$10,272 in the Wallenpaupack School District)*	<b>\$ 96,136,302</b>	<b>\$ 12,883,609</b>	<b>\$ 25,371,918</b>	<b>\$ 109,019,911</b>	<b>\$121,508,220</b>

*\*Based on 2006 expenditure per student per district from Pennsylvania Department of Education 2007 Datasets.*

Table 19: Enrollment and Expenditure Projections – Build-Out Results, illustrates that under **the Low Density Residential Build-Out Scenario** the projected number of school aged children (1,344 for the region) plus the current enrollment equates to 11,266 students (4,736 in the Wallenpaupack School District plus 6,530 in the Delaware Valley School District). The impact of the school aged children (based on Low Density Residential Build-Out) equates to approximately 60 less students than the Wallenpaupack School District’s projected enrollment for school year 2014-2015; and approximately 120 less students than the Delaware Valley School District’s projected enrollment for school year 2014-2015. **The table also illustrates that the cost to accommodate the additional 1,344 students at the 2006 expenditure rate per student per School District is approximately an additional \$12.9 million.**

**Under the Maximum Build-Out Scenario** the projected number of school aged children (2,754 for the region) plus the current enrollment equates to 12,676 students (6,146 in the Wallenpaupack School District plus 6,530 in the Delaware Valley School District). The impact of the school aged children (based on Maximum Build-Out) equates to approximately 1,200 more students than the Wallenpaupack School District’s projected enrollment for school year 2014-2015; and approximately 120 less students than the Delaware Valley School District’s projected enrollment for school year 2014-2015. **The table also illustrates that the cost to accommodate the additional 2,754 students at the 2006 expenditure rate per student per School District is approximately an additional \$25.4 million.**

According to the Pennsylvania Department of Education’s 2007 datasets the Wallenpaupack School District’s percentage of expenditure per student that is

derived from residential taxation accounts for approximately 76.22% of the total expenditure per student; the Delaware Valley School District's percentage of expenditure per student that is derived from residential taxation accounts for approximately 80.32% of the total expenditure per student. ***The implication is that either the school district attempts to receive more funding from state and federal resources to augment the budget for projected enrollment; or a change in taxation of residential and non-residential uses is made to augment the budget; or the amount of taxable properties is increased which do not use the school district's resources, such as non-residential taxable properties that do not send children to school.***

### Section 9.9 Libraries

The Pike County Public Library, as designated by the Pike County Board of Commissioners, serves all full-time and part-time residents of Pike County by providing the materials and services to meet their demands and expectations. Libraries associated with Pike County Public Library system include the following.

Lackawaxen Township Branch  
223 Route 590  
Greeley, PA 1825  
570-685-3100  
Hours: Tuesday, Wednesday and Friday 2 pm - 7 pm  
Sunday 10 am - 3 pm

Milford Branch: The Community House  
201 Broad Street  
Milford, PA 18337  
570-296-8211  
Fax 570-296-8987  
Hours: Monday and Tuesday 10 am - 9 pm  
Wednesday, Thursday, Friday and Saturday 10 am - 5 pm

New Dingman Township Branch  
100 Bond Court  
Milford, PA 18337  
Located on Log Tavern Road near the intersection of Route 739  
570-686-7045  
Hours: Monday, Tuesday and Friday 10 am - 6 pm  
Wednesday and Thursday 2 pm - 8 pm, Sunday 10 am - 2 pm

Source: <http://dvvsd.org> [Accessed 28 MAR 07].

The Delaware Valley School District has announced that the Delaware Valley High School Library is open Monday through Thursday from 2:45 p.m. to 4:30 p.m. to make the updated resources and technology available to the public which includes computers with Internet access, electronic encyclopedias, Microsoft Office 2000 and additional software applications. Community members are encouraged to take advantage of this opportunity to utilize the



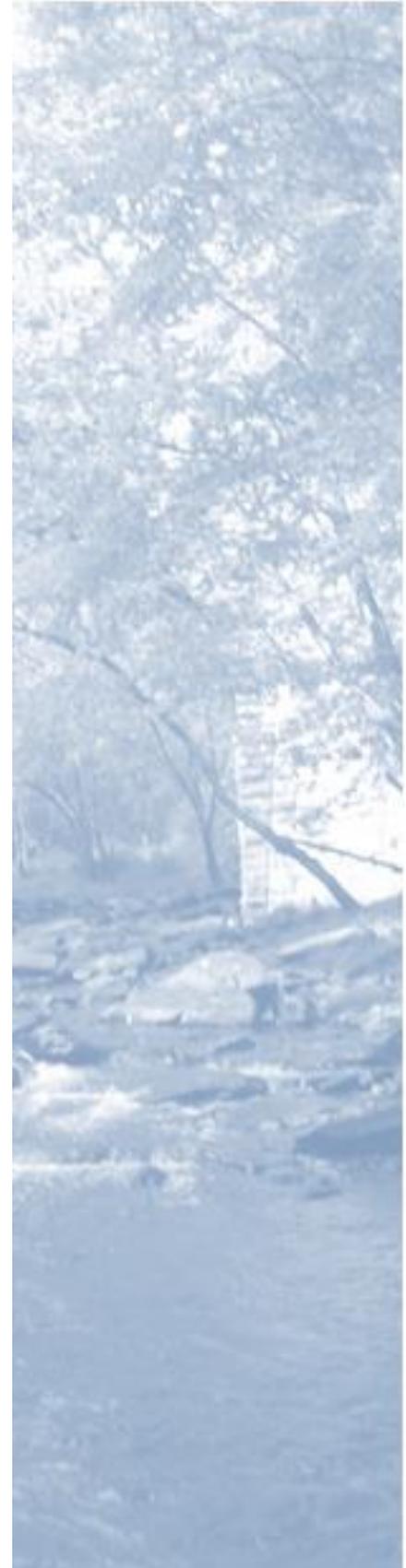
updated technology and resources available. These services are available without any cost to property owners in the Delaware Valley School District.

The following are also public libraries within ten miles of Lackawaxen Township and Shohola Township.

- Sunshine Hall Free Library, Sullivan County, NY
- Western Sullivan Public Library - Tusten-Cohocton, Sullivan County, NY

Source: <http://www.epodunk.com/> [Accessed 28 MAR 07].

Considerations to further augment or expand library facilities, services and resources, particularly with projected changes in population would be prudent.



## SECTION 10.0 FUTURE HOUSING PLAN

Article III of the MPC requires a plan to meet the housing needs of present residents and of those individuals and families anticipated to reside in the Township. Availability of decent, affordable housing for households of all ages and all income levels is an indicator of a sustainable community. This element of the plan focuses on current and projected housing and assessing housing needs using through use of a method referred to as housing capacity analysis.

### Section 10.1 Housing Projections

Housing unit and population projections were prepared as part of the build-out analysis and were used to develop several of the elements of the entire comprehensive plan including the Community Facilities and Services Plan, Conceptual Growth Areas, and Future Land Use Plan. Housing unit projections based in the build-out analysis were presented earlier in this document but are repeated in the following table.

### Section 10.2 Housing Capacity Analysis

A housing capacity analysis evaluates total lands available for residential development and the possible housing units permitted to develop using current land development regulations, housing trends, national standards and real estate trends. The analysis results can be compared to growth rates or population growth rates. The analysis can be used as a measure of the ability to provide for various housing types under current regulations. The housing capacity analysis can also be used to determine housing trends based upon certain market factors. The results of the housing capacity analysis provide valuable information to support land use policy decisions and can also be used to assess fiscal impacts of residential development.

#### Section 10.2.1 Seasonal Housing Trends

Results of the Build-Out Analysis addressing seasonal housing are depicted in Table 20: Residential Build-Out Results. This table illustrates seasonal units accounted for in the projected housing units for each of the Build-Out Scenarios. The data in the table support two concepts, seasonal housing will continue to be present in both municipalities and there is land available for housing development whether it is seasonal or year round housing.

***Availability of decent, affordable housing for households of all ages and all income levels is an indicator of a sustainable community.***

#### **Housing Goal**

*Create a housing plan to meet the needs of present residents and those individuals and families anticipated to reside in the region.*

#### **Housing Objectives**

- ❶ Conserve and preserve present housing stock.
- ❷ Enforce building and property codes.
- ❸ Rehabilitate existing housing stock.
- ❹ Provide for different dwelling types at appropriate densities for all income levels.

**Table 20: Residential Build-Out Results**

Variable	Lackawaxen Township						Shohola Township				
	Year 2000 Data	Estimated 2007 Population & Housing Units	Build-Out Low Density Results Based on Current Zoning (2007 Plus Build-Out)	ADDITIONAL HOUSING UNITS & POPULATION Difference: Build-Out Low Density Minus Year 2007 Estimates	Maximum Build-Out Results Based on Current Zoning (2007 Plus Build-Out)	ADDITIONAL HOUSING UNITS & POPULATION Difference: Maximum Build-Out Minus Year 2007 Estimates	Year 2000 Data	Estimated 2007 Population & Housing Units	Build-Out Low Density or Maximum Build-Out Results Based on Current Zoning (2007 Plus Build-Out)	ADDITIONAL HOUSING UNITS & POPULATION* Difference: Build-Out Low Density or Maximum Build-Out Minus Year 2007 Estimates	
<b>Total Population</b>	4,154	4,973	8,138	3,164	14,983	10,010	2,088	2,246	5,656	3,410	
<b>HOUSING OCCUPANCY</b>											
<b>Total housing units</b>	3,750	4,487	7,342	2,855	13,518	9,031	3,089	3,319	8,357	5,038	
Occupied housing units	1,694	2,028	3,319	1,290	6,110	4,082	836	899	2,265	1,365	
Vacant housing units	2,056	2,459	4,023	1,565	7,408	4,949	2,253	2,420	6,092	3,673	
For seasonal, recreational, or occasional use	1,863	2,230	3,649	1,419	6,718	4,488	2,055	2,207	5,557	3,350	
Persons Per <b>Occupied</b> Housing Units	2.45	2.45	2.45		2.45		2.50	2.50	2.50		
Persons Per Housing Unit	1.11					2,062	0.67				

\*There is no difference between the Build-Out Low Density and Maximum Build-Out for Shohola Township.  
Source: 2000 US Census Data, Pike County Building Permits, and 2007 Build-Out Analysis Report.

Local residential building permit data and trends indicate that seasonal housing has begun to be occupied as year-round housing, and the sale prices of housing have increased over the past five years (Refer to the Build-Out Analysis Report). These trends were echoed in a housing market analysis completed by the United States Department of Housing and Urban Development (HUD). A Comprehensive Market Analysis Report was completed by HUD for the Newburgh, New York – Pennsylvania housing market in April 2005. The study area included Orange County New York and Pike County Pennsylvania. A portion of the analysis focuses on projecting housing demand over the next two years (until 2007). The report included the following concerning Pike County:

*“Since 2000, Pike County has become an exurban bedroom community. Because this submarket is expected to remain a relatively affordable housing market when compared with other housing markets such as nearby Sussex and Warren Counties in Northern New Jersey, the level of population growth is expected to increase slightly during the forecast period.”*

*Source: Analysis of the Newburgh, New York – Pennsylvania Housing Market as of April 1, 2005.*

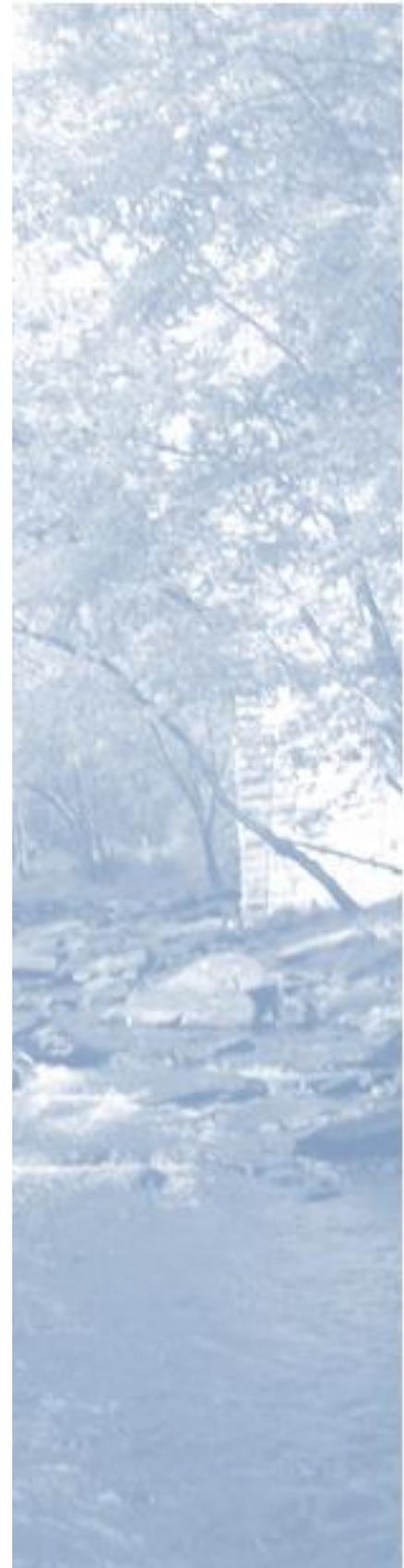
The study further discusses the seasonal units in the Housing Market Area (HMA) and the trends as they existed in 2004. Note that although the Lake Wallenpaupack Area referenced below is not in the Lackawaxen Township and Shohola Township study-area it is adjacent to the study area and is representative of waterfront homes.

*“The HMA contains a substantial number of vacation homes because of its proximity to New York City and its large tracts of rural land. Currently, there are an estimated 20,400 seasonal units are in the HMA, 75 percent of which are in Pike County. Seasonal units represent more than 40 percent of the housing inventory in Pike County. These seasonal units are located throughout the county, but a concentration of vacation homes surrounds Lake Wallenpaupack. Recently, prices have increased significantly for waterfront homes on Lake Wallenpaupack, with some homes now selling for more than \$1 million.”*

*Source: Analysis of the Newburgh, New York – Pennsylvania Housing Market as of April 1, 2005.*

### Section 10.2.2 Housing Sales

The HMA analysis discusses sales market conditions and the cost of homes being sold within the HMA. At the time of the study (2005) the median sales price of homes being sold in Pike County was \$159,999, and as of 2006 the average sales prices of homes in the Lackawaxen Township and Shohola Township area was \$204,400 (Refer the Build-Out Analysis Report). The HMA report indicates that although home sale prices will continue to increase within the Pike County area the sales prices will continue to be lower than the



region (Orange County New York / Pike County Pennsylvania) or areas adjacent to the region.

*“In Pike County, although home prices have increased, homes continue to be much more affordable than in adjoining areas in New York and New Jersey. Consequently, demand for single-family homes in Pike County is expected to continue to increase.”*

*Source: Analysis of the Newburg, New York – Pennsylvania Housing Market as of April 1, 2005.*

### Section 10.2.3 Development Trends

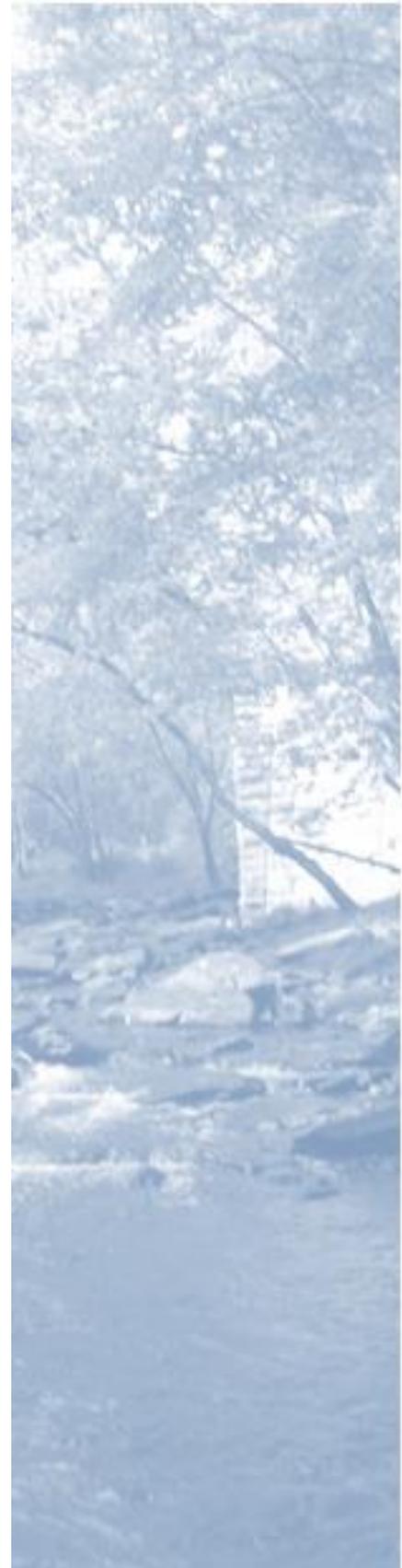
Recent trends and data indicate that housing development pressures will increase within Lackawaxen Township and Shohola Township. The housing development pressure will include conversion of seasonal units to year round units as well as new unit construction. The trends also suggest that although the sales price of homes will increase significantly within the next few years, they will still be considered as “affordable” as compared to units in a broader region.

The housing issues therefore for each municipality are a question of quality of life. Neither municipality expressed a desire to increase the number of “suburban” style subdivisions replete with cul-de-sacs and which devour agriculture, forest, or environmentally sensitive areas at an alarming rate. Neither municipality expressed a desire to replace private hunt clubs with housing developments, nor loose the rural residential characteristic of the community. Neither municipality denied that development pressures were forthcoming. Both municipalities have been adamant that property development rights belong with property owners.

### Section 10.3 Housing Strategy

A variety of housing strategies are represented in the Future Land Use Plan, the Growth Management Policy, the Conservation and Preservation Plan, the Community & Neighborhood Design Elements, and the Future Community Services Plan. The following provides a summary listing of housing strategies as they relate to the various Comprehensive Plan elements.

- **Land Use Plan** – The Land Use Plan provides for various land use classifications that permit a variety of housing types at a variety of densities across the region.
- **Growth Management Policy** – This housing plan strategy focuses on directing development into the growth areas particularly where there are community services and facilities or there is the ability to extend or offer community services and facilities.
- **Conservation and Preservation Plan** – Housing development should incorporate conservation design elements and preservation and conservation concepts resulting in preservation/conservation of open space and provision of recreation facilities.



- **Community & Neighborhood Design Elements** – Housing development should include key design elements that ensure long term quality housing that contributes to the character of the community.
- **Future Community Services Plan** – A variety of community services are identified to support existing and future residential land use patterns across the region.



## SECTION 11.0 ECONOMIC DEVELOPMENT PLAN

An Economic Development Plan is vital to the development of a self-sustaining community. The appropriate balance between residential and non-residential land uses will result in a community that is self-sustaining with respect to employment, commerce and tax revenues to support basic community services. The following plan addresses a key objective of the plan that is to provide a plan for the promotion of commercial and industrial development to create a sustainable community while preserving and conserving the rural character of the communities.

### Section 11.1 Economic Analysis

There has been limited economic analysis completed for the Lackawaxen Township and Shohola Township region. Generally, analysis and data are available for a larger region (Northeast Pennsylvania, Pocono Mountains Region, New York and Pennsylvania Region including Hudson River / Delaware River Corridor) and data specific to this region is not readily available. There exists however two agencies that can provide economic development guidance for the region, these agencies include the Pike County Industrial and Commercial Development Authority (IDA) and the Pike County Industrial Development Corporation (PIDCO). The following descriptions for each agency were derived from the 2006 Pike County Comprehensive Plan.

*"Both agencies are non-profit organizations dedicated to providing a stable employment base in Pike County while preserving the County's culture and natural beauty. Pike County's Economic Development agencies have adopted the following as their goals and action plan:*

***A healthy economy fosters a sustainable community by providing a balance of land uses to include housing, business development, employment, open space, recreation and tourism opportunities.***

#### **Economic Development Goal**

*Guide orderly, efficient and environmentally sensitive development to accommodate projected growth of the region while providing adequate public facilities and services and preservation/conservation goals to maintain a sustainable community.*

#### **Economic Development Objectives**

- ❶ Conserve and preserve present housing stock.
- ❷ Enforce building and property codes.
- ❸ Rehabilitate existing housing stock.
- ❹ Provide for different dwelling types at appropriate densities for all income levels.

**PIKE COUNTY INDUSTRIAL DEVELOPMENT CORPORATION (PIDCO)**

**GOALS & ACTION PLAN**

1. Develop sources of funding to support PIDCO endeavors, including but not limited to the sale of the Business Park.
  - a) Sell sites at the Business Park
  - b) Research grants or other funding sources that may have been overlooked at the local, state and federal levels
2. Provide educational opportunities to help local business succeed.
  - a) Cosponsor workshops with the IDA and PCCC
  - b) Survey local businesses to determine what topics might be most helpful
3. Make business aware of, and help them to, access economic stimulus programs.
  - a) Develop marketing plan to increase awareness of PIDCO and its mission. Consider a booth at events such as PCBA Home Show and Pear Blossom Tent Fair. Consider joint publication with IDA and PCCC
  - b) Consider the creation of a membership program to encourage broader participation by the "industrial" business community (leaving the "commercial" to the PCCC). Need to define benefits of such a membership
4. Assist with the implementation of the new County Comprehensive Plan.
  - a) Get a copy of draft plan (specifically, economic development sections) and review/discuss to determine areas PIDCO might assist
  - b) Establish a committee to meet with County Commissioners/Planners to discuss areas for PIDCO assistance
  - c) Consider joint effort with IDA to seek broader input from the Pike County business community on the economic development recommendations of the plan.



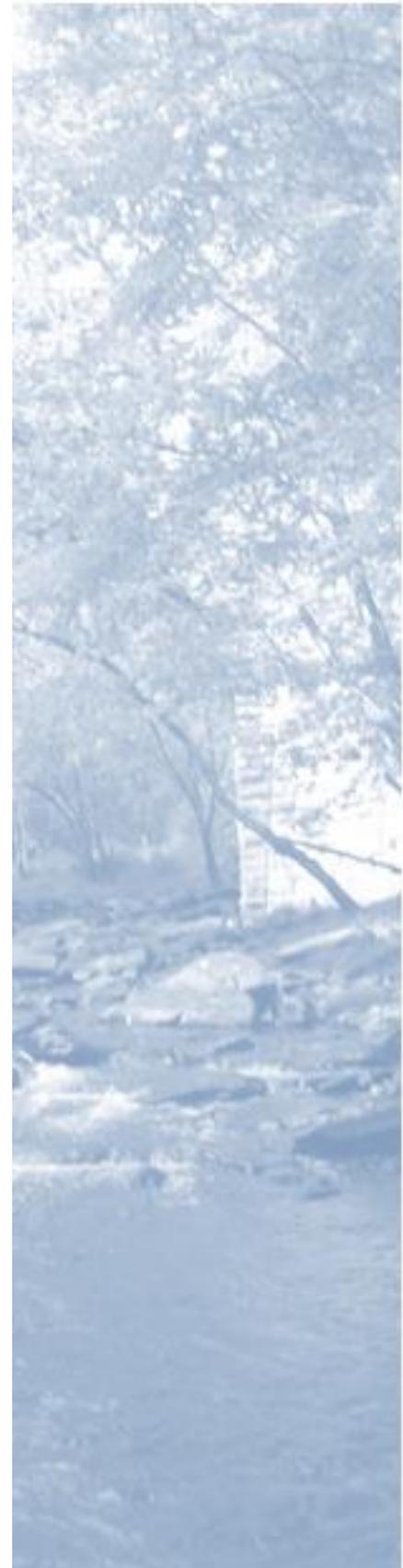
**PIKE COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY (IDA)**  
**GOALS & ACTION PLAN**

1. Work with county and local government to help provide the infrastructure needed to support the business community.
  - a) Meet with local government agents to find out their goals/needs for next few years to identify areas (e.g. roads and traffic) in which we can help and to ensure they have the information they need on available resources to help them meet their needs.
2. Assist with the implementation of the upcoming County Comprehensive Plan.
  - a) Obtain draft report and identify areas in which we may be helpful and meet with Commissioners/planners to discuss specific strategies/roles for IDA
  - b) Consider obtaining (mail or meetings) business community input on the economic development recommendations in the Plan.
3. Help attract appropriate businesses to Pike County.
  - a) Maintain database of available commercial properties
  - b) Continue to support the efforts of Penn's Northeast
  - c) Continue to develop the web site and other materials to promote area
  - d) Cooperate with and support PIDCO efforts to sell sites at the Business Park
4. Assist with the retention and expansion of existing local businesses.
  - a) Co-sponsor workshops that help local businesses understand availability of resources that will help them grow and succeed. Cooperate with the Pike County Chamber of Commerce (PCCC) and its initiative to get workshop information on its website for businesses
  - b) Maintain inventory of available commercial space and network with local businesses to identify space needs (e.g. BREP interviews)
  - c) Prepare a brochure of services that the IDA can provide to area businesses. Consider joint effort with PIDCO and PCCC
5. Assist Pike County entrepreneurs interested in starting up a new business.
  - a) Continue to act as liaison with the SBDC
  - b) Create a list of services/businesses we'd like to attract to Pike County and then promote to specific target industries/businesses
  - c) Maintain a list of businesses for sale and promote them on web site etc.
  - d) Conduct an annual workshop specifically for anyone interested in starting a business

*BREP = Business Retention and Expansion Program*

*More specifically, their major objective is to assist in the retention and expansion of existing firms and the attraction of new business to Pike County through the following:*

- *To provide such financial assistance, and training, as may be available to prospective firms interested in expanding or locating in Pike County.*



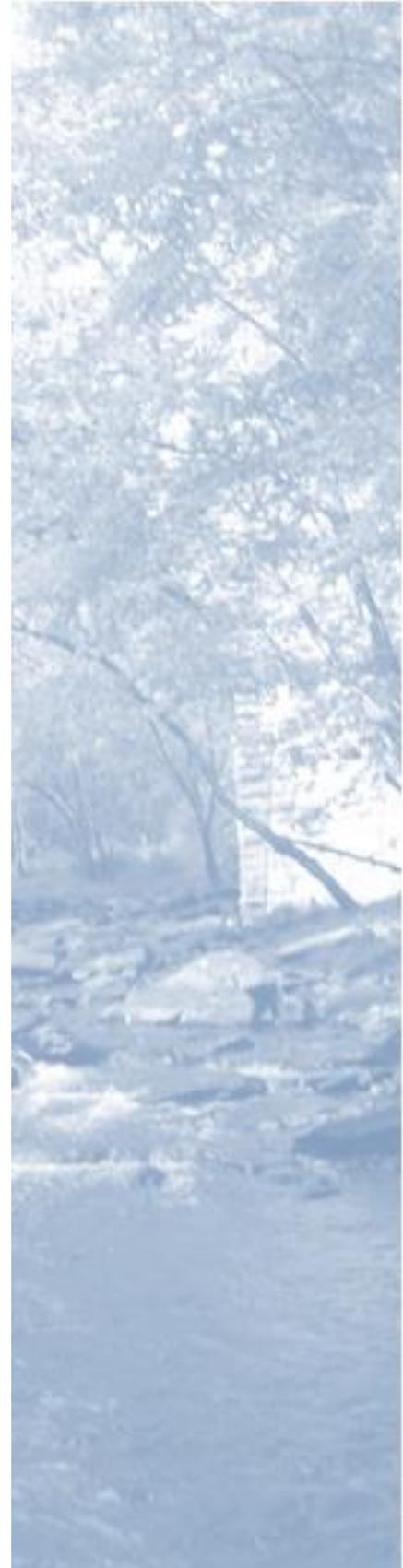
- *To provide confidential business consulting services, through the University of Scranton's Small Business Development Center, to all individuals interested in starting, expanding, or improving an existing small business.*
- *To provide research data, concerning Pike County's employment, population, financial aid, housing, tax rates, real estate, zoning, transportation and other facilities.*
- *To work with the County, State, and Federal agencies to provide such other assistance that may be available and required by interested firms."*

A housing market analysis was completed by the United States Department of Housing and Urban Development (HUD) which also included economic variables that describe the region. The Comprehensive Market Analysis Report was completed by HUD for the Newburgh, New York area which includes Orange County, New York and Pike County, Pennsylvania. A portion of the analysis, entitled "*Analysis of the Newburgh, New York – Pennsylvania Housing Market as of April 1, 2005*", includes a section on employment sectors and economic growth within the region (study area of the analysis) and trends for the next two years (2005 -2007). Included in the report was the following concerning Pike County:

*"Much of the economic growth in the HMA since the early 1990s has been the result of steadily expanding employment in the service-providing sectors. From 2000 to the Current date, nonfarm employment has increased by an average of 1,600 jobs a year. Employment growth in three service-providing sectors—leisure and hospitality; trade, transportation, and utilities; and local government—has contributed most of the job gains in the HMA. Since 2000, nonfarm employment in the manufacturing sector has declined an average of 500 jobs annually."*

*Source: Analysis of the Newburgh, New York – Pennsylvania Housing Market as of April 1, 2005.*

Table 21; derived from the report, reiterates that employment sectors illustrating growth include service providing sectors, such as leisure and hospitality; trade, transportation, and utilities; and local government. Note that highlighted rows of Table 21 represent those sectors that have increased by at least 2,000 jobs since 2000.



**Table 21: Non-farm Employment by Industry (2000-2005)\***

Employment Sector	2000	2001	2002	2003	2004	Previous 12 Months	Current 12 Months
<b>Total Nonfarm</b>	<b>131,300</b>	<b>132,600</b>	<b>134,800</b>	<b>136,700</b>	<b>139,200</b>	<b>137,300</b>	<b>139,800</b>
<b>Total Private</b>	<b>102,800</b>	<b>103,600</b>	<b>104,800</b>	<b>106,500</b>	<b>108,900</b>	<b>107,000</b>	<b>109,400</b>
Goods-Producing	16,600	15,900	15,100	14,600	14,300	14,500	14,200
Nat.Res & Mining	5,300	5,600	5,600	5,600	5,700	5,600	6,700
Manufacturing	11,300	10,200	9,500	9,000	8,600	8,900	8,600
<b>Service-Providing</b>	<b>114,800</b>	<b>116,800</b>	<b>119,700</b>	<b>122,100</b>	<b>124,900</b>	<b>122,900</b>	<b>125,600</b>
Trade, Trans. & Util.	33,200	33,900	34,700	35,100	35,800	35,200	36,000
Wholesale Trade	7,000	7,700	7,900	7,800	8,000	7,900	8,000
Retail Trade	20,400	20,700	21,500	21,900	22,300	22,000	22,400
Information	3,000	3,100	2,700	2,600	2,500	2,500	2,400
Financial Activities	5,800	5,700	5,800	6,000	6,300	6,100	6,400
Prof. & Bus. Services	9,300	9,800	9,900	10,200	10,300	10,200	10,300
Edu. & Health Services	18,400	18,400	18,800	19,400	19,900	19,500	20,000
Leisure & Hospitality	10,900	11,200	11,900	12,700	13,800	13,100	13,900
Other Services	5,600	5,600	5,800	5,900	6,000	5,900	6,100
<b>Government</b>	<b>28,600</b>	<b>29,100</b>	<b>30,000</b>	<b>30,200</b>	<b>30,400</b>	<b>30,300</b>	<b>30,400</b>
Federal	6,000	5,600	5,800	5,900	5,400	5,400	5,400
State	3,100	3,300	3,200	3,200	3,200	3,200	3,200
Local	19,400	20,200	21,100	21,600	21,800	21,700	21,800

*\*In the Orange County New York and Pike County Pennsylvania Region*

*Highlighted Rows represent those sectors that have increased by at least 2,000 jobs since 2000.*

*Source: New York State Department of Labor, HUD Analysis of the Newburgh, New York – Pennsylvania Housing Market, April 2005.*

A comparison was made between the job sectors showing growth since 2000 and permitted uses by zoning district for Lackawaxen Township and Shohola Township. The inference is that these sectors are growing and providing new jobs and therefore what types of businesses that offer those jobs would be likely (according to Zoning criteria only) to locate in the Lackawaxen Township and Shohola Township region? The following tables were derived from the Build-Out Analysis Report and illustrate the acres available for development, the potential square footage of non-residential space that could be generated from each zoning district, and the permitted non-residential uses that match the top three growing job sectors.

**Table 22: Land Available for Development & Type of Permitted Uses: Lackawaxen Township**

Zoning District	Land Available for Development (Acres)	Build-out Assumption	Potential Non-Residential Space (Square Feet)	ZONING DISTRICT USES Uses Permitted by Conditional Use that Match the 3 Top Job Growth Sectors (Leisure and hospitality; Trade, Transportation, and Utilities; and Local Government)
Recreational Vehicle Park District (RV)	153.5	Low Density Residential Build-Out Assumes: No Build  Maximum Build-Out Assumes: 100% Residential	Low Density Residential Build-Out: 0 No Build as Per Build-Out Assumption  Maximum Build-Out: 0 No Build as Per Build-Out Assumption	Amusements parks, bed and breakfast establishments, golf courses, and tourist recreation and lodging facilities.
Neighborhood Development District (ND)	961.0	100% Non-residential	16,744,328	Amusement parks, bed and breakfast establishments, boarding and tourist homes, bulk fuel storage facilities, bus terminals, business and professional offices, commercial recreation facilities, convenience stores, country clubs, hotels, motels, and other tourist lodging facilities, personal service shops, private recreation facilities, restaurants, retail and service establishments, shopping centers and malls, specialty shops, studios, tourist recreation and lodging facilities, truck stops, and truck terminals.
Low Density Residential District (R-1)	5,709.2	100% Residential Assumes that parcels smaller than 2.0 are aggregated	0 No Build as Per Build-Out Assumption	Bed and breakfast establishments, stables, country clubs, and golf courses (excluding mini-golf, and ranges).
Rural District (RU)	17,180.9	Low Density Residential Build-Out Assumes: No Build  Maximum Build-Out Assumes: 90% Residential 10% Non-residential	Low Density Residential Build-Out: 0 No Build as Per Build-Out Assumption  Maximum Build-Out: 14,967,997	Bed and breakfast establishments, commercial stables, country clubs, golf courses (excluding mini-golf, and ranges), restaurants, commercial swimming pools, and tourist recreation and lodging facilities.
<b>Subtotal (Low Density Residential Scenario)</b>	<b>24,004.5</b>		<b>16,744,328</b>	
<b>Subtotal (Maximum Scenario)</b>	<b>24,004.5</b>		<b>31,712,325</b>	

Source: Build-Out Analysis Report and current Zoning Ordinances.

**Table 23: Land Available for Development & Type of Permitted Uses: Shohola Township**

Zoning District	Land Available for Development (Acres)	Build-out Assumption	Potential Non-Residential Space (Square Feet)	ZONING DISTRICT USES Uses Permitted by Conditional Use that Match the 3 Top Job Growth Sectors (Leisure and hospitality; Trade, Transportation, and Utilities; and Local Government)
Commercial, General (C-1)	169.6	100% Non-residential	2,955,482	Adult stores, bulk fuel storage facilities, commercial recreation facilities, hotels, motels, and other tourist lodging, personal service shops, restaurants, retail stores, and truck terminals.
Neighborhood Commercial (NC)	62.9	50% Residential 50% Non-residential	547,860	Restaurants (sit-down), retail stores, service establishments.
Open Space (OS)	122.4	100% Residential	0 No Build as Per Zoning Ordinance	None Listed.
Residential Forest (RF) (Less than 10 Acres)	859.3	75% Residential 25% Non-residential (Non-residential permitted as Conditional Use)	3,275,161	Campgrounds, country clubs, golf courses, hotels, commercial stables, private stables, public waterbody access areas, recreational vehicle parks, shooting ranges, small lodging facilities, commercial swimming pools, tourist recreation facilities.
Residential Forest (RF) (10 Acres or Greater)	7,362.5	75% Residential 25% Non-residential (Non-residential permitted as Conditional Use)	28,062,030	Campgrounds, country clubs, golf courses, hotels, commercial stables, private stables, public waterbody access areas, recreational vehicle parks, shooting ranges, small lodging facilities, commercial swimming pools, tourist recreation facilities.
Residential Low Density (R-1)	972.0	100% Residential	0 No Build as Per Zoning Ordinance	Golf courses and private stables.
<b>Subtotal</b>	<b>9,548.7</b>		<b>34,840,533</b>	

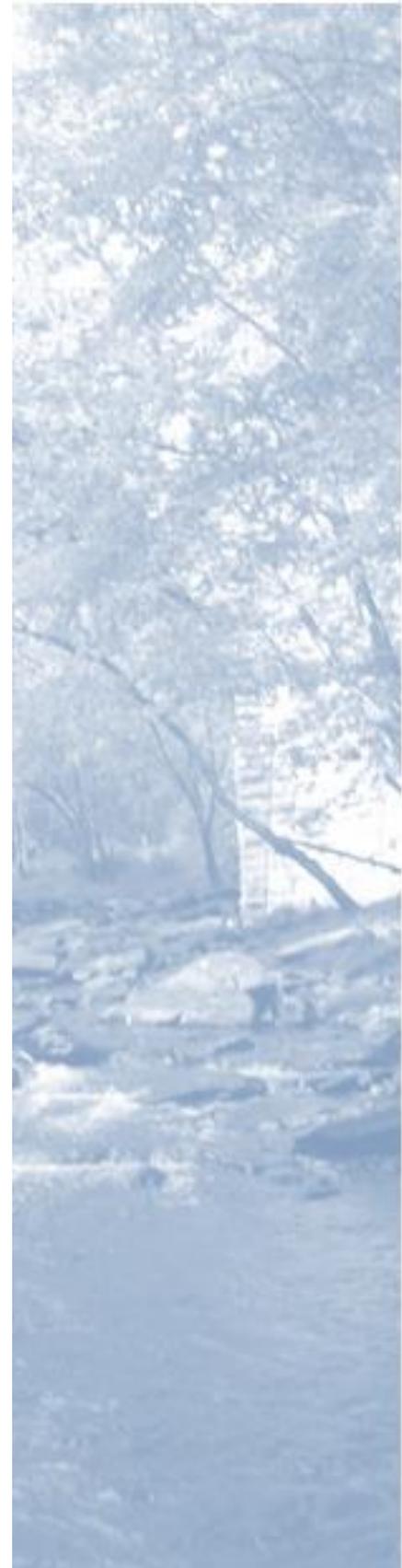
Source: Build-Out Analysis Report and current Zoning Ordinances.

Based on the comparison of permitted commercial uses per district as they pertain to the three fastest growing employment sectors of the region, there may be a need to revisit the permitted uses in Zoning Districts to accommodate the three sectors (leisure and hospitality; trade, transportation, and utilities; and local government) or to direct opportunities toward the areas identified in the Future Land Use Plan, Growth Management Policies, Future Transportation Plan, Future Community Services Plan, and Open Space, Greenways and Recreation Plan, or to direct uses away from Zoning Districts or areas identified in the Future Conservation / Preservation Plan.

Although the comparison made in Table 21 is not a complete market analysis it provides a starting point for further investigation and consideration by Lackawaxen Township, Shohola Township and Pike County Industrial and Commercial Development Authority (IDA), and Pike County Industrial Development Corporation (PIDCO). Some of the use considerations may include uses as identified by the community through the Lackawaxen Township & Shohola Township Community Survey including, non-franchised (locally-owned) restaurants, movie rentals, movie theatres, grocery store, deli/coffee shop, and bakery. Additional uses for consideration which address the top three sectors for which jobs are being created include outdoor amphitheatre, multi-use or multi-season complexes (sports arenas), performing arts center, and active recreation service centers or shops (canoe rental, bicycle rental, repairs, outdoor stores, and hunting stores).

### **Section 11.2 Village Development Opportunities**

The following table provides guidelines for planning the appropriate mix of land uses to support traditional neighborhood development patterns in villages. The guidelines, when compared to land use percentages for Lackawaxen Village and Shohola Village (as illustrated in the Village Exhibits), suggest the need for mixed land uses in the village core such as first floor commercial with upper floors apartments as well as additional uses within the village consisting of high density residential (condominiums, apartments or townhouses), commercial and employment uses (office and industrial). Table 24 provides approximate percentages of land uses based on land use categories used in the 2007 General Land Use map.



**Table 24: Suggested Mix of Land Uses in Villages**

Land Use Type	Standard*	Existing Lackawaxen Village Percentages	Existing Shohola Village Percentages
<b>Low – Medium Density Residential</b>	Maximum of 60%	42.6%	2.4%
<b>High Density Residential</b>	Minimum of 20% and Maximum of 60%	1.4%	2.8%
<b>Workplace Uses (Office, Industrial)</b>	Minimum of 2% and Maximum of 30%	0.0%	0.8%
<b>Commercial Uses</b>	Minimum of 2% and Maximum of 30%	0.5%	3.5%
<b>Civic Uses</b>	Minimum of 2%	2.0%	1.9%
<b>Public Space</b>	Minimum of 5% or 3 acres ( <i>whichever is greater</i> )	13.6%	1.7%
<b>Vacant / Undeveloped Lands (including Agriculture Lands)</b>		39.9%	87.0%

\*Source: *Architectural Graphic Standards, Tenth Edition, the American Institute of Architects*

### Section 11.3 Economic Development Strategies

Lackawaxen Township and Shohola Township are uniquely situated for economic development in that, there is current zoning available for non-residential uses; trends indicate that growth (in terms of new residents) is forthcoming, trends infer that new residents will seek additional services; and there is a strong community desire (from current populations and incoming populations) to conserve and preserve the natural beauty inherent to the region. The region should seek good economic partners and businesses that provide a sound economic base to the region and that are compatible with the character of the region and which provide goods and services to current and projected populations.



## SECTION 12.0 OPEN SPACE, GREENWAYS AND RECREATION PLAN

Lackawaxen and Shohola Townships agreed to participate in the development of a Multi-Municipal Open Space, Greenways and Recreation Plan. Please refer to that plan for details. The plan is consistent with the various elements of this plan. The following provides relevant information and maps identifying opportunities for open space, park, recreation and greenways as well as the future open space, greenways and park/recreation facilities.

### Section 12.1 Opportunities for Open Space, Greenways and Recreation

As population grows, there will be a greater demand for open space, park, recreational facilities and greenways to meet passive and active recreational needs. Map 10: Potential Opportunities for Active Recreational Space depicts undeveloped areas with slopes less than 25% in contiguous areas greater than five acres. Additionally, the map depicts population centers with a ½ and 1 mile radius to identify lands suited for recreational opportunities within walking distance of these identified population centers. Map 10 is also referred to as the *Map of Potential Conservation Lands* depicting opportunities for open space, parks, recreation, greenways and lands for conservation/preservation including hunting and fishing clubs, Natural Areas Inventory sites and environmentally sensitive areas.

### Section 12.2 Future Open Space, Greenways and Park/Recreation Facilities

Map 11: Proposed Open Space, Greenways and Park/Recreational Space Plan identifies population centers and key points of interest as hubs with opportunities to make connections using Scenic Byways, water trails, roadways and trails/paths. Additionally, the plan identifies areas in proximity to designated growth areas that should be considered for in whole or part as potential parks and recreational space. Greenways for public access will require consideration by private property owners. Greenways preserved as private open space provide unique opportunities for wildlife habitats and preservation of riparian buffers along water ways. This plan is consistent with other plan elements described and mapped.

### Section 12.3 Historic and Natural Resources

These features are addressed in this plan in the Land Use section as well as the Multi-Municipal Open Space, Greenways and Recreation Plan. Refer to Map 3 for an inventory of historic and natural resources.

***Community sustainability and green infrastructure are interrelated with respect to economic development and preservation of natural resources for use by current and future generations.***

#### **Open Space, Greenways and Recreation Goal**

*Create a plan to address local and regional recreation, preservation and conservation needs including parks and recreation facilities and programs, greenways and open space.*

#### **Open Space, Greenways and Recreation Objectives**

- ❶ Preserve and conserve natural resources.
- ❷ Identify public park and recreation facilities and programs.
- ❸ Identify opportunities to utilize greenways to provide connections/linkages to a variety of hubs or destinations.
- ❹ Preserve and conserve open space and greenways through private preservation opportunities.

## SECTION 13.0 GOVERNMENT

There are numerous governmental agencies, activities, functions and institutions which cut across municipal boundaries. Intergovernmental cooperation is the key to success when there are shared interests of citizens such as in the case of the Lackawaxen/Shohola Region with a strong desire to preserve and conserve the natural beauty of the townships resulting in the ability to share land uses across regional landscapes, when economies of scale can be achieved through cooperative efforts resulting in maximizing township resources and when effectiveness of government activities, services and programs can be achieved as a result of sufficient funding, staffing and administration. The following sections outline the benefits of planning and implementing together.

### Section 13.1 Planning Together

The Townships already share a variety of services, facilities and programs such as athletic facilities and programs, natural and rural environments, shopping districts, churches, service clubs and other similar aspects of community. There are several key advantages to plan together such as economic, environmental, fiscal, legal and political reasons for planning and implementing together. The following briefly describes these reasons and can be further researched in publications such as *“Planning Beyond Boundaries, A Multi-Municipal Planning and Implementation Manual for Pennsylvania Municipalities.”*

Provisions of Article XI of the MPC authorizes contiguous municipalities to use intergovernmental cooperative agreements as a legal mechanism to work together to develop a comprehensive plan and to implement the plan through developing or amending implementing ordinances to ensure consistency. The MPC no longer requires municipalities to municipalities who agree to plan together to adopt a joint zoning ordinance in order to achieve a legally defensible distribution of permitted land uses among participating municipalities. Therefore, the Townships can have their own zoning ordinances so long as its actions are generally consistent with multi-municipal commitments made to each other.

#### Section 13.1.1 Economic Development

Municipal officials have a responsibility to attract economic development to their communities to provide jobs and tax revenues to support a variety of municipal services and the school district. The types of economic development for this region is outlined in this plan element. The ability to target economic development sites as part of a growth area providing adequate public facilities is beneficial to both the township as well as the development community. Growth areas (*both designated growth areas and future growth areas*) have been designated as part of this plan to address growth needs. Studies have documented that property values increase in well planned communities with flexible zoning consistent with the plan.

***Affective governance is leadership dedicated to maintaining a sustainable community through decision making emphasizing smart growth through regulation and design of development in harmony with the ecosystem of the region and financial stability.***

#### **Government Goal**

*Provide an adequate organizational structure to support provision and maintenance of adequate public facilities, services and programs as well as efficiently administered policies, procedures, regulations and laws.*

#### **Government Objectives**

- ❶ Promote inter-governmental cooperation to maximize public resources.
- ❷ Develop partnerships with various levels of government.
- ❸ Develop public/private partnerships to support goals and objectives of the plan.

### **Section 13.1.2 Preservation of Environmental Quality and Resource Lands**

Natural resources span political boundaries and for this region provide a unique economic development resource. This multi-municipal plan enables the townships to plan for conservation of resources that cross municipal boundaries for the purposes stated in the Conservation/Preservation element of this plan as well as the Multi-Municipal Open Space, Greenways and Recreation Plan.

### **Section 13.1.3 Fiscal Savings**

Cooperation between the townships on a variety of municipal functions can result in economies of scale related to planning, studies, programs, staffing and implementation of services and projects.

### **Section 13.1.4 Legal Advantages**

The MPC allows for the townships to provide for all required uses across the region, to allocate uses more intelligently to meet local and regional objectives and to strengthen their individual zoning ordinances against validity challenges. This plan has provided the townships to plan and design their communities in a manner that allows them to achieve the vision for the region to preserve a rural character of life for current and future residents. The townships can amend and adopt local development and conservation ordinances consistent with this plan to achieve the various plan goals and objectives provided all uses and a fair share of regional housing growth is planned for the region. Various state agencies rely on multi-municipal plans and ordinances when reviewing applications for funding, projects and permitting of facilities.

### **Section 13.1.5 Political Cooperation**

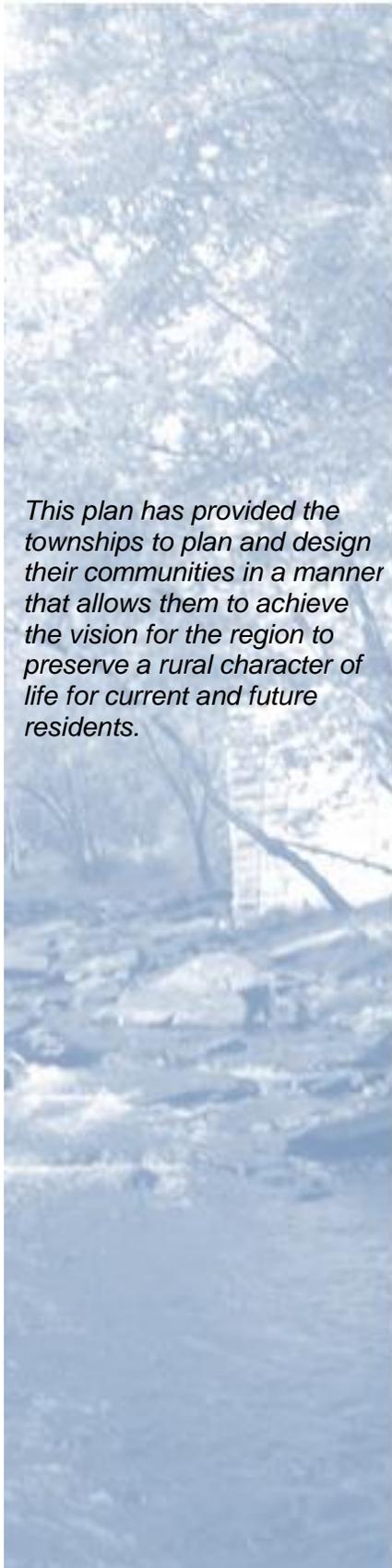
Cooperative planning has led to the identification of common needs and common solutions while each township has the ability to retain its own autonomy and governing bodies. Implementation of this plan can be accomplished through cooperative agreements and ordinances with the freedom for each township to regulate local uses and resources within the context of this multi-municipal plan.

### **Section 13.2 Implementing Together**

There are a variety of planning tools and techniques that can be implemented as a result of this multi-municipal plan as well as cooperative agreements can outline a variety of actions to implement the plan. The following describes various mechanisms to support municipal cooperation.

#### **Section 13.2.1 Specific Land Use Tools**

Article XI of the MPC allows the townships to adopt a regional transfer of development rights (TDR) program. This program would allow for owners of agricultural, forested and natural resource lands to profit from the sale of development rights and to keep their land rural while managing growth in areas better suited to adequately support infrastructure demands of growth.



*This plan has provided the townships to plan and design their communities in a manner that allows them to achieve the vision for the region to preserve a rural character of life for current and future residents.*

Article XI of the MPC also allows the townships to share tax revenues and fees through a program to be spelled out in a cooperative agreement. This would allow for sharing of land uses and the taxes associated with those uses.

### Section 13.2.2 Cooperative Implementation Agreements

This section outlines the MPC requirements for a Cooperative Implementation Agreement as a next step after adoption of the Multi-Municipal Comprehensive Plan. Section 1104 of the MPC outlines the various provisions that **must** be in a cooperative implementation agreement that may be adopted by the townships for the purpose of implementing this multi-municipal plan.

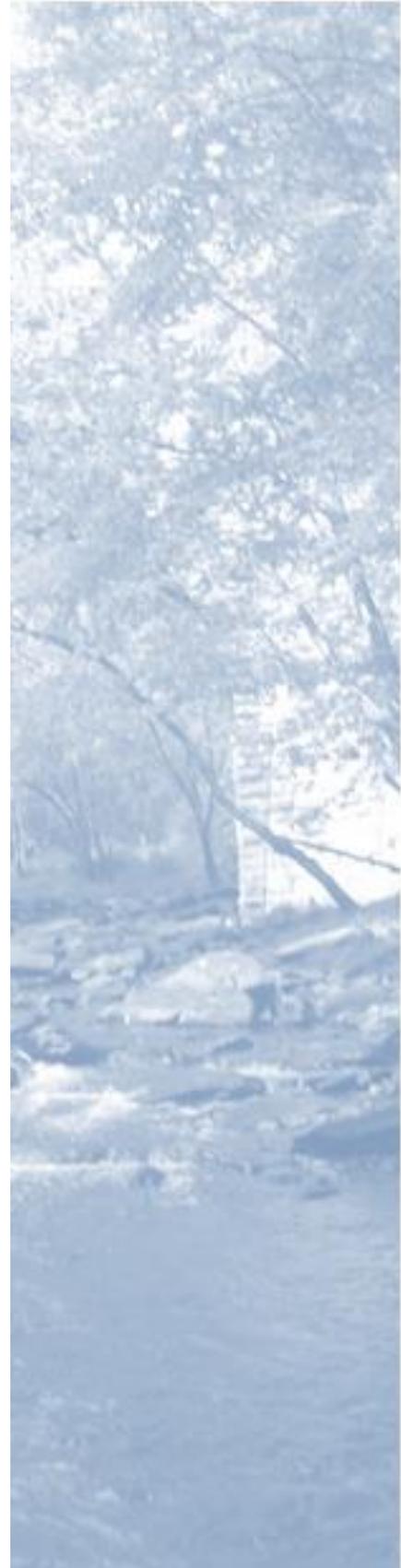
- Establish the process that the participating municipalities will use to achieve general consistency between the Multi-Municipal Comprehensive Plan and zoning ordinances, subdivision and land development and capital improvement plans within participating municipalities, including adoption of conforming ordinances by participating municipalities within two years and a mechanism for resolving disputes over the interpretation of the Multi-Municipal Comprehensive Plan and the consistency of implementing plans and ordinances.
- Establish a process for review and approval of developments of regional significance and impact that are proposed within any participating municipality. Subdivision and land development approval powers under the MPC shall only be exercised by the municipality in which the property where the approval is sought.
- Establish the role and responsibilities of participating municipalities with respect to implementation of the plan, including the provision of public infrastructure services within participating municipalities, affordable housing and purchase of real property, including rights-of-way and easements.
- Require a yearly report by participating municipalities to the County concerning activities carried out pursuant to the agreement during the previous year. Such reports shall include summaries of public infrastructure needs in growth areas and progress toward meeting those needs through capital improvement plans and implementing actions, and reports on development applications and dispositions for residential, commercial and industrial development in each participating municipality for the purpose of evaluating the extent of provision for all categories of use and housing for all income levels within the region of the plan.
- Other items that **may** be included are further outline in Section 1104.

Source: MPC, Section 1104.



### Section 13.2.3 Council of Governments

The Townships have the ability to cooperate with municipal partners at a larger regional level through membership in a Council of Governments (COG). COGs are general or multipurpose organizations. They are established to enable a group of municipalities to cooperate on various aspects of authority as well as work together on various programs in the mutual interest of the membership. A council of governments is both a method of cooperation and a cooperative program. For more details about COGs, reference the publication titled *“Intergovernmental Cooperation Handbook”* published by the Pennsylvania Governor’s Center for Local Government Services.



## SECTION 14.0 INTERRELATIONSHIPS OF PLAN ELEMENTS

Plans for future growth within the Townships were developed considering the following regional planning issues in a holistic manner:

- existing development patterns,
- the transportation network and the ability to provide future access,
- lands available for development and redevelopment,
- the need for non-residential development,
- the need for mixed uses in the villages areas,
- existing water services capabilities and the ability to make logical extension of both water and sewer facilities to adequately support future development,
- mobility within the villages with emphasis on non-vehicular modes,
- preservation of natural resources and prime agricultural lands, and
- greenway connections and increase of park, recreation and open spaces.

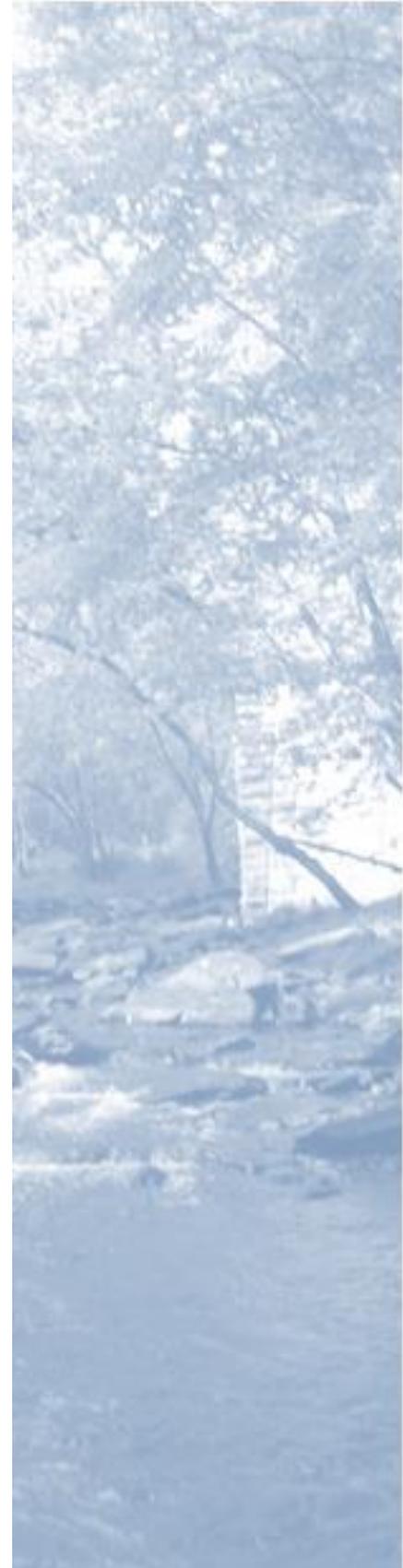
This holistic approach to planning for future growth was conducted based upon citizen input, active participation by the CAC and technical assistance from Pike County Office of Community Planning and the Planning Consultant. Plan elements were prepared based upon a series of work sessions with the CAC, technical analysis and thoughtful planning to integrate various plan elements to achieve a desired growth management strategy for future development of the region. The Future Land Use Plan depicts the distribution, general location and inter-relationship of land use for residential, commercial, industrial, open space, recreation, and other categories of public and private uses of land. The compatibility section of the plan contains analysis of consistency/inconsistency of existing zoning districts and recommendations for changes in regulations to support future land use patterns depicted on the Future Land Use Plan. The Future Land Use Plan is further supported by the following sections of the plan in the manner described below demonstrating the interrelationship of plan elements.

- The Future Housing Plan identifies trends and housing capacity to support development of the Future Land Use Plan.
- The Future Community Facilities and Services section of the plan as well as the Build-Out Analysis (an Appendix item to this plan) reveals the basis for decisions to support development of a plan that fully integrates all elements.
- The Future Transportation Plan identifies vehicular and non-vehicular facilities necessary to provide access and linkages to existing and future land uses with an understanding for connections needed to support residential and non-residential growth and overall projected traffic demands.



*Rohman's Inn – Shohola Village*

- The Economic Development Plan builds upon the Village Enhancement section and provides a framework for potential expansion opportunities as well as provides a basis for rural development opportunities in support of community development goals, conservation and preservation of natural resources and eco-tourism strategies.
- The Multi-municipal Open Space, Greenways and Recreation Plan identifies the requirements of public spaces based upon projected future populations and desired land use patterns in the Future Land Use Plan as well as provides opportunities for non-vehicular linkages to hubs within the region, community facilities, and natural amenities. The Future Land Use plan was developed considering areas for open space, greenway connections and park and recreational needs.
- The Housing Plan identifies strategies supported by the land use plan to allow for a variety of housing types to support households of all income levels while promoting protection of environmentally sensitive areas and providing for non-residential economic development opportunities to provide for a balanced tax base. This is demonstrated through the Land Use Plan, Conservation/Preservation Plan as well as the Build-Out Analysis.



## SECTION 15.0 COMPATIBILITY WITH SURROUNDING MUNICIPALITIES

The MPC requires that the existing and proposed development of the Townships be compatible with the existing and proposed development and plans in contiguous municipalities. The MPC also requires identification of measures to provide buffers and transitions in any areas where there may be incompatible land uses along adjoining boundaries. This section addresses plan consistency with respect to the 2006 Pike Comprehensive Plan, and future land use plans as derived from current Zoning Districts for Berlin Township Wayne County, Palmyra Township Wayne County, and the following Townships of Pike County; Palmyra Township, Blooming Grove Township, Dingman Township, Milford Township, and Westfall Township.

Overall, the plan is generally consistent with plans for adjoining municipalities as well as Pike County. Refer to Map 12: Current Zoning & Surrounding Municipalities Zoning and the following tables which were developed using respective Zoning district descriptions and purposes. These descriptions further support general consistency between proposed future land uses and surrounding municipalities.

**Table 25: Wayne County Municipalities – Zoning Districts Adjacent to Lackawaxen Township**

WAYNE COUNTY MUNICIPALITIES	
<b>Berlin Township – No Zoning</b>	There is currently no Zoning in Berlin Township. A review of aerial photography of the area (2005) indicates that the area is rural in nature similar to the area contiguous to Lackawaxen Township. There appears to be consistency across Municipal and County boundaries.
<b>Palmyra Township RR – Rural Residential</b>	Although no Zoning District description was available for Palmyra Township Wayne County, there is a Rural Residential District adjacent to Rural District (RU) of Lackawaxen Township

*Source: Pike County Office of Community Planning, Palmyra Township Zoning Map March 2005.*



*Greenway along Delaware River – Lackawaxen Village*

**Table 26: Pike County Municipalities – Zoning Districts Adjacent to Lackawaxen & Shohola Townships**

PIKE COUNTY MUNICIPALITIES	
Palmyra Township Zoning	
<b>R - Residential District</b>	The intent of the Residential District is to provide land in a sufficient amount to accommodate the residential needs of expected future populations and also to provide for others uses of a generally passive nature associated with residential uses. <b><i>This district is compatible with Lackawaxen's bordering R-1 and RU Districts (refer to Map 12).</i></b>
<b>S - Special Purpose District</b>	The intent of the Special Purpose District is to designate certain areas of the Township for future residential and resort commercial type development, while concurrently preserving the rural, recreational and natural setting critical to tourism. It is recognized that much of the Special Purpose District is of limited development capability because of natural land use limitations and it is for this reason that most uses must be conditioned on satisfactory proposals to overcome those limitations. It is further intended that the Special Purpose District serve to provide areas for the location of various types of residential and seasonal uses in those areas where natural conditions will allow. <b><i>This district is compatible with Lackawaxen's bordering RU and R-1 Districts (refer to Map 12).</i></b>
<b>CC – Community Commercial District</b>	The intent of the Community Commercial District is to provide land for expansion of the Township's recreational and economic resources and to service the transient population which annually is attracted to the Lake Wallenpaupack Region. It is also intended to provide a somewhat broader range of other uses in conjunction with residential uses to meet the needs of the surrounding community. <b><i>This district is compatible with Lackawaxen's bordering RV District (refer to Map 12).</i></b>
<b>HC - Highway Commercial District</b>	The intent of the Highway Commercial District is to provide areas to meet the needs of the residential and transient populations of the region within which a wide variety of uses will be permitted, including manufacturing. Residential uses are discouraged in the District due to relative lack of control over commercial uses which might have a negative impact on residential uses located near them. <b><i>This district provides uses that meet the needs of Lackawaxen's bordering R-1 District with respect to employment and commerce (refer to Map 12).</i></b>



**PIKE COUNTY MUNICIPALITIES**

**Blooming Grove Township Zoning**

<p><b>MU – Multiple Use District</b></p>	<p>The intent of the MU District is to provide for the protection of the health, safety and general welfare of the residents of Blooming Grove Township, to provide for a wide range of uses throughout the District, and to provide for the orderly and compatible development of all uses in the District. <b><i>This district is compatible with Lackawaxen’s bordering R-1, RU, RV and ND Districts (refer to Map 12).</i></b></p>
<p><b>Dingman Township Zoning</b></p>	
<p><b>CP – Conservation and Parks District</b></p>	<p>This district is intended to preserve the scenic beauty of parks and open spaces and protect special natural areas including the Delaware Water Gap Recreation Area, state Game Lands and State Forest Lands. Special performance standards are provided in this Zoning Ordinance so that the private lands within the district are developed in such manner to afford the reasonable use of such parcel and concurrently afford protection the character of the District and the identified special natural areas. <b><i>This district is compatible with Shohola’s bordering OS District (refer to Map 12).</i></b></p>
<p><b>R-1 – Low Density Residential District</b></p>	<p>This district is intended to provide sufficient space for low density residential development on lots of adequate size to safely permit the use of either public or on-site sewage disposal and water supply. <b><i>This district is compatible with Shohola’s bordering RD District (refer to Map 12).</i></b></p>
<p><b>ND – Neighborhood Development District</b></p>	<p>The intent of this district is to provide areas for the normal development of business and service activities to serve the needs of the Township and surrounding communities. This district is compatible with Shohola’s bordering CG District. <b><i>This district is compatible with Shohola’s bordering GC District (refer to Map 12).</i></b></p>
<p><b>RC – Resort Commercial District</b></p>	<p>This district is designed to provide areas of intense resort activity on roads adequate to handle traffic for those activities located away from adverse impact. <b><i>This district is compatible with Shohola’s bordering GC District (refer to Map 12).</i></b></p>



**PIKE COUNTY MUNICIPALITIES**

**Milford Township Zoning**

<p><b>DD – Development District</b></p>	<p>This district is intended to provide for the normal growth of business and services to meet the needs of area residents and to provide for the development of light manufacturing. <b><i>This district is compatible with Shohola’s bordering R District (refer to Map 12).</i></b></p>
<p><b>LG – Low Growth District</b></p>	<p>This district is intended to preserve open space while allowing for lower density housing and other compatible uses, employing conditional use review in the case of certain uses allowed ensuring environmental and community protection. <b><i>This district is compatible with Shohola’s bordering RD and OS Districts.</i></b></p>

**Westfall Township Zoning**

<p><b>CD – Conservation District</b></p>	<p>To provide for very low-intensity development in areas with significant important natural features, such as wetlands, flood-prone lands and very steeply sloped areas. To recognize that many of these areas have limited road access. To protect the water quality and habitats along the Delaware River, lakes and creeks, and promote groundwater recharge. To provide incentives and a certain amount of flexibility in lot layout through open space development so that development can be clustered on the most suitable portions of a tract of land, while still avoiding overly intense development. To recognize that most of these areas are not near existing public water and sewage systems. <b><i>This district is compatible with Shohola’s bordering OS District (refer to Map 12).</i></b></p>
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Source: Pike County Office of Community Planning.

In an effort to strengthen consistency of zoning across municipal boundaries, the municipalities that border Route 6 should consider discussions on minor zoning changes that promote preservation and enhancement of this important scenic corridor through use of appropriate bulk standards and site and building design sympathetic to the natural beauty of the corridor as well as access management issues.



## SECTION 16.0 IMPLEMENTATION PLAN

Implementing this plan for conservation and preservation with an emphasis on growth management for the Lackawaxen/Shohola Region will require collaboration and cooperation between the townships as well as collaboration among a broad base of interested parties including the citizens, businesses, county and state governments, regional authorities and agencies as well as private property owners and investors.

Implementation of this plan will require strengthening of the current partnership between the townships as outlined in this section with respect to intergovernmental cooperation agreements required to support plan implementation. This section includes recommended actions including projects, programs, studies and changes in policy and regulation to address community issues and concerns, plan goals and objectives, vision statement, village enhancement concepts and strategies that were identified throughout the planning process and comprehensive plan elements as outlined in the plan. The recommendations are organized by plan element with the land use element organized by landscape (growth areas, villages and rural resource areas).

### Section 16.1 Intergovernmental Cooperation Agreements to Support Implementation

Implementation agreements differ from planning agreements. The planning agreement that was adopted by Lackawaxen and Shohola Townships focused on agreeing to plan together. Implementation agreements are entered into for the purpose of carrying out the plan and giving the plan legal effect through general consistency of ordinances and actions. Agreements can address the following responsibilities for each township with respect to distribution of uses:

- The sharing of residential densities or commercial and industrial uses when amending zoning ordinances to be consistent with this Plan;
- Commitment for infrastructure improvements when amending subdivision/land development ordinances or updating Act 537 plans or similar requirements consistent with this Plan; and
- Conservation of agricultural, open space and other rural lands through implementation of the Multi-Municipal Open Space, Greenways & Recreation Plan for the Lackawaxen/Shohola Region.

Separate agreements can be entered into for the purpose of addressing items such as:

- A transfer of development rights program that crosses municipal boundaries;
- Adoption of a specific plan for a commercial and industrial development area of the plan; and
- A tax or revenue sharing agreement to spread the benefits of particular economic development projects among participants in the plan.



*View of Lackawaxen Village from  
New York Side of Delaware River*

The above may be determined at the time of the agreement with respect to distribution of land uses or more time may be required to establish a separate agreement to address these items.

### Section 16.1.1 Role of Planning Committee or Joint Planning Commission

Based upon the planning process conducted to date with involvement by the County, each of the townships and the county may be partners in various agreements previously suggested. A joint planning commission or partnership between the townships' planning commissions, established for the purpose of developing this plan, may be used to have oversight responsibility or to support plan implementation. If the townships desire to establish a more formal structure, a joint planning commission structure can be established under the provisions of the Intergovernmental Cooperative Law (ICL) and Article II of the MPC, which together would allow the townships to do jointly anything that each township can do separately.

In accordance with MPC, Section 1104, a cooperative agreement *may* be entered into by the townships to establish the process that will be utilized to achieve general consistency between this plan and the zoning ordinances, subdivision and land development and capital improvements plans for each Township. The role of the Township Planning Committee and Planning Commissions includes:

- Oversight of the preparation of conforming ordinances within two years and establishment of a mechanism for resolving disputes over the interpretation of the plan and consistency of implementing plans and ordinances identified above.
- Establish a review and approval process for developments of regional significance and impact that are proposed in the Townships.
- Establish roles and responsibilities of the Townships with respect to implementation of the plan, including provisions of public infrastructure services, the provision of affordable housing and purchase of real property, including right-of-ways, easements and public lands and grounds.
- Prepare a yearly report for submission to Pike County outlining activities carried out pursuant to the agreement during the previous year.

As summarized above, requirements for intergovernmental cooperative agreements to support plan implementation must comply with requirements of Section 1104. This section contains items that must be included in this type of agreement (*reference MPC, Section 1104(b)(1-5) as summarized above*) as well as items that may be included (*reference MPC, Section 1104 (c) and (d)*). The above information provides the technical basis for a legal agreement(s) that may be developed upon completion of the plan.



### Section 16.1.2 Role of Pike County Planning Commission

The County has acted as a facilitator and provided technical assistance to support development of this plan. The County may continue as partners to carry out the plan by developing and securing the implementation agreements that are necessary to give the plan legal effect or at a minimum facilitate the adoption of such agreement by each Township.

### Section 16.2 Recommended Actions

The following recommended actions incorporate a variety of conservation/preservation and growth management strategies identified in previous sections of this plan for the purpose of meeting identified plan goals and objectives outlined in Section 5.0, Growth Management Policy. Each plan element statement, goal and objectives are identified in the right column.

#### ① Community Development Standards/Growth Management (Land Use)

*...type, timing, intensity and character of land use to improve the quality of development...*

Update existing community development standards and develop new standards where appropriate that are consistent with this Plan for the purpose of improving the quality of development, utilizing the following tools with emphasis on development in designated growth areas and infill development in villages.

#### Designated Growth Areas Strategies:

- Provide adequate public facilities through private and public partnerships to support growth within growth boundaries.
- Provide for a variety of uses at a variety of densities to reduce development pressures outside of Designated Growth Areas.
- Provide for the phasing and timing of growth with short-term growth targeted to the Designated Growth Area.
- Target the expansion of community and public infrastructure improvements to keep pace with development in order to maintain a high quality of life by providing adequate public facilities.

#### Recommendations:

- Modify zoning districts to promote development of higher densities and a variety of uses through specific zones within the Designated Growth Areas consistent with this plan.
- Modify zoning districts to be consistent between Lackawaxen and Shohola Townships and neighboring municipalities with respect to density, types of uses and appropriate buffering areas.
- Modify zoning and subdivision land development ordinances to strengthen Shohola's ordinance and update Lackawaxen's ordinance through adoption of conservation-by-design standards to preserve environmentally sensitive, natural features and open space as well as to provide park and recreation lands and facilities through dedication or fee in lieu of by the development community as part of residential development within the Designated Growth Areas.

***A delicate balance of land use is required to create a desired level of local and regional sustainability.***

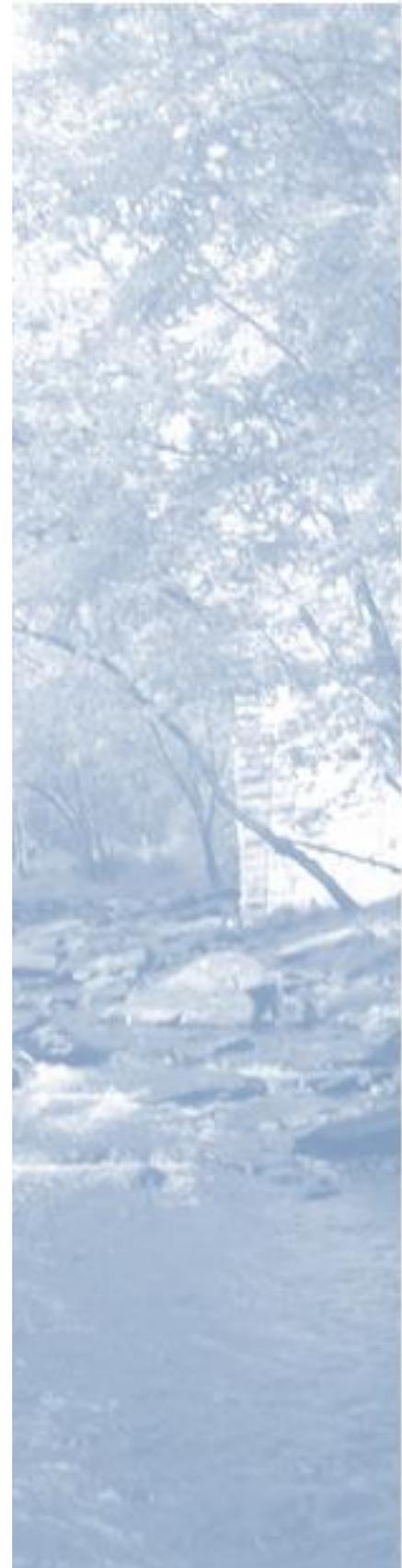
#### **Land Use Goal**

*Create a land use plan that includes provisions for amount, intensity, character and timing of land use proposed for use categories such as residential, commercial, industrial, agricultural, transportation facilities, utilities, community facilities, public grounds, parks and recreation, environmentally sensitive areas and other areas of special interest.*

#### **Land Use Objectives**

- ① Designated growth area and potential future growth areas.
- ② Growth management strategy.
- ③ Strategies for preservation and conservation.
- ④ Minimize impacts from developments of regional significance.
- ⑤ Standards for low-impact development or conservation-based development.
- ⑥ Enhanced village centers.

- Amend community development goals and objectives in the zoning ordinance to ensure consistency with this Plan.
- Amend zoning districts for consistency with designated growth areas and future growth areas identified on Map 6 and future land use patterns identified on Map 5.
- Amend zoning ordinance to identify developments of regional significance with appropriate standards to minimize impacts on the natural environment and infrastructure.
  - Commercial recreation facilities (*public and private*)
  - Large residential developments
  - Resorts
  - Town Centers or newly created Traditional Neighborhood Developments (TNDs)
- Develop/modify performance standards to minimize impacts on the environment and existing residential neighborhoods.
- Use infill development standards to achieve the following:
  - Traditional Neighborhood Development Districts or Village Zoning Districts designed to guide development and redevelopment opportunities within villages for the purpose of regulating:
    - Mixed use development and redevelopment opportunities.
    - Setbacks and building density and massing consistent with existing development patterns.
    - Architectural and historic integrity.
- Consider creating a procedure with advisory recommendations for the review of infill development plans for TND and/or Village Districts, for lands along Route 6 within the Corridor Preservation Overlay District and for areas within Community Associations.
  - This review process will be advisory in nature and provide recommendations of land development plans to the Planning Commission(s).
  - When appropriate, input should be sought from volunteers from the professional community including engineering, architecture, landscape architecture and/or planning, the development and real estate community, businesses and residents.



**Village Enhancement Strategies:**

- Provide adequate public facilities (community water and community sanitary sewer systems) through private and public partnerships to support infill development, redevelopment and expansion opportunities.
- Provide proper zoning regulations and design guidelines to support infill development, redevelopment and expansion of the villages.
- Preserve, enhance, redevelop and develop the villages as hubs with a balanced mix of residential, commercial, government and recreation activities with water access where appropriate and connections to greenways.

**Recommended Guidelines:**

The following recommendations are depicted in Village Enhancement Concepts for both Lackawaxen Village and Shohola Village (refer to concept designs for details).

- Utilize TND or Village District design standards through zoning and subdivision/land development regulations and standards to achieve the following:
  - Edges – Define the village edges or fringes to create the transition and buffer area between village and surrounding natural area.
  - Gateways – Gateways should be established at entranceways to villages.
  - Pedestrian Ways – Paths, sidewalks, walkways and boardwalks provide links to various attractions and natural amenities.
  - Setbacks – Narrow and deep lots and shallow front yard setbacks are typical of villages.
  - On-Street Parking – In appropriate locations, on-street parking provides a separator between moving traffic and pedestrian ways.
  - Trees – Trees provide a buffer between pedestrian ways and the streets, a unified visual effect along a street and protection of pedestrians from elements such as sun glare and reflective heat from paved surfaces.
  - Access to Waterfront – Where appropriate, establish new areas for public access and/or improve all existing public access areas to the water.
  - Historic Preservation – The historic character of a property is important to preserving village and regional heritage. Deteriorated historic features should be repaired rather than replaced.
  - Density – Historically, lot sizes in the village are smaller in comparison to those typically required for rural subdivision. The goal is to create lots of similar density.
  - Signage – Sign standards addressing appropriate size and design should reflect the unique characteristics of the village.
  - Architectural Design – New construction and additions should consider proportion and scale, massing, directional

**Village Design Standards**

- ➊ Define village edges.
- ➋ Establish gateways.
- ➌ Provide paths, sidewalks, walkways and boardwalks.
- ➍ Allow narrow lots with shallow setbacks.
- ➎ Provide on-street parking opportunities.
- ➏ Place trees to create a buffer between pedestrian areas and streets.
- ➐ Provide public access to the waterfront.
- ➑ Preserve historic structures.
- ➒ Create similar lots when infill development is proposed.
- ➓ Develop sign standards compatible with village character and new development should consider compatible architectural design.

expression, materials and colors consistent with historic development of the village.

- Proportion and Scale – Scale includes the height, width and mass of the buildings. Additions should be in proportion to and maintain the level of proportion and scale as the existing building and the neighboring structures.
- Massing refers to the volume created by the combined sections of a building. Various architectural styles have different massing such as boxlike structures versus varied massing. Respect for the predominant styles of the village should be demonstrated in new construction and additions.
- Common Private Drives – As development occurs in the village, consideration should be given to common private drives to the rear of buildings where appropriate to support traditional neighborhood design. On-site parking should be oriented to the rear or the property accessible from common private drives.
- Traffic Calming – Traffic calming measures should be established in villages for safety purposes.

## **② Conservation and Preservation Strategies (Land Use)**

*...conserve and preserve a variety of natural, historic and cultural resources in rural resource areas to maintain a high quality of life....*

### **Rural Resource Area Strategies:**

- Provide cluster development option with incentives to limit access to the transportation network.
- Develop infill residential development standards for developments within Community Associations.
- Utilize a variety of conservation/preservation tools and techniques.
- Encourage the adoption of conservation easements.
- Require sufficient area for replacement on-lot systems as part of zoning and development standards.
- Consider requiring community water and community sanitary sewer systems for all residential communities regardless of lot size and density.

### **Recommendations:**

- Promote various strategies for private and public conservation and preservation of land as outlined in this plan and the Open Space, Greenways and Recreation Plan (*refer to Conservation/Preservation Plan and Conservation Tool Kit*).
- Implement watershed conservation, preservation and protection strategies outlined in the River Management Plan for the Upper Delaware Scenic and Recreational River Area and future watershed management plans within the region.
  - Consider integrating future watershed planning and comprehensive planning resulting in watershed based

***The cultural, historic and natural resources of a community create a “sense of place” for both residents and visitors.***

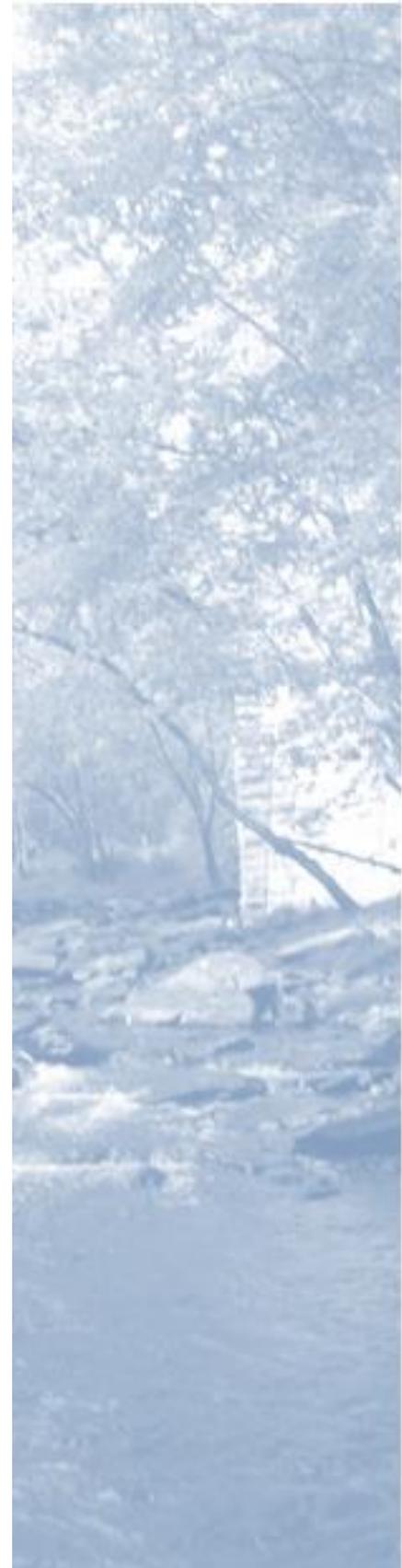
### **Historic and Natural Resources Goal**

*Create a plan for the protection of natural and historic resources consistent with county, regional and state plans and regulations.*

### **Historic and Natural Resources Objectives**

- ① Identify natural and historic resources for protection, preservation and conservation and enhance access to the public to support tourism.
- ② Identify various tools and techniques for preservation and conservation of resources.
- ③ Identify **best management practices** for the conservation of natural resources and environmentally sensitive areas.

- planning and zoning which consider impacts on water resources to promote land use patterns with minimal impact to water quality and quantity.
- Establish/strengthen wellhead protection zones and establish performance standards through use of environmentally sensitive overlay districts, wellhead protection districts and similar zones.
  - Establish river and stream corridor overlay zones to restrict development and impervious surfaces and to require riparian buffers to protect waterways and wildlife habitats and to reduce sedimentation and pollution.
  - Collaborate with the Pike County Conservation District, watershed associations and other agencies to manage stream corridors by establishing riparian buffers, using best management practices and promoting stream bank restoration and stabilization.
    - Establish public and private greenways along streams through conservation easements as part of development requirements.
  - Consider establishment of a Corridor Preservation Overlay District along Route 6 (*proposed state Scenic Byway*) and Towpath Road (SR 4006), Route 590 and Twin Lake Road (*proposed local Scenic Byways*) for the purpose of:
    - Development of a Corridor Management Plan (CMP) to ensure the following.
      - Preservation of open space and restoration of remains of the canal.
      - Consistency of land use type, design and intensity with rural character of the corridor.
      - Provide uses that meet the needs of both permanent and seasonal residents and visitors and strengthen existing business mix.
      - Site design with respect to building and parking lot placement, driveway access, signage, lighting, landscaping and tree preservation, buffering and screening, and other aspects of design.
      - Discourage strip commercial development.
      - Improvements to address vehicular, pedestrian and bicycle safety.
      - Access management for current and future development along the corridor.
      - Collaborate with neighboring municipalities for consistency of zoning regulations and site design standards.
      - Heritage and wayfinding signage design.
  - Collaborate with PennDOT to improve existing pull-off areas along the Towpath Road and to identify additional areas for similar improvements such as those identified below and depicted on the Route 590, Towpath Pull-off Concept. The following may be considered:
    - Use of a 36" timber fence to delineate parking areas and canal viewing areas along roadway.



- Provide some type of parking delineation allowing for parking stalls approximately 18' x 9'.
- Aisle-way width should accommodate 2-way traffic approximately 25' wide.
- Pathway/trail width should be improved for ADA accessibility approximately 8' wide.
- Heritage signage should be consistent with National Park Service (NPS) standards.
- Native plant species requiring minimal maintenance should be used.
- Path and parking surfaces are to be determined but should be compacted gravel surfaces at a minimum.
- A clear zone of approximately 10' should be provided for all areas designed to view remaining walls of canal adjacent to roadway.
- Other amenities such as seating, bicycle racks and trash receptacles should be provided.

### ③ **Housing**

*...provide opportunities for affordable housing for all income levels...*

#### **Strategies:**

- Cluster development options minimize impacts on the environment, while reducing cost to homeowner (smaller lots and less infrastructure costs).
- Infill development within the villages and crossroads.
- Provide a variety of housing types at affordable levels.
- Allow for home occupations and home-based low impact in residential districts.

#### **Recommendations:**

- Collaborate with the development community to identify housing types, styles and sizes to accommodate a variety of family types and needs.
- Promote residential communities of mixed housing types and costs.
- Rehabilitation programs for existing housing stock.
- Collaborate with the County to identify housing needs, programs and funds.
- Provide design standards for conservation-by-design to include cluster development, essential services such as private/public community water and sewer systems and pedestrian trails with connections or potential connections to existing and future trails.
- Provide design standards for traditional neighborhood development (TND) options for mixed use neighborhoods within designated growth areas and appropriate zoning districts.

***Availability of decent, affordable housing for households of all ages and all income levels is an indicator of a sustainable community.***

#### **Housing Goal**

*Create a housing plan to meet the needs of present residents and those individuals and families anticipated to reside in the region.*

#### **Housing Objectives**

- ① Conserve and preserve present housing stock.
- ② Enforce building and property codes.
- ③ Rehabilitate existing housing stock.
- ④ Provide for different dwelling types at appropriate densities for all income levels.

#### **4 Community Infrastructure Improvements, Rehabilitation and Retrofits**

##### ***(Transportation, Community Facilities and Utilities)***

***...providing adequate public facilities to ensure public health, safety, welfare and movement of goods and people...***

##### **Strategies:**

- **Transportation Improvements and Enhancements**
  - Partner with Northeastern Pennsylvania Rural Transportation Planning Organization (NPRTPO), the Northeast Pennsylvania Alliance (NEPA) and PennDOT.
  - Seek various grant funds for specific projects.
- **Waterfront Access Improvements**
  - Conduct feasibility assessment of opportunities for waterfront access improvements.
- **Park and Recreation Facilities**
  - Utilize regulatory tools, design standards and conservation of environmentally sensitive lands to achieve goals.
  - Refer to the strategies and recommendations in the Open Space, Greenways and Recreation Plan.
- **Greenway/Path/Trail Improvements**
  - Utilize regulatory tools, design standards and conservation of environmentally sensitive lands to achieve goals.
  - Refer to the strategies and recommendations in the Open Space, Greenways and Recreation Plan.
- **Municipal Facilities & Services**
  - Strengthen existing partnership between the Townships and adjacent municipalities for a variety of opportunities to share staff, equipment, resources, facilities and services.
- **Community Water Systems and Sanitary Sewer Systems**
  - Provide adequate community facilities to support current and future development.
  - Establish partnership between Community Associations to economically provide, upgrade and maintain facilities.
  - Seek various grant and loan funds to address facility needs.
- **Inspection and Permitting**
  - Review and improve standards with the intent to promote public health, safety and welfare.
  - Coordinated inspection and permitting activities.

##### **Recommendations:**

- **Transportation Improvements and Enhancements**
  - Collaborate with the NPRTPO through the NEPA and PennDOT to obtain necessary funding for improvements to roads, bridges, paths, trails, signage and sidewalks from various funding sources.
    - Prioritize safety improvements to hazardous locations (refer to Map 7 for location of hazardous locations and list of planned roadway and bridge improvements).



***Safety, mobility and accessibility for all modes of travel are key indicators of sustainability.***

##### **Transportation Goal**

*Create a transportation plan for the movement of people and goods including facilities for all modes of transportation.*

##### **Transportation Objectives**

- ❶ Provide adequate transportation network.
- ❷ Provide adequate maintenance.
- ❸ Restore rail access to the region.

- Roadway improvements to include widening and shoulder improvements to accommodate both vehicular and bicycle/pedestrian traffic.
    - Towpath pull-off improvements (refer to concept for details).
  - Collaborate with PennDOT to ensure appropriate posting of speed limits.
  - Continue involvement with the Pike County Road Task Force (RTF) to identify needed roadway improvements.
  - Enhance Lackawaxen and Shohola Villages as rural destination places for tourist train stops and as commuter hubs as population grows.
    - Collaborate with regional partners for commuter rail services to Lackawaxen and Shohola Villages.
    - As service is planned, seek funding for tourist and commuter train station/stop and parking improvements.
  - Establish private roadway standards equal to those for public roadways (restrict substandard roadways).
  - Establish roadway and bridge protection through required bonding for industries or impacts from uses such as logging, forestry, mining, natural gas drilling and similar operations requiring heavy hauling.
  - Work with County and PennDOT to correct road name inconsistencies.
  - Prepare a roadway and bridge inventory and condition assessment to support posting of roadways and bridges and to support heavy hauling permitting and bonding.
  - Prepare a Regional Traffic Impact Study.
- **Water Access Improvements**
  - Identify areas feasible for water access consistent with areas identified along waterways for park, recreation, open space and greenways.
  - Provide water access improvements as part of open space, greenways and park improvements including access to parking, boat launching facilities and other amenities.
- **Park and Recreation Facilities**
  - Amend ordinances to require dedication of lands for public park and recreation facilities based upon residential density standards with a fee in lieu of option.
    - Utilize fees with general funds and grants to acquire lands and make improvements in proximity to hub or population concentrations.
  - Collaborate with development community, private property owner, county agencies and various land conservancies when identifying lands for open space/conservation versus lands for park and recreation facilities.
    - Utilize ArcReader and GIS maps to assist the development community to identify lands for potential conservation and lands for public or private active

***Community sustainability and green infrastructure are interrelated with respect to economic development and preservation of natural resources for use by current and future generations.***

**Open Space, Greenways and Recreation Goal**

*Create a plan to address local and regional recreation, preservation and conservation needs including parks and recreation facilities and programs, greenways and open space.*

**Open Space, Greenways and Recreation Objectives**

- ❶ Preserve and conserve natural resources.
- ❷ Identify public park and recreation facilities and programs.
- ❸ Identify opportunities to utilize greenways to provide connections/linkages to a variety of hubs or destinations.
- ❹ Preserve and conserve open space and greenways through private preservation opportunities.

recreation area (map data depicted on Maps 1, 2, 3, and 4).

- Require National Recreation and Park Association (NRPA) standards for various facilities (*standards are contained in the Multi-Municipal Open Space, Greenways and Recreation Plan*).
- Provide safe access and adequate parking for all facilities.

- **Greenway/Path/Trail Improvements**

- Implement strategies and recommendations outlined in the Open Space, Greenways and Recreation Plan.
  - Seek state funding through DCNR and PennDOT for improvements.
  - Strive to achieve consistency with Pike County's Open, Space Greenways and Recreation Plan.

- **Municipal Facilities & Services**

- Seek state and federal grants for emergency services facilities and equipment.
  - Address emergency services related to hazardous materials hauling and spills.
- Lackawaxen Township Buildings/Facilities/Resources
  - Replace existing Township Building and Road Maintenance Garage to meet current and future needs for administration operations and staffing, equipment, meetings, community activities, storage, vehicle storage and maintenance, community shelter and emergency management command center and other related activities.
  - Consider consolidation of maintenance and upgrade of resources and facilities with Shohola Township as needed in the future.
- Shohola Township Buildings/Facilities/Resources
  - Conduct necessary maintenance and upgrade of resources and facilities with Lackawaxen Township as needed.

- **Community Water Systems**

- Consider community water systems for residential developments that are developed as a community or through a Community Association.
- Consider developing public/private partnership or consider a private service to provide community water system for Shohola Village.
- Consider developing public/private partnership or consider a private service to provide community water system for Lackawaxen Village.
- Consider Well Head Protection Ordinance and well location and drilling standards.

***Community facilities and utilities include land, buildings and services to help meet public health, safety and welfare, and educational and social needs.***

**Community Facilities & Utilities Goal**

*Create a community facilities and utilities plan addressing a wide array of community facilities, services and public and private utilities necessary to meet community needs.*

**Community Facilities & Utilities Objectives**

- ❶ Expand police protection and emergency services.
- ❷ Provide adequate public facilities and services.
- ❸ Obtain access to or enhance existing regional facilities.
- ❹ Enhance access to all forms of the communication.
- ❺ Provide community water and sewer facilities where appropriate.

- **Community Sanitary Sewer Systems**
  - Consider community sanitary sewer systems for residential developments that are developed as a community or through a Community Association.
  - Consider developing public/private partnership or allow private service to provide community sanitary sewer system for Shohola Village.
  - Consider developing public/private partnership or allow private service to provide community sanitary sewer system for Lackawaxen Village.
  - Update the Act 537 Plans for the Townships jointly and coordinate with the update of this plan.
- **Inspection and Permitting**
  - Improve monitoring, inspection and continue permitting of on-lot systems
  - Require sufficient space for location of an on-lot replacement system.
  - Consider mandatory pump outs every three (3) years.

## 5 **Economic Development Strategies**

*...provide a balance of land uses to achieve sustainability...*

### **Strategies:**

- Promote small business development through land use regulations and through partnerships with regional economic development agencies and the business community.
- Utilize conservation-by-design standards to ensure compatibility and protection of natural environment.

### **Recommendations:**

- Promote small business development of professional services and commercial retail to meet residential living needs.
  - Modify zoning to sufficiently allow for commercial uses along major transportation corridors, crossroads, hamlets and villages.
  - Private/public partnerships with economic development agencies.
- Allow for a variety of home occupations and no-impact home-based business opportunities for telecommuters and professions that can be conducted from home with minimal or no impact to adjacent residents and the natural environment.
- Develop economic incentives for businesses that sustainably use natural resources such as lumbering, fishing and hunting, provide eco-tourism opportunities and resort/recreation facilities.
  - Greenhouses/landscaping, wineries, specialty wood working shops and similar operations.
  - Camps, resorts, spas, hunting and fishing excursions.

***A healthy economy fosters a sustainable community by providing a balance of land uses to include housing, business development, employment, open space, recreation and tourism opportunities.***

### **Economic Development Goal**

*Guide orderly, efficient and environmentally sensitive development to accommodate projected growth of the region while providing adequate public facilities and services and preservation/conservation goals to maintain a sustainable community.*

### **Economic Development Objectives**

- ① Promote environmentally sensitive non-residential development.
- ② Conserve open land and emphasize tourism-recreation opportunities.
- ③ Encourage non-residential development compatible with existing land use and tourism-recreation economy.
- ④ Allow development that can provide adequate public facilities and services.

- Enhancement of Villages with infill development and redevelopment of small business enterprises, cottage industries and heritage tourism opportunities.
  - Make necessary changes to zoning to support small scale mixed uses.

## ⑥ Government

*...provide proper organizational structure for townships individually and collectively to foster effective governance...*

### Strategies:

- Continued partnership between the Townships, County and adjacent municipality.
- Intergovernmental cooperative agreements.
- Regional committees, boards, commissions and authorities.

### Recommendations:

Implementation of this Plan will require a number of actions by the Townships' Boards of Supervisors such as:

- Explore opportunities for shared staff in order to increase diversity in areas such as planners, zoning officers, building officials, SEOs, police, public works crews and other staff to support basic governmental function.
- Establish a joint Planning Commission to guide implementation of the plan and to review development plans.
- Develop intergovernmental cooperative agreements to amend zoning ordinances to be consistent with the Plan.
  - Consider joint zoning. The region has somewhat consistent land use patterns and could benefit from further consistency with respect to mixed use opportunities, conservation-by-design standards and other aspects of this situation.
- Develop intergovernmental cooperative agreements to amend subdivision/land development ordinances consistent with the Plan.
- Monitor and update other municipal plans and ordinances.
- Monitor local actions over time to ensure consistency and compliance with MPC requirements.
- Adopt capital budgets that are consistent with the Plan.
- Partner with Pike County to access professional planning staff.
- Partner with Pike County to take advantage of County, State and Federal programs.
- Create a Joint Municipal Authority responsible for public water and sanitary sewer systems as developed to support the villages and other areas.

***Affective governance is leadership dedicated to maintaining a sustainable community through decision making emphasizing smart growth through regulation and design of development in harmony with the ecosystem of the region and financial stability.***

### Government Goal

*Provide an adequate organizational structure to support provision and maintenance of adequate public facilities, services and programs as well as efficiently administered policies, procedures, regulations and laws.*

### Government Objectives

- ① Promote inter-governmental cooperation to maximize public resources.
- ② Develop partnerships with various levels of government.
- ③ Develop public/private partnerships to support goals and objectives of the plan.

**Section 16.2.1 Implementation Plan Matrix**

The implementation plan is outlined in a matrix by various growth management concepts and strategies and landscapes along with strategies and recommendations described in this section of the plan along with identification of lead agency and partners for key actions, funding sources, cost estimates, priority and reference to timing. The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

<b>Table 27: Landscapes Implementation Plan – Land Use (Growth Boundaries)</b>						
<b>Growth Management Concept, Strategy or Landscape</b>	<b>Strategies and Recommendations</b>	<b>Lead Agency &amp; Partners Key Actions</b>	<b>Funding Sources</b>	<b>Cost Estimate</b>	<b>Priority</b>	<b>Time Reference</b>
<p align="center"><b>GROWTH BOUNDARIES</b></p> <p><b>1 Land Use - Community Development Standards/ Growth Management</b> <i>...type, timing, intensity and character of land use to improve the quality of development...</i></p>	<p><b>Designated Growth Areas Strategies</b></p> <ul style="list-style-type: none"> <li>• Provide adequate public facilities through private and public partnerships to support growth within growth boundaries.</li> <li>• Provide for a variety of uses at a variety of densities to reduce development pressures outside of designated growth areas.</li> <li>• Provide for the phasing and timing of growth with short-term growth targeted to the Designated Growth Area.</li> <li>• Target the expansion of community and public infrastructure improvements to keep pace with development in order to maintain a high quality of life by providing adequate public facilities.</li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County Planning Department, Pike County Conservation District, Property Owners and Developers – make necessary zoning and SALDO amendments consistent with the plan</p>	<p>DCED, Township General Funds, County Grant Programs and Committee Volunteers</p>	<p>\$30,000 - \$40,000 (combined effort between Townships)</p>	1	<p>Initial Update 2009-2010 with Ongoing Updates</p>
	<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>• Modify zoning districts to promote higher densities and a variety of uses through specific zones within the Designated Growth Areas consistent with this plan.</li> <li>• Modify zoning districts to be consistent between Lackawaxen and Shohola Townships with respect to density, types of uses and appropriate buffering areas.</li> <li>• Modify zoning and subdivision land development ordinances to strengthen (Shohola) and incorporate (Lackawaxen) conservation-by-design standards to preserve environmentally sensitive, natural features and open space as well as provide park and recreation facilities within the Designated Growth Areas.</li> <li>• Amend community development goals and objectives in the zoning ordinance to ensure consistency with this Plan.</li> <li>• Amend zoning districts for consistency with designated growth areas and future growth areas identified on Map 3 and future land use patterns identified on Map 2.</li> </ul>			<p>\$3,000 - \$7,000 Routine Updates</p>	1-3	<p>On-going</p>

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

**Table 27: Landscapes Implementation Plan – Land Use (Growth Boundaries)**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p align="center"><b>GROWTH BOUNDARIES</b></p> <p>① <b>Land Use - Community Development Standards/ Growth Management</b> <i>...type, timing, intensity and character of land use to improve the quality of development...</i></p>	<p><b>Continuation of Recommendations</b></p> <ul style="list-style-type: none"> <li>Amend zoning ordinance to identify developments of regional significance with appropriate standards to minimize impacts on the natural environment and infrastructure.                             <ul style="list-style-type: none"> <li>Commercial recreation facilities (<i>public and private</i>), large residential developments, resorts, Town Centers or newly created Traditional Neighborhood Developments (TNDs)</li> </ul> </li> <li>Develop/modify performance standards to minimize impacts on the environment and existing residential neighborhoods.</li> <li>Use infill development standards to achieve the following:                             <ul style="list-style-type: none"> <li>Traditional Neighborhood Development Districts or Village Zoning Districts designed to guide development and redevelopment opportunities within villages for the purpose of regulating:                                     <ul style="list-style-type: none"> <li>Mixed use development and redevelopment opportunities;</li> <li>Setbacks and building density and massing consistent with existing development patterns.</li> <li>Architectural and historic integrity.</li> </ul> </li> </ul> </li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County Planning Department, Pike County Conservation District, Property Owners and Developers – make necessary zoning and SALDO amendments consistent with the plan</p>	<p>DCED, Township General Funds, County Grant Funds and Committee Volunteers</p>	<p>\$30,000 - \$40,000 (combined effort between Townships) <i>(Note: This is the same project as listed previously.)</i></p> <p>\$3,000 - \$7,000 Routine Updates <i>(Note: This is the same project as listed previously.)</i></p>	<p>1</p> <p>1-3</p>	<p>Initial Update 2009-2010 with Ongoing Updates</p> <p>On-going</p>
	<p><b>Future Growth Areas Strategies</b></p> <ul style="list-style-type: none"> <li>Provide for the phasing and timing of growth with long-term growth targeted to the Future Growth areas – ongoing zoning ordinance and map updates.</li> <li>As Designated Growth Areas are developed, the same strategies and recommendations should be applied to Future Growth Areas – zoning ordinance and map updates.</li> </ul>	<p>Lackawaxen and Shohola Townships – make necessary zoning and SALDO amendments consistent with the plan</p>	<p>DCED, General Funds and Committee Volunteers</p>			
	<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>Consider creating a procedure for the review with advisory recommendations of infill development plans for TND and/or Village Districts, for lands along Route 6 within the Corridor Preservation Overlay District and for areas within Community Associations.                             <ul style="list-style-type: none"> <li>This review process will be advisory in nature and provide recommendations of land development plans to the Planning Commissions.</li> <li>When appropriate, input should be sought from volunteers from the professional community including engineering, architecture, landscape architecture and/or planning, the development and real estate community, business and residents.</li> </ul> </li> </ul>	<p>Lackawaxen and Shohola Townships – Board of Supervisors – create review process that is advisory in nature.</p>	<p>Committee Volunteers and Staff Support (General Funds)</p>	<p>\$1,000 - \$2,000 annually to support review process activity</p>	<p>1</p>	<p>Establish in 2009</p>

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

**Table 27: Landscapes Implementation Plan – Land Use (Villages)**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p align="center"><b>VILLAGE ENHANCEMENTS</b></p> <p>① Land Use - Community Development Standards/ Growth Management ...type, timing, intensity and character of land use to improve the quality of development...</p>	<p><b>Village Enhancement Strategies</b></p> <ul style="list-style-type: none"> <li>Provide adequate public facilities (community water and community sanitary sewer systems) through private and public partnerships to support infill development, redevelopment and expansion opportunities – Conduct Feasibility Study and make improvements.</li> <li>Provide proper zoning regulations and design guidelines to support infill development, redevelopment and expansion of the villages.</li> <li>Preserve, enhance, redevelop and develop the villages as hubs with a balanced mix of residential, commercial, government and recreation activities with water access and connections to greenways.</li> </ul> <p><b>Recommended Guidelines</b></p> <p>The following recommendations are depicted in Village Enhancement Concepts for both Lackawaxen Village and Shohola Village (refer to concept designs for details).</p> <ul style="list-style-type: none"> <li>Utilize TND or Village District design standards through zoning and subdivision/land development regulations and standards to achieve the following:                             <ul style="list-style-type: none"> <li>Edges, gateways, pedestrian ways, setbacks, on-street parking, trees, access to waterfront, historic preservation, appropriate density, signage, architectural design, common private drives, traffic calming.</li> </ul> </li> </ul>	<p>Lackawaxen and Shohola Townships and Community Associations– Seek funding and implement community water/sewer systems</p>	<p>DCED, DEP Grants and Loans (PennVEST Program), General Funds and Staff Time</p>	<p>\$20,000 - \$25,000 (Feasibility Study for new service areas each)</p> <p>\$500,000 - \$2,500,000 (design, new improvements and upgrade of existing facilities depending upon how many project selected to undertake)</p>	<p>1-2</p> <p>1-3</p>	<p>2010-2011</p> <p>2012-2015</p>
	<p>Lackawaxen and Shohola Townships – update of zoning regulations and SALDO</p>	<p>DCED, General Funds, Committee Volunteers and Pike County Grants</p>	<p>\$30,000 - \$40,000 (combined effort between Townships) <i>(Note: This is the same project as listed previously.)</i></p>	<p>1</p>	<p>Establish Design Regulations and Guidelines as part of Ordinance Updates 2009-2010 with Ongoing Updates</p>	
	<p>Lackawaxen and Shohola Townships – TND/Village design standards regulations</p>	<p>DCED, General Funds, Committee Volunteers and Pike County Grants</p>	<p>\$3,000 - \$7,000 Routine Updates <i>(Note: This is the same project as listed previously.)</i></p>	<p>1-3</p>	<p>Establish Design Regulations and Guidelines as part of Ordinance Updates 2009-2010 with Ongoing Updates</p>	
	<p><b>Recommendation</b></p> <p>Develop a Wayfinding Signage Plan and System. Village gateway signage.</p>	<p>Lackawaxen and Shohola Townships, PennDOT and DCED along with other regional partners such as PMVB, Pike County and NEPA – Seek funding, conduct study, design and installation/construction</p>	<p>General Funds, DCED Programs, PennDOT and PMVB</p>	<p>Estimated costs are for Lackawaxen/ Shohola Region, costs for greater region will be greater than those listed. \$20,000 - \$25,000 (Study) \$25,000 - \$50,000 (Wayfinding Signage) \$15,000 - \$25,000 (Village Gateway Signage)</p>	<p>2</p>	<p>2010 - 2012</p>

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

**Table 27: Landscapes Implementation Plan – Land Use (Rural and Natural Landscapes & Rural Resource Area)**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p><b>Rural Landscapes &amp; Natural Landscapes/ Rural Resource Areas</b>  <b>☉ Conservation and Preservation Strategies (Land Use)</b>  <i>...conserve and preserve a variety of natural, historic and cultural resources in rural resource areas to maintain a high quality of life....</i></p>	<p><b>Rural Resource Area Strategies</b></p> <ul style="list-style-type: none"> <li>• Provide cluster development option with incentives to limit access to the transportation network.</li> <li>• Develop infill residential development standards for developments within Community Associations.</li> <li>• Utilize a variety of conservation/preservation tools and techniques.</li> <li>• Encourage the adoption of conservation easements.</li> <li>• Require sufficient area for replacement on-lot systems as part of zoning and development standards.</li> <li>• Consider requiring community water and community sanitary sewer systems for all residential communities regardless of lot size and density.</li> </ul> <p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>• Promote various strategies for private and public conservation and preservation of land as outlined in this plan and the Open Space, Greenways and Recreation Plan (<i>refer to Conservation/ Preservation Plan and Conservation Took Kit</i>).</li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County Planning Department, Pike County Conservation District, Property Owners and Developers</p>	<p>Variety of County, State and Federal Grant Funding Sources, General Funds and Private Investment</p>	<p>To be determined based upon project.</p>	<p>1-3</p>	<p>2009-2020</p>
	<ul style="list-style-type: none"> <li>• Implement watershed conservation, preservation and protection strategies outlined in the River Management Plan for the Upper Delaware Scenic and Recreational River Area and future watershed management plans within the region.                             <ul style="list-style-type: none"> <li>○ Consider integrating future watershed planning and comprehensive planning resulting in watershed based planning and zoning which consider impacts on water resources to promote land use patterns with minimal impact to water quality and quantity.</li> <li>○ Establish/strengthen wellhead protection zones and establish performance standards through use of environmentally sensitive overlay districts, wellhead protection districts and similar zones.</li> <li>○ Establish river and stream corridor overlay zones to limit development and impervious surfaces and to implement riparian buffers to protect waterways and wildlife habitats and to reduce sedimentation and pollution.</li> </ul> </li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County Planning Department, Pike County Conservation District, Property Owners and Developers – make necessary zoning and SALDO amendments consistent with the plan</p>	<p>DCED, Township General Funds, County Grant Funds and Committee Volunteers</p>	<p>\$30,000 - \$40,000 (combined effort between Townships)  <i>(Note: This is the same project as listed previously.)</i></p> <p>\$3,000 - \$7,000 Routine Updates  <i>(Note: This is the same project as listed previously.)</i></p>	<p>1</p> <p>1-3</p>	<p>Initial Update 2009-2010 with Ongoing Updates</p> <p>On-going</p>

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

**Table 27: Landscapes Implementation Plan – Land Use (Rural and Natural Landscapes & Rural Resource Area)**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p><b>Rural Landscapes &amp; Natural Landscapes/ Rural Resource Areas</b>  <b>Conservation and Preservation Strategies (Land Use)</b>  <i>...conserve and preserve a variety of natural, historic and cultural resources in rural resource areas to maintain a high quality of life....</i></p>	<ul style="list-style-type: none"> <li>Collaborate with the Pike County Conservation District, watershed associations and other agencies to manage stream corridors by establishing riparian buffers, using best management practices and promoting stream bank restoration and stabilization.                             <ul style="list-style-type: none"> <li>Establish public and private greenways along streams through conservation easements as part of development requirements.</li> </ul> </li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County Conservation District and DCNR</p>	<p>County Grant Programs Private Investment</p> <ul style="list-style-type: none"> <li>Conservation of Lands and Improvements</li> </ul> <p>US EPA</p> <ul style="list-style-type: none"> <li>Five-Star Restoration Program</li> </ul> <p>DCNR Programs</p> <ul style="list-style-type: none"> <li>Stream Improvement Program</li> <li>CRP Funds</li> <li>River Conservation Program</li> </ul>	<p>To be determined on project basis.</p>	<p>1-3</p>	<p>Ongoing</p>
	<ul style="list-style-type: none"> <li>Consider establishment of a Corridor Preservation Overlay District along Route 6 (<i>proposed state Scenic Byway</i>) and Towpath Road, Route 590 and Twin Lakes Road (<i>proposed local Scenic Byways</i>) for the purpose of:                             <ul style="list-style-type: none"> <li>Development of a Corridor Management Plan (CMP) to ensure the following.                                     <ul style="list-style-type: none"> <li>Preservation of open space.</li> <li>Consistency of land use factors.</li> <li>Provide uses that meet the needs of residents and visitors.</li> <li>Site design standards.</li> <li>Discourage strip commercial development.</li> <li>Improvements to address vehicular, pedestrian and bicycle safety.</li> <li>Access management for all uses.</li> <li>Collaborate w/adjacent municipalities.</li> <li>Heritage/wayfinding signage design.</li> </ul> </li> </ul> </li> </ul>	<p>Lackawaxen and Shohola Townships, PennDOT, DCED and DCNR</p> <ol style="list-style-type: none"> <li>Prepare grant applications.</li> <li>RFP Process</li> <li>Award Professional Services Contract</li> <li>Complete Study</li> </ol>	<p>General Funds, DCNR Programs, DCED LUPTAP Funds and PennDOT Special Studies Funds</p>	<p>\$50,000 - \$65,000</p>	<p>1</p>	<p>2009 - 2011</p>
	<ul style="list-style-type: none"> <li>Collaborate with PennDOT to improve existing pull-off areas along the Towpath and to identify additional areas for similar improvements such as those identified below and depicted on the Route 590, Towpath Pull-off Concept. The following may be considered:                             <ul style="list-style-type: none"> <li>Use of a 36" timber fence to delineate parking areas and canal viewing areas along roadway.</li> <li>Provide some type of parking delineation allowing for parking stalls approximately 18' x 9'.</li> <li>Aisle-way width should accommodate 2-way traffic approximately 25' wide.</li> <li>Pathway/trail width should be improved for ADA accessibility approximately 8' wide.</li> <li>Heritage signage should be consistent with National Park Service (NPS) standards.</li> <li>Native plant species requiring minimal maintenance should be used.</li> <li>Path and parking surfaces are to be determined but should be compacted gravel surfaces at a minimum.</li> <li>A clear zone of approximately 10' should be provided for all areas designed to view remaining walls of canal adjacent to roadway.</li> <li>Other amenities such as seating, bicycle racks and trash receptacles should be provided.</li> </ul> </li> </ul>	<p>Lackawaxen and Shohola Townships, PennDOT and DCNR</p>	<p>General Funds, DCNR Programs and PennDOT</p>	<p>\$150,000 - \$500,000 (<i>several project locations</i>)</p>	<p>1 - 3</p>	<p>2009 - 2012</p>

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.



**Table 27: Landscapes Implementation Plan – Transportation**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p><b>ALL LANDSCAPES TRANSPORTATION</b>  <b>④ Community Infrastructure Improvements, Rehabilitation and Retrofits (Transportation)</b>  <i>...providing adequate public facilities to ensure public health, safety, welfare and movement of goods and people...</i></p>	<p><b>Transportation Strategies</b></p> <ul style="list-style-type: none"> <li>Partner with Northeastern Pennsylvania Rural Transportation Planning Organization (NPRTPO), the Northeast Pennsylvania Alliance (NEPA) and PennDOT.</li> <li>Seek various grant funds for specific projects.</li> </ul> <p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>Collaborate with the Northeast Pennsylvania Rural Transportation Planning Organization (NPRTPO) through the Northeast Pennsylvania Alliance (NEPA) and PennDOT to obtain necessary funding for improvements to roads, bridges, paths, trails, signage and sidewalks from various funding sources and Regional Traffic Impact Study.</li> <li>Prioritize safety improvements to hazardous locations (refer to Map 4 for location of hazardous locations and list of planned roadway and bridge improvements).</li> <li>Roadway improvements to include widening and shoulder improvements to accommodate both vehicular and bicycle/pedestrian traffic.</li> <li>Towpath pull-off improvements (refer to concept for details).</li> </ul>	<p>Lackawaxen/Shohola Townships, NPRTPO, PennDOT and DCNR</p> <ol style="list-style-type: none"> <li>Prepare grant applications</li> <li>Coordinate with NPRTPO so projects receive priority to make it onto the TIP and PennDOT's 12-Year Plan</li> <li>Coordinate with DCNR for potential funding for related projects</li> <li>Implement projects as funding is received</li> <li>(Towpath Pull-offs) apply for Transportation Enhancement Funds and DCNR Funds</li> </ol>	<p>PennDOT – Transportation Enhancement Program, PennDOT Programs and DCNR for trails/paths and pull-offs.  DCED – LUPTAP funds for Regional Traffic Impact Study.</p>	<p>Cost estimates are to be determined based upon project studies and other analysis.</p> <p>Towpath Pull-offs: \$150,000 - \$300,000</p> <p>Regional Impact Traffic Study: \$75,000 to \$100,000</p>	<p>1-3</p> <p>1-2</p> <p>1-2</p>	<p>Ongoing</p> <p>2009-2012</p> <p>2009- 2012</p>
	<ul style="list-style-type: none"> <li>Collaborate with PennDOT to ensure appropriate posting of speed limits.</li> <li>Continue involvement with the Pike County Road Task Force (RTF) to identify needed roadway improvements.</li> <li>Establish private roadway standards equal to those for public roadways (restrict use of dirt roads and substandard roadways).</li> <li>Establish roadway and bridge protection through required bonding for industries or impacts from uses such as logging, forestry, mining, natural gas drilling and similar operations requiring heavy hauling.</li> </ul>	<p>Lackawaxen/Shohola Townships and PennDOT</p> <ol style="list-style-type: none"> <li>Conduct speed studies for roadway segments and follow PennDOT process</li> <li>Participate in RTF meetings</li> <li>Utilize Township and/or PennDOT standards for private roadways</li> <li>Roadway and bridge bonding requirements– obtain guidance from Township Solicitors on subject matter</li> <li>Roadway &amp; Bridget Inventory and Assessment</li> </ol>	<p>Speed Studies – General Funds</p> <p>Participation in RTF Meeting – Supervisor responsibility</p> <p>Township and/or PennDOT Roadway Standards – General Funds</p> <p>Roadway and Bridge Bonding Requirements – General Funds</p> <p>Roadway and Bridget Inventory and Assessment</p>	<p>\$4,500 – \$7,000 for select locations</p> <p>Volunteer time</p> <p>\$2,500 - \$3,500 Township Engineer</p> <p>\$5,000 - \$10,000 Township Solicitors</p> <p>Phases \$20,000 Annually for 4 years @ Municipality</p>	<p>1-2</p>	<p>2009-2012</p>
	<ul style="list-style-type: none"> <li>Enhance Lackawaxen and Shohola Villages as rural destination places for tourist train stops and as commuter hubs as population grows. <ul style="list-style-type: none"> <li>Collaborate with regional partners for commuter rail services to Lackawaxen and Shohola Villages.</li> <li>As service is planned, seek funding for tourist and commuter train station/stop and parking improvements.</li> </ul> </li> </ul>	<p>Lackawaxen/Shohola Townships, DCED, PennDOT, Railroad and DCNR</p> <ol style="list-style-type: none"> <li>Conduct Feasibility Study</li> <li>Design</li> <li>Construction</li> </ol>	<p>DCED LUPTAP Funds for Study</p> <p>PennDOT Transportation Enhancement Funds</p> <p>DCNR Programs</p> <p>DCED LMRDP &amp; CRP Funds</p> <p>Railroad Private Investment</p>	<p>Study - \$30,000</p> <p>Grant amount to be determined</p> <p>Grant amounts to be determined</p> <p>Grant amounts to be determined</p> <p>Investment to be determined</p>	<p>1-3</p>	<p>2009-2020</p>
	<p><b>Water Access Improvements Strategies</b></p> <ul style="list-style-type: none"> <li>Conduct feasibility assessment of opportunities for waterfront access improvements.</li> </ul> <p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>Identify areas feasible for water access consistent with areas identified along waterways for park, recreation, open space and greenways.</li> <li>Provide water access improvements as part of open space, greenways and park improvements including access to parking, boat launching facilities and other amenities.</li> </ul>	<p>PA F&amp;B Commission  NPS  Lackawaxen/Shohola Townships, DCED, PennDOT and DCNR</p> <ol style="list-style-type: none"> <li>Conduct Feasibility Study</li> <li>Design</li> <li>Construction</li> </ol>	<p>Fish &amp; Boat Commission Programs, DCNR Programs and DCED Programs</p>	<p>Cost and grant amounts to be determined upon completion of Feasibility Study (Feasibility Study is underway for Shohola)</p>	<p>1-3</p>	<p>2009-2020</p>

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

**Table 27: Landscapes Implementation Plan – Park & Recreation Facilities**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p><b>ALL LANDSCAPES PARK &amp; RECREATION FACILITIES</b></p> <p><b>④ Community Infrastructure Improvements, Rehabilitation and Retrofits (Recreation)</b></p> <p><i>...providing adequate public facilities to ensure public health, safety, welfare and movement of goods and people...</i></p>	<p><b><u>Park and Recreation Facilities &amp; Greenway/Path/Trail Improvements Strategies</u></b></p> <ul style="list-style-type: none"> <li>Utilize regulatory tools, design standards and conservation of environmentally sensitive lands to achieve goals.</li> <li>Refer to the strategies and recommendations in the Open Space, Greenways and Recreation Plan.</li> </ul> <p><b><u>Recommendations</u></b></p> <ul style="list-style-type: none"> <li>Amend ordinances to require dedication of lands for public park and recreation facilities based upon residential density standards with a fee in lieu of option.                             <ul style="list-style-type: none"> <li>Utilize fees with general funds and grants to acquire lands and make improvements in proximity to hub or population concentrations.</li> </ul> </li> <li>Collaborate with development community, private property owner, county agencies and various land conservancies when identifying lands for open space/conservation versus lands for park and recreation facilities.                             <ul style="list-style-type: none"> <li>Utilize ArcReader and GIS maps to assist the development community to identify lands for potential conservation and lands for public or private active recreation area (map data depicted on Maps 1, 7 &amp; 8).</li> </ul> </li> <li>Require National Recreation and Park Association (NRPA) standards for various facilities.</li> <li>Provide safe access and adequate parking for all facilities.</li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County Planning Department, Pike County Conservation District, Property Owners and Developers – make necessary zoning and SALDO amendments consistent with the plan</p>	<p>DCED, Township General Funds, County Grant Programs and Committee Volunteers</p>	<p>\$30,000 - \$40,000 (combined effort between Townships) <i>(Note: This is the same project as listed previously.)</i></p> <p>\$3,000 - \$7,000 Routine Updates <i>(Note: This is the same project as listed previously.)</i></p>	<p>1</p> <p>1-3</p>	<p>Initial Update 2009-2010 with Ongoing Updates</p> <p>On-going</p>
	<p>Refer to Multi-Municipal Open Space, Greenways and Recreation Plan for additional strategies and recommendations.</p>					

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

**Table 27: Landscapes Implementation Plan – Municipal Facilities & Services**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p><b>ALL LANDSCAPES MUNICIPAL FACILITIES &amp; SERVICES</b></p> <p><b>4 Community Infrastructure Improvements, Rehabilitation and Retrofits (Municipal)</b></p> <p><i>...providing adequate public facilities to ensure public health, safety, welfare and movement of goods and people...</i></p>	<p><b><u>Municipal Facilities &amp; Services Strategies</u></b></p> <ul style="list-style-type: none"> <li>Strengthen existing partnership between the Townships and adjacent municipalities for a variety of opportunities to share staff, equipment, resources, facilities and services.</li> </ul> <p><b><u>Recommendations</u></b></p> <ul style="list-style-type: none"> <li>Seek state and federal grants for emergency services facilities and equipment.                             <ul style="list-style-type: none"> <li>Address emergency services related to hazardous materials hauling and spills.</li> </ul> </li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County Emergency Management and Volunteer Agencies Pike County Council of Governments</p>	<p>State Surplus Property Program Volunteer Firefighter's Relief Association</p> <ul style="list-style-type: none"> <li>Volunteer Loan Assistance Program</li> </ul> <p>DCED</p> <ul style="list-style-type: none"> <li>Emergency Responders Resources &amp; Training Program</li> </ul>	<p>Cost estimates to be determined based upon equipment needed</p>	<p>1-3</p>	<p>2009-2020</p>
	<ul style="list-style-type: none"> <li>Lackawaxen Township Buildings/Facilities/Resources                             <ul style="list-style-type: none"> <li>Replace existing Township Building and Road Maintenance Garage to meet current and future needs for administration operations and staffing, equipment, meetings, community activities, storage, vehicle storage and maintenance, community shelter and emergency management command center and other related activities.</li> <li>Consider consolidation of maintenance and upgrade of resources and facilities with Shohola Township as needed in the future.</li> </ul> </li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County Emergency Management and Volunteer Agencies</p>	<p>DCED</p> <ul style="list-style-type: none"> <li>Shared Municipal Services Program</li> <li>Local Government Capital Project Loan Program</li> <li>Municipal General Funds</li> <li>Municipal Bonds</li> <li>USDA Grant and Loan Programs</li> </ul>	<p>Cost estimates to be determined based upon specific projects</p>	<p>1-3</p>	<p>2009-2020</p>
	<ul style="list-style-type: none"> <li>Shohola Township Buildings/Facilities/Resources                             <ul style="list-style-type: none"> <li>Conduct necessary maintenance and upgrade of resources and facilities with Lackawaxen Township as needed.</li> </ul> </li> </ul>					

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

**Table 27: Landscapes Implementation Plan – Municipal Facilities & Services**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p align="center"><b>ALL LANDSCAPES MUNICIPAL FACILITIES &amp; SERVICES</b></p> <p>④ <b>Community Infrastructure Improvements, Rehabilitation and Retrofits (Community Facilities &amp; Municipal Inspections)</b> <i>...providing adequate public facilities to ensure public health, safety, welfare and movement of goods and people...</i></p>	<p><b><u>Community Water and Sanitary Sewer Systems Strategies</u></b></p> <ul style="list-style-type: none"> <li>• Provide adequate community facilities to support current and future development.</li> <li>• Establish partnership between Community Associations to economically provide, upgrade and maintain facilities.</li> <li>• Seek various grant and loan funds to address facility needs.</li> </ul>	<p>Lackawaxen and Shohola Townships, Community Associations, Water Provider for the Region and Property Owners</p>	<p>DCED</p> <ul style="list-style-type: none"> <li>• Water Supply &amp; Wastewater Infrastructure Program (PennWorks)</li> </ul> <p>US Dept of Agriculture, Rural Utility Services</p> <ul style="list-style-type: none"> <li>• Water/Waste Disposal Systems for Rural Communities</li> </ul> <p>USDA Programs PENNVEST Grant and Loan Programs Municipal/Authority Bonds Water Provider Investment Private Investment</p>	<p>\$20,000 - \$25,000 (Feasibility Study for new service areas each)</p> <p>\$500,000 - \$2,500,000 (design and new improvements and upgrade of existing facilities depending upon how many project selected to undertake)</p>	<p>1-2</p> <p>1-3</p>	<p>2010-2011</p> <p>2012-2020</p>
	<p><b><u>Recommendations Community Water Systems</u></b></p> <ul style="list-style-type: none"> <li>• Consider community water systems for residential developments that are developed as a community or through a Community Association.</li> <li>• Consider developing public/private partnership or consider a private service to provide community water system for Shohola Village.</li> <li>• Consider developing public/private partnership or consider a private service to provide community water system for Lackawaxen Village.</li> <li>• Consider Well Head Protection Ordinance and well location and drilling standards.</li> </ul> <p><b><u>Recommendations Community Sanitary Sewer Systems</u></b></p> <ul style="list-style-type: none"> <li>• Consider community sanitary sewer systems for residential developments that are developed as a community or through a Community Association.</li> <li>• Consider developing public/private partnership or allow private service to provide community sanitary sewer system for Shohola Village.</li> <li>• Consider developing public/private partnership or allow private service to provide community sanitary sewer system for Lackawaxen Village.</li> <li>• Update the Act 537 Plans for the Townships jointly and coordinate with the update of this plan.</li> </ul>					
	<p><b><u>Inspection and Permitting</u></b></p> <ul style="list-style-type: none"> <li>• Improve monitoring, inspection and continue permitting of on-lot systems</li> <li>• Require sufficient space for location of an on-lot replacement system.</li> <li>• Consider mandatory pump outs every 3 years.</li> </ul>	<p>Lackawaxen and Shohola Townships</p> <ol style="list-style-type: none"> <li>1. Staff Assessment of Cost</li> <li>2. Fee Adjustment</li> <li>3. Regulations</li> </ol>	<p>Permit Fees</p>	<p>Cost to be determined</p>	<p>1</p>	<p>2009-2010</p>

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**Table 27: Landscapes Implementation Plan – Economic Development**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p><b>ALL LANDSCAPES ECONOMIC DEVELOPMENT</b>  <b>⑤ Economic Development Strategies</b>  <i>...provide a balance of land uses to achieve sustainability...</i></p>	<p><b>Strategies</b></p> <ul style="list-style-type: none"> <li>Promote small business development through land use regulations and through partnerships with regional economic development agencies and the business community.</li> <li>Utilize conservation-by design standards to ensure compatibility and protection of natural environment.</li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County Planning Department, Pike County Conservation District, Property Owners and Developers – make necessary zoning and SALDO amendments consistent with the plan</p> <ol style="list-style-type: none"> <li>Amend ordinances</li> <li>Coordinate with regional economic development agencies for projects and programs</li> <li>Coordinate with regional tourism agencies for projects and programs</li> </ol>	<p>Ordinance Amendment: DCED, Township General Funds, County Grant Programs and Committee Volunteers</p> <p>Projects: Townships General Funds Potential Funding Sources</p> <ul style="list-style-type: none"> <li>PA – Small Business Development</li> <li>PA Dept of Ag – First Industries Fund</li> <li>DCED Heritage and Tourism Cooperative</li> <li>PA Humanities County Grants</li> <li>DCED – IDP Funds</li> </ul>	<p>\$30,000 - \$40,000 (combined effort between Townships) <i>(Note: This is the same project as listed previously.)</i></p> <p>\$3,000 - \$7,000 Routine Updates <i>(Note: This is the same project as listed previously.)</i></p> <p>Staff/Supervisor time Estimated Cost of projects to be determined</p>	<p>1</p> <p>1-3</p> <p>1-3</p>	<p>Initial Update 2009-2010 with Ongoing Updates</p> <p>On-going</p> <p>On-going</p>
	<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>Promote small business development of professional services and commercial retail to meet residential living needs.                             <ul style="list-style-type: none"> <li>Modify zoning to sufficiently allow for commercial uses along major transportation corridors, crossroads, hamlets and villages.</li> <li>Private/public partnerships with economic development agencies.</li> </ul> </li> <li>Allow for a variety of home occupations and no-impact home based business opportunities for telecommuters and professions that can be conducted from home with minimal or no impact to adjacent residents and the natural environment.</li> <li>Develop economic incentives for businesses that sustainably use natural resources such as lumbering, fishing and hunting, provide eco-tourism opportunities and resort/recreation facilities.                             <ul style="list-style-type: none"> <li>Greenhouses/landscaping, wineries, specialty wood working shops and similar operations.</li> <li>Camps, resorts, spas, hunting and fishing excursions.</li> </ul> </li> <li>Enhancement of Villages with infill development and redevelopment of small business enterprises, cottage industries and heritage tourism opportunities.                             <ul style="list-style-type: none"> <li>Make necessary changes to zoning to support small scale mixed uses.</li> </ul> </li> </ul>					

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

**Table 27: Landscapes Implementation Plan – Government**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<p><b>ALL LANDSCAPES GOVERNMENT</b>  <b>⑥ Government</b>  <i>...provide proper organizational structure for townships individually and collectively to foster effective governance...</i></p>	<p><b>Strategies</b></p> <ul style="list-style-type: none"> <li>Continued partnership between the Townships, County and adjacent municipality.</li> <li>Intergovernmental cooperative agreements.</li> <li>Regional committees, boards, commissions and authorities.</li> </ul>	<p>Lackawaxen and Shohola Townships, Pike County and DCED</p>	<p>General Funds User Fees Municipal Fees DCED Grant Programs</p> <ul style="list-style-type: none"> <li>Shared Municipal Services Program</li> <li>Regional Police Assistance Grant Program</li> </ul>	<p>Cost savings is anticipated with additional cost associated with ability to provide more services</p>	<p>1-2</p>	<p>2009-2015</p>
	<p><b>Recommendations</b></p> <p>Implementation of this Plan will require a number of actions by the Townships' Boards of Supervisors such as:</p> <ul style="list-style-type: none"> <li>Explore opportunities for shared staff in order to increase diversity in areas such as planners, zoning officers, building officials, SEOs, police, public works crews and other staff to support basic governmental function.</li> </ul>					
	<ul style="list-style-type: none"> <li>Establish a joint Planning Commission to guide implementation of the plan and to review development plans.</li> </ul>	<p>Optional Item for Consideration Lackawaxen and Shohola Townships with Technical Assistance from Pike County</p> <ol style="list-style-type: none"> <li>Solicitor Assistance</li> </ol>	<p>General Funds Volunteers</p>	<p>\$1,000 - \$3,000 annual support costs Solicitor Cost Estimate \$1,500 - \$3,000</p>	<p>1-3</p>	<p>2009-2020</p>
	<ul style="list-style-type: none"> <li>Develop intergovernmental cooperative agreements to amend zoning ordinances to be consistent with the Plan.                             <ul style="list-style-type: none"> <li>Consider joint zoning. The region has somewhat consistent land use patterns and could benefit from further consistency with respect to mixed use opportunities, conservation-by-design standards and other aspects of this situation.</li> </ul> </li> <li>Develop intergovernmental cooperative agreements to amend subdivision/land development ordinances consistent with the Plan.</li> </ul>	<p>Lackawaxen and Shohola Townships with Technical Assistance from Pike County</p> <ol style="list-style-type: none"> <li>Solicitor Assistance</li> </ol>	<p>General Funds</p>	<p>\$1,500 - \$3,000</p>	<p>1</p>	<p>2009</p>
	<ul style="list-style-type: none"> <li>Monitor and update other municipal plans and ordinances.</li> </ul>	<p>Lackawaxen and Shohola Townships and Pike County</p> <ol style="list-style-type: none"> <li>Review of Ordinances and Plans</li> <li>Update Work Program</li> <li>Seek Applicable Grant Funds</li> </ol>	<p>Various Grant Funding Sources</p>	<p>\$10,000 - \$50,000</p>	<p>1</p>	<p>2009-2012</p>

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

**Table 27: Landscapes Implementation Plan – Government**

Growth Management Concept, Strategy or Landscape	Strategies and Recommendations	Lead Agency & Partners Key Actions	Funding Sources	Cost Estimate	Priority	Time Reference
<b>ALL LANDSCAPES GOVERNMENT</b> ⑥ Government <i>...provide proper organizational structure for townships individually and collectively to foster effective governance...</i>	<ul style="list-style-type: none"> <li>Monitor local actions over time to ensure consistency. Comply with MPC reporting requirements.</li> </ul>	Lackawaxen and Shohola Townships	General Funds	Part of general Township requirements	1-3	2009-2020
	<ul style="list-style-type: none"> <li>Develop and adopt capital budgets that are consistent with the Plan.</li> </ul>	Lackawaxen and Shohola Townships	General Funds DCED • Early Intervention Program Local Government Academy • Multi-Municipal Planning Grant Program	\$15,000 - \$20,000	1	2009-2010
	<ul style="list-style-type: none"> <li>Partner with Pike County to access professional planning staff.</li> <li>Partner with Pike County to take advantage of County, State and Federal programs.</li> <li>Add increased professional staff</li> </ul>	Lackawaxen and Shohola Townships and Pike County	General Funds	Utilize all free municipal services offered Cost to be determined based upon project	1-3	2009-2020
	<ul style="list-style-type: none"> <li>Add increased professional staff</li> </ul>	Lackawaxen and Shohola Townships and Pike County	General Funds, User Fees, Review and Permit Fees	To be determined based upon staffing needs, staffing expertise and available revenue.	2-3	2013-2020
	<ul style="list-style-type: none"> <li>Create a Joint Municipal Authority responsible for public water and sanitary sewer systems as developed to support the villages and other areas.</li> </ul>	Optional Item to be used as needed Lackawaxen and Shohola Townships and Technical Assistance from DCED with Support from Solicitors	General Funds and Grant Funds	Cost to be determined	1-3	As needed

Note: The priority rating for implementation is using a scale of 1 to 3 with the following meaning: 1-short term – 1-3 years, 2-mid-term – 3-5 years, and, 3-long-term – 5-10 years or more as well as ongoing activities.

## REFERENCES

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*Shohola Township Natural Resources Conservation and Open Lands Preservation Reports, September 2006.*

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<http://www.lackawaxen.org/town.htm>

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<http://www.dcnr.state.pa.us/info/shapefuture/05-lc.aspx>



## APPENDICES

### APPENDIX 1: EXISTING CONDITIONS REPORT

### APPENDIX 2: BUILD-OUT ANALYSIS

### APPENDIX 3: COMMUNITY INVOLVEMENT

*Note: Appendices 1 through 3 are separately bound documents.*

### APPENDIX 4: GLOSSARY

This plan is built upon some basic concepts defined by a set of key terms. The following terms are defined for the purpose of supporting land use policy for the region.

**County Comprehensive Plan** – A land use and growth management plan prepared by the county planning commission and adopted by the county commissioners which establishes broad goals and criteria for municipalities to use in preparation of their comprehensive Plan and land use regulations.

*Source: Municipalities Planning Code*

**Complete Streets** – Streets designed and operated to enable, safe, attractive and comfortable access and travel for all users (pedestrians, bicyclists, motorists and transit). Complete streets also create a sense of place and improve social interaction, while generally improving adjacent land values.

**Designated Growth Area** – A region within a county or counties described in a municipal or multi-municipal plan that preferably includes and surrounds a city, borough or village, and within which residential and mixed use development is permitted or planned for at densities of one unit to the acre or more, commercial, industrial and institutional uses are permitted or planned for and public infrastructure services are provided or planned.

*Source: Municipalities Planning Code*

**Development of Regional Significance and Impact** – Any land development that, because of its character, magnitude, or location will have substantial effect upon the health, safety, or welfare of citizens in more than one municipality.

*Source: Municipalities Planning Code*

**Easement and/or Conservation Easement** – A land preservation agreement that offers perpetual land protection. An easement permanently protects the important conservation values of a property usually by limiting future development although other restrictions may be included in the easement. This legal agreement is between a willing landowner and the county and/or land trust responsible for monitoring and enforcing the easement agreement over the long-term.

*Source: Pike County Open Space, Greenways and Recreation Plan*



**Ecotourism** – It is typically defined as travel to destinations where the flora, fauna, cultural heritage, and natural resources are the primary attractions. Responsible ecotourism includes programs that minimize the adverse effects of traditional tourism on the natural environment, and enhance the cultural integrity of local people. Therefore, in addition to evaluating environmental and cultural factors, initiatives by hospitality providers to promote recycling, energy efficiency, water re-use, and the creation of economic opportunities for local communities are an integral part of ecotourism.

*Source: Pike County Open Space, Greenways and Recreation Plan*

**Forestry** – The management of forests and timberlands when practiced in accordance with accepted silvicultural principles, through developing, cultivating, harvesting, transporting and selling trees for commercial purposes, which does not involve any land development.

*Source: Municipalities Planning Code*

**Future Growth Area** – An area of a municipal or multi-municipal plan outside of and adjacent to a designated growth area where residential, commercial industrial and institutional uses and development are permitted or planned at varying densities and public infrastructure services may or may not be provided, but future development at greater densities is planned to accompany that orderly extension and provision of public infrastructure services.

*Source: Municipalities Planning Code*

**Inter-Municipal Agreement** – An agreement between two or more municipalities outlining the means for agreement to plan together to prepare a multi-municipal comprehensive plan and/or implement a multi-municipal comprehensive plan.

**Low Impact Development (LID)** – Low impact development is an innovative stormwater management approach with a basic principle that is modeled after nature: manage rainfall at the source using integrated management practices (IMPs) for developed areas such as towns, villages and development with significant amounts of impervious surface (building coverage, parking lots and sidewalks). Almost all components in the built environment have the potential to serve as the IMP.

**Minerals** – Any aggregate or mass of mineral matter, whether or not coherent. The term includes, but is not limited to, limestone and dolomite, sand and gravel, rock and stone, earth, fill, slag, iron ore, zinc ore, vermiculite and clay, anthracite and bituminous coal, coal refuse, peat and crude oil and natural gas.

*Source: Municipalities Planning Code*



**Multi-Municipal Plan** – A plan developed and adopted by any number of contiguous municipalities, including a joint municipal plan as authorized by the Pennsylvania Municipalities Planning Code (MPC), except that all of the municipalities participating in the plan need not be contiguous, if all of them are within the same school district.

*Source: Municipalities Planning Code*

**Multi-Municipal Planning Agency** – A planning agency comprised of representatives of more than one municipality and constituted as a joint municipal planning commission in accordance with Article XI of the Pennsylvania Municipalities Planning Code (MPC), or otherwise by multi-municipal issues, including, but not limited to, agricultural and open space preservation, natural and historic resources, transportation, housing and economic development.

*Source: Municipalities Planning Code*

**Official Map** – A map adopted pursuant to MPC, Article IV. The governing body of each municipality shall have the power to make or cause to be made an official map of all or portion of the municipality which may show appropriate elements or portions of elements of the comprehensive plan with respect to public lands and facilities and which may include, but need not be limited to: 1) existing and proposed public streets, watercourses and public grounds, including widening, narrowings, extensions, diminutions, openings or closing of same; 2) existing and proposed public parks, playgrounds and open space reservations; 3) pedestrian ways and easements; 4) railroad and transit rights-of-way and easements; 5) flood control basins, floodways and floodplains, stormwater management areas and drainage easements; 6) support facilities, easements and other properties held by public bodies undertaking the comprehensive plan.

*Source: Municipalities Planning Code*

**Planned Residential Development** – An area of land, controlled by a landowner, to be developed as a single entity for a number of dwelling units, or combination of residential and nonresidential uses, the development plan for which does not correspond in lot size, build, type of dwelling, or use, density, or intensity, lot coverage and required open space to the regulations established in any one district created, from time to time, under the provisions of a municipal zoning ordinance.

*Source: Municipalities Planning Code*

**Preservation or Protection** – When used in connection with natural and historic resources, shall include means to conserve and safeguard these resources from wasteful or destructive use, but shall not be interpreted to authorize the unreasonable restriction of forestry, mining or other lawful uses of natural resources.

*Source: Municipalities Planning Code*



**Prime Agricultural Land** – Land used for agricultural purposes that contains soils of the first, second or third class as defined by the United States Department of Agriculture natural resources and conservation services county soil survey.

*Source: Municipalities Planning Code*

**Protected Open Space** – Open space lands which are certain to remain undeveloped over the long-term. These lands are protected either through conservation easements (land protection agreements) or ownership by state, federal, county or municipal governments.

*Source: Pike County Open Space, Greenways and Recreation Plan*

**Public Grounds** – Lands including parks, playgrounds, trails, paths and other recreational areas and other public areas; sites for schools, sewage treatment, refuse disposal and other publicly owned or operated facilities; and, publicly owned or operated scenic and historic sites.

*Source: Municipalities Planning Code*

**Public Infrastructure Area** – A designated growth area and all or any portion of a future growth area described in a county or multi-municipal comprehensive plan where public infrastructure services will be provided and outside of which such public infrastructure services will not be required to be publicly financed.

*Source: Municipalities Planning Code*

**Public Infrastructure Services** – Services that are provided to areas with densities of one or more units to the acre, which may include sanitary sewers and facilities for the collection and treatment of sewage, water lines and facilities for the pumping and treating of water, parks and open space, streets and sidewalks, public transportation and other services that may be appropriated within a growth area, but shall exclude fire protection and emergency medical services and any other service required to protect the health and safety of residents.

*Source: Municipalities Planning Code*

**Renewable Energy Source** – Any method, process or substance whose supply is rejuvenated through natural processes and, subject to those natural processes, remains relatively constant, including, but not limited to, biomass conversion, geothermal energy, solar and wind energy and hydroelectric energy and excluding those sources of energy, solar and wind energy and hydroelectric energy and excluding those sources of energy used in the fission and fusion processes.

*Source: Municipalities Planning Code*

**Rural Resource Area** – An area described in a municipal or multi-municipal plan within which rural resource uses including, but not limited to, agriculture,



timbering, mining, quarrying and other extractive industries, forest and game lands and recreation and tourism are encouraged and enhanced, development that is compatible with or supportive of such uses is permitted, and public infrastructure services are not provided except in villages.

*Source: Municipalities Planning Code*

**Smart Growth** – Smart growth is a concept which provides long-term strategies that address sprawl and incorporate growth with sustainable use of land and water resource. The Smart Growth Network, U.S. Environmental Protection Agency (EPA), and International City/County Management Association (ICMA) have described smart growth as “development that serves the economy, community, and the environment. It provides a framework for communities to make informed decisions about how and where they grow. Smart growth makes it possible for communities to grow in ways that support economic development and jobs; create strong neighborhoods with a range of housing, commercial, and transportation options; and, achieve healthy communities that provide families with a clean environment.” There are ten basic smart growth principles which can provide focus and direction for applying the concept in local communities.

*Source: Pike County Open Space, Greenways and Recreation Plan*

**Traditional Neighborhood Development (TND)** – An area of land developed for a compatible mixture of residential units for various income levels and nonresidential commercial and workplace uses, including some structures that provide for a mix of uses within the same building. Residences, shops, offices, workplaces, public buildings, and parks are interwoven within the neighborhood so that all are within relatively close proximity to each other. Traditional neighborhood development is relatively compact, limited in size and oriented toward pedestrian activity. It has an identifiable center and a discernible edge. The center of the neighborhood is in the form of a public park, commons, plaza, square or prominent intersection of two or more major streets. Generally, there is a hierarchy of streets laid out in a rectilinear or grid pattern of interconnecting streets and blocks that provides multiple routes from origins to destinations and is appropriately designed to serve the needs of pedestrians and vehicles equally.

*Source: Municipalities Planning Code*

**Transferable Development Rights (TDRs)** – The attaching of development rights to specific lands which are desired by a municipality to be kept undeveloped, but permitting those rights to be transferred from those lands so that the development potential which they represent may occur on other lands where more intensive development is deemed to be appropriate.

*Source: Municipalities Planning Code*

**Village** – An unincorporated settlement that is part of a township where residential and mixed use densities of one unit to the acre or more exist or



are permitted and commercial, industrial or institutional uses exist or are permitted.

*Source: Municipalities Planning Code*

**Watershed Protection** – Activities which assist in the protection and effective management of the quality of watershed lands and/or surface or groundwater resources – including the inherent functions and values the land and water resources provide – for the benefit of human, environmental and economic health, safety and welfare. Such land areas may include but are not limited to: floodplains, wetlands, steep slopes. Surface conditions may include, but are not limited to: land development or other human activities.

*Source: Pike County Open Space, Greenways and Recreation Plan*

## **APPENDIX 5: GROWING GREENER CONSERVATION BY DESIGN MANUAL**

The Growing Greener Conservation by Design publication describes the development process to protect interconnected networks of open space including natural areas, greenways, trails and recreation lands. This publication was prepared in cooperation by the Natural Lands Trust, DCNR and the Governor's Center for Local Government Services.



## APPENDIX 6: FUNDING SOURCES & TECHNICAL ASSISTANCE SUPPORT

STATE & FEDERAL FUNDING SOURCES & TECHNICAL ASSISTANCE SUPPORT PROGRAMS			
Grant Program	Agency	Email / Web Site	Description and Eligibility
<b>Housing Programs</b>			
Weatherization Program	PA Department of Community and Economic Development	<a href="http://www.newpa.com/programDetail.aspx?id=95">www.newpa.com/programDetail.aspx?id=95</a>	Federal program that works to minimize the adverse affects of high energy costs to low-income, elderly and handicapped citizens through client education activities and by providing weatherization services.
Emergency Shelter Grant (ESG)	PA Department of Community and Economic Development	<a href="http://www.newpa.com/programDetail.aspx?id=92">www.newpa.com/programDetail.aspx?id=92</a>	Federal grants funding assistance in creating or rehabilitating shelter space for the homeless.
PA Access Grant Program	PA Department of Community and Economic Development	<a href="http://www.newpa.com/programDetail.aspx?id=88">www.newpa.com/programDetail.aspx?id=88</a>	Provides grants to low- and moderate-income persons with permanent disabilities, for home renovations to make them handicapped accessible.
HOME	PA Department of Community and Economic Development	<a href="http://www.newpa.com/programDetail.aspx?id=85">www.newpa.com/programDetail.aspx?id=85</a>	Federally funded program that provides municipalities with loan assistance and technical assistance to expand the supply of decent and affordable housing for low- and very low-income citizens.
Community Development Block Grant Program	PA Department of Community and Economic Development	<a href="http://www.newpa.com/programDetail.aspx?id=72">www.newpa.com/programDetail.aspx?id=72</a>	Federal program, locally administered. Communities/neighborhoods must meet a standard of 51% low- to moderate-income level.
Community Revitalization Program (CRP)	PA Department of Community and Economic Development	<a href="http://www.newpa.com/programDetail.aspx?id=72">www.newpa.com/programDetail.aspx?id=72</a>	Provides grant funds to support local initiatives that promote community stability and quality of life.

**STATE & FEDERAL FUNDING SOURCES & TECHNICAL ASSISTANCE SUPPORT PROGRAMS**

**Community Services**

<b>Grant Program</b>	<b>Agency</b>	<b>Email / Web Site</b>	<b>Description and Eligibility</b>
<b>Municipal Services</b>			
Shared Municipal Services Program (SMSP)	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=101">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=101</a>	Provides grant funds that promote cooperation among municipalities as well as encourages more efficient and effective delivery of municipal services on a cooperative basis.
Regional Police Assistance Grant Program	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=83">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=83</a>	Grants for two or more municipalities that regionalize police operations.
State Surplus Property Program	State Surplus Property Program	<a href="http://www.dgs.state.pa.us/surp_prop/cwp/view.asp?a=3&amp;q=121047">www.dgs.state.pa.us/surp_prop/cwp/view.asp?a=3&amp;q=121047</a>	Used equipment available to local governments and volunteer fire companies.
Volunteer Loan Assistance Program (2% loan program)	Volunteer Firefighters Relief Associations	<a href="http://www.osfc.state.pa.us/osfc/cwp/view.asp?a=3&amp;Q=244793&amp;osfcNav=%7C">www.osfc.state.pa.us/osfc/cwp/view.asp?a=3&amp;Q=244793&amp;osfcNav=%7C</a>	Finance new and used equipment and structures for ambulance and fire companies.
Rural Communities Fire Protection	Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry Fire Protection	<a href="http://www.dcnr.state.pa.us/forestry/stateforests/kittanning.aspx">www.dcnr.state.pa.us/forestry/stateforests/kittanning.aspx</a>	State Foresters solicit cost-sharing grant proposals from fire departments who serve communities of 10,000 people or less. State Foresters review the grant proposals and consider statewide needs when determining awards. At least 50 percent of the funding for RCFP cost-sharing grant projects must come from non-federal sources.
Emergency Responders Resource & Training Program (ERRTP)	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=75">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=75</a>	ERRTP funds may be used for emergency responder improvement projects. These projects must demonstrate a benefit to community activities associated with police, fire, ambulance or related public safety services.
Section 902 Recycling Performance Grants	PA Department of the Environmental Protection	<a href="http://www.dep.state.pa.us/dep/deputate/airwaste/wm/RECYCLE/document/Grants.htm">www.dep.state.pa.us/dep/deputate/airwaste/wm/RECYCLE/document/Grants.htm</a>	Grants for recycling program implementation. Funding also available for equipment, containers and education outreach.
Section 904 Recycling Performance Grants	PA Department of the Environmental Protection	<a href="http://www.dep.state.pa.us/dep/deputate/airwaste/wm/RECYCLE/document/Grants.htm">www.dep.state.pa.us/dep/deputate/airwaste/wm/RECYCLE/document/Grants.htm</a>	Grants awarded to provide incentives to counties and municipalities giving more money to successful recycling programs.

**STATE & FEDERAL FUNDING SOURCES & TECHNICAL ASSISTANCE SUPPORT PROGRAMS**

<b>Grant Program</b>	<b>Agency</b>	<b>Email / Web Site</b>	<b>Description and Eligibility</b>
<b>Economic Development</b>			
Local Municipal Resources and Development Program (LMRDP)	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=78">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=78</a>	Grants to municipalities for improving quality of life within the community.
Small Business First	PA Department of Agriculture, PA Grows	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=33">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=33</a>	Funding for small business (100 employees or less), including: low-interest loans for land and building acquisition and construction; machinery and equipment purchases and working capital.
Economic Stimulus Package Technical Assistance	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=73">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=73</a>	Technical assistance for local governments as part of the Economic Stimulus Package.
First Industries Fund	PA Department of Agriculture, PA Grows	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=47">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=47</a>	Grant and loan program aimed at strengthening PA's agriculture and tourism industries.
Heritage and Tourism Cooperative	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=105">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=105</a>	Providing marketing grants to arts, cultural and heritage festivals for marketing that will supplement existing marketing efforts of these festivals.
PA Humanities Council Grants	PA Humanities Council	<a href="http://www.pahumanities.org/">www.pahumanities.org/</a>	Grants to host exhibitions or events encouraging programs on Pennsylvania traditions.
<b>Land Use</b>			
Land Use Planning and Technical Assistance Program (LUPTAP)	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=100">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=100</a>	Provides grant funds for the preparation of community comprehensive plans and the ordinances to implement them.
<b>Government Facilities</b>			
Local Government Capital Project Loan Program (LGCPL)	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=96">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=96</a>	Low-interest loans to local government for equipment and facility needs. Rolling stock and data processing equipment purchases or the purchase, construction, renovation or rehabilitation of municipal facilities.
Infrastructure Development Program	PA Department of Community and Economic Development, Center for Business Financing	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=26">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=26</a>	Grant and low-interest loan financing for public and private authorities and corporations, municipal authorities, redevelopment authorities and local development districts may apply for IDP assistance for themselves or on behalf of eligible private companies engaged in: agriculture, industrial, manufacturing, research and development, and export services; real estate developers who are developing sites for eligible private companies.

**FUNDING SOURCES & TECHNICAL ASSISTANCE SUPPORT PROGRAMS**

<b>Grant Program</b>	<b>Agency</b>	<b>Email / Web Site</b>	<b>Description and Eligibility</b>
<b>Government Facilities &amp; Functions</b>			
Early Intervention Program	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=98">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=98</a>	Provides matching grant funds to assist municipalities experiencing fiscal difficulties to develop comprehensive multi-year financial plans and establish short- and long-term financial objectives.
Water Supply and Wastewater Infrastructure Program (PennWorks)	PA Department of Community and Economic Development, Center for Business Financing, Site Development Division	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=43">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=43</a>	A program to ensure safe water supply and proper wastewater infrastructure. Eligibility: Municipalities, Industrial Development Corporations, Municipal Authorities, Investor-owned water or wastewater enterprise.
Water and Waste Disposal Systems for Rural Communities	US Department of Agriculture, Rural Utilities Service	<a href="http://www.usda.gov/rus/water/program.htm">www.usda.gov/rus/water/program.htm</a>	RUS provides loans, guaranteed loans, and grants for water, sewer storm water, and solid waste disposal facilities in cities and towns up to 10,000 people and rural areas with no population limits.
Pennsylvania Infrastructure Investment Authority (PENNVEST)	Pennsylvania Infrastructure Investment Authority (PENNVEST)	<a href="http://www.pennvest.state.pa.us/pennvest/site/default.asp">www.pennvest.state.pa.us/pennvest/site/default.asp</a>	Provides low interest loans for the design and engineering of drinking water, wastewater and stormwater infrastructure projects. Provides low-interest loans and grants for new construction or for improvements to publicly or privately owned drinking water or sewage treatment facilities. PENNVEST can also fund municipally owned stormwater management systems.
<b>Transportation Facilities</b>			
Land Use Planning and Technical Assistance Program (LUPTAP)	PA Department of Community and Economic Development	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=100">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=100</a>	Provides grant funds for the preparation of community comprehensive plans and the ordinances to implement them.
Infrastructure Development Program	PA Department of Community and Economic Development, Center for Business Financing	<a href="http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=26">http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?proglid=26</a>	Grant and low-interest loan financing for public and private authorities and corporations, municipal authorities, redevelopment authorities and local development districts may apply for IDP assistance for themselves or on behalf of eligible private companies engaged in: agriculture, industrial, manufacturing, research and development, and export services; real estate developers who are developing sites for eligible private companies.

**FUNDING SOURCES & TECHNICAL ASSISTANCE SUPPORT PROGRAMS**

Grant Program	Agency	Email / Web Site	Description and Eligibility
<b>Transportation Facilities</b>			
Transportation Enhancement Program (SAFETEA-LU)	PA Department of Transportation	<a href="http://www.dot.state.pa.us/">http://www.dot.state.pa.us/</a>	Projects meeting eligibility criteria may be funded: streetscapes, trails/paths, bicycle improvements and other related activities. The Hometown Streets/Safe Routes to School is a specific grant program that utilizes these funds.
FHWA/PennDOT Transportation Funds	PA Department of Transportation	<a href="http://www.dot.state.pa.us/">http://www.dot.state.pa.us/</a>	Funds for a variety of bridge, roadway and traffic control projects funded by: Federal/State Highway Funds, Federal/State Bridge Funds, CMAQ Funds, Rail Highway Grade Crossing Funds, Special Federal Earmarks (SXF), PennDOT Discretionary Funds.
Pennsylvania Infrastructure Bank (PIB) Loans	PA Department of Transportation	<a href="http://www.dot.state.pa.us/PennDOT/Bureaus/PIB.nsf/HomepagePIB?OpenForm">http://www.dot.state.pa.us/PennDOT/Bureaus/PIB.nsf/HomepagePIB?OpenForm</a>	A PennDOT operated program that provides low-interest loans to help fund transportation projects within the Commonwealth. The goal of the program is to leverage state and federal funds, accelerate priority transportation projects, spur economic development and assist local governments with their transportation needs.

**FUNDING SOURCES & TECHNICAL ASSISTANCE SUPPORT PROGRAMS**

<b>Grant Program</b>	<b>Agency</b>	<b>Email / Web Site</b>	<b>Description and Eligibility</b>
<b>Conservation, Preservation, Park, Open Space and Greenways</b>			
Watershed Protection and Flood Prevention Program	US Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS)	<a href="http://www.nrcs.usda.gov/programs/watershed/">www.nrcs.usda.gov/programs/watershed/</a>	Provides technical and financial assistance to address water resources and related economic problems on a watershed basis.
Community Preservation Program	PA Historic and Museum Commission	<a href="http://www.phmc.state.pa.us/bhp/community/overview.asp?secid=25">www.phmc.state.pa.us/bhp/community/overview.asp?secid=25</a>	The Bureau offers technical assistance and preservation guidance available through workshops to assist municipalities in designing historic districts, advising on developing historic preservation plans and other strategies (planning and zoning, and protecting historic properties at the local government level).
Community Grants	Department of Conservation and Natural Resources	<a href="http://www.dcnr.state.pa.us/brc/grants/">http://www.dcnr.state.pa.us/brc/grants/</a> then click on 2008 C2P2 Grants List	This program assists municipalities in the rehabilitation and development of parks and recreation facilities. The program provides financial assistance for land acquisition, as well as technical assistance.
Growing Greener: Environmental Stewardship and Watershed Protection Act	Pennsylvania Department of Environmental Protection	<a href="http://www.depweb.state.pa.us/growinggreener/site/default.asp">www.depweb.state.pa.us/growinggreener/site/default.asp</a>	Funding to clean up abandoned mines, restore watersheds, and provide new and upgraded water and sewer systems.
Source Water Protection Grant Program	Pennsylvania Department of Environmental Protection, Bureau of Watershed Management	<a href="http://www.dep.state.pa.us/dep/deputate/watermgmt/wc/Subjects/SrceProt/SourceWaterProtection/default.htm">www.dep.state.pa.us/dep/deputate/watermgmt/wc/Subjects/SrceProt/SourceWaterProtection/default.htm</a>	Grants for start-up and development of local, voluntary source water protection programs.
Nonpoint Source Pollution Control	Pennsylvania Department of Environmental Protection, Bureau of Watershed Management	<a href="http://www.dep.state.pa.us/dep/deputate/watermgmt/wc/Subjects/NonpointSourcePollution/default.htm">www.dep.state.pa.us/dep/deputate/watermgmt/wc/Subjects/NonpointSourcePollution/default.htm</a>	Funding for projects that restore or protect impaired waters through education, monitoring or practices to control or reduce nonpoint sources of pollution.
Stream Improvement Program	Pennsylvania Department of Environmental Protection, Bureau of Waterways Engineering	<a href="http://www.dep.state.pa.us/dep/deputate/watermgmt/we/streamprogram/main.htm">www.dep.state.pa.us/dep/deputate/watermgmt/we/streamprogram/main.htm</a>	State provided design and construction projects to eliminate imminent threats due to flooding and stream bank erosion.

**FUNDING SOURCES & TECHNICAL ASSISTANCE SUPPORT PROGRAMS**

Grant Program	Agency	Email / Web Site	Description and Eligibility
<b>Conservation, Preservation, Park, Open Space and Greenways</b>			
Stormwater Management Program	Pennsylvania Department of Environmental Protection, Bureau of Watershed Management	<a href="http://www.dep.state.pa.us/dep/deputate/watermgmt/wc/subjects/wwec/general/wetlands/wetlands.htm">www.dep.state.pa.us/dep/deputate/watermgmt/wc/subjects/wwec/general/wetlands/wetlands.htm</a>	Funding and technical assistance for the restoration of wetlands.
Five-Star Restoration Program	U.S. Environmental Protection Agency Office of Wetlands, Oceans and Watersheds	<a href="http://www.epa.gov/owow/wetlands/restore/5star/">www.epa.gov/owow/wetlands/restore/5star/</a>	Provides funds to the National Fish and Wildlife Foundation and its partners, the National Association of Counties, NOAA's Community-based Restoration Program and the Wildlife Habitat Council. These groups then make subgrants to support community-based wetland and riparian restoration projects. Competitive projects will provide long-term ecological, educational, and/or socioeconomic benefits to the people and community.
Community-based Restoration Program (CRP)	U.S. Department of Commerce National Oceanic and Atmospheric Administration Office of Habitat Conservation	<a href="http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/">www.nmfs.noaa.gov/habitat/restoration/projects_programs/</a>	Provides funds for small-scale, locally driven habitat restoration projects that foster natural resource stewardship within communities.
Rivers Conservation Program	PA Department of Conservation and Natural Resources, Division of Conservation Partnerships	<a href="http://www.dcnr.state.pa.us/rivers/riverhome">www.dcnr.state.pa.us/rivers/riverhome</a>	Funding and technical assistance to river support groups and municipalities for planning, implementation, acquisition and development.
Flood Mitigation Assistance Program (RMA)	Federal Emergency Management Agency	<a href="http://www.fema.gov/fima/fma.stm">www.fema.gov/fima/fma.stm</a>	Assists states and communities to identify and implement measures to reduce or eliminate the long-term risk of flood damage to homes and other structures insurable under the NFIP.
National Fish and Wildlife Foundation General Matching Grants	U.S. Department of the Interior, U.S. Fish and Wildlife Service	<a href="http://www.fedcenter.gov/Bookmarks/index.cfm?id=851&amp;pge_prg_id=8677&amp;pge_id=1866">http://www.fedcenter.gov/Bookmarks/index.cfm?id=851&amp;pge_prg_id=8677&amp;pge_id=1866</a>	Grant program that awards challenge grants to projects that (1) address priority actions promoting fish and wildlife conservation and the habitats on which they depend; (2) work proactively to involve other conservation and community interests; (3) leverage available funding; and (4) evaluate project outcomes.

**FUNDING SOURCES & TECHNICAL ASSISTANCE SUPPORT PROGRAMS**

Grant Program	Agency	Email / Web Site	Description and Eligibility
<b>Conservation, Preservation, Park, Open Space and Greenways</b>			
Partners for Fish and Wildlife Program	U.S. Department of the Interior, U.S. Fish and Wildlife Service Branch of Habitat Restoration, Division of Habitat Conservation	<a href="http://www.fws.gov/partners/">www.fws.gov/partners/</a>	Provides technical and financial assistance to private landowners to restore fish and wildlife habitats on their lands.
Miscellaneous Grants	PA Department of Conservation and Natural Resources, Division of Conservation Partnerships	<a href="http://www.dcnr.state.pa.us/brc/grants/">www.dcnr.state.pa.us/brc/grants/</a>	DCNR offers a variety of grants for projections, programs and acquisition utilizing a variety of federal and state funds including: <ul style="list-style-type: none"> <li>• Commonwealth's Keystone Recreation, Park and Conservation Fund (Key93)</li> <li>• The Environmental Stewardship and Watershed Protection Act (Growing Greener)</li> <li>• Act 68 Snowmobile and ATV Trails Fund</li> <li>• Land and Water Conservation Fund (LWCF)</li> <li>• Recreational Trails component of SAFETEA-LU</li> </ul>

## APPENDIX 7: SUMMARY OF COMMUNITY SURVEY

Lackawaxen Township and Shohola Township are engaged in the development of a Multi-Municipal Comprehensive Plan. As a component of the public involvement portion of the planning process, and as a method to collect public opinion, attitudes, and factual data about the citizens of the community, a Township-wide Community Survey for both Townships was developed and administered. The distribution and collection methodology of the Community Survey are provided in this document, as well as response rates and summarized data from the survey responses. The results of the completed surveys have been summarized to provide the Borough with vital information about current conditions within the community, about how the community would like to change, and key issues or concerns identified by the community. The results of the community survey will be incorporated with other Comprehensive Plan Documents (Existing Conditions Report, Visual Preferences Report, Priority Issues Report and summaries of public meetings) when developing strategies that meet the plan goals and objectives.

### Community Survey Administration and Methodology

A mail-out/mail-back Community Survey was administered for all households in Lackawaxen Township and Shohola Township. The three page survey was to be completed by an adult member of each household; one completed survey per household returned to Township offices. The mailings were conducted by using tax assessment and utility service's mailing addresses. Completed surveys were collected and provided to Johnson, Mirmiran & Thompson, Planning Consultant, for analysis and summarization. Included in this document are summaries, a blank Community Survey as well as raw data and responses. All completed and returned surveys are on file at the Township Buildings and are the property of Lackawaxen Township and Shohola Township. Survey responses are contained in a database on a CD as part of this document.

The Townships mailed out 9411 Community Surveys and received 978 completed surveys for a 10.4 percent (10.4%) response rate. The outcome of the Community Survey is presented on the following pages using the community survey instrument to organize a tally of results. The results are based on the 978 completed and returned surveys. Of the returned surveys, numerous respondents did not answer all questions. Results for each question are based on the number of respondents that answered the question. Oftentimes, respondents provided comments for questions that weren't intended to receive written comment; for these instances, the written comments are included with the summary results.

### Community Survey Summary

The following summary includes the results of the combined survey responses from Lackawaxen Township and Shohola Township. In general, respondents were property owners who owned their own home for an average 16 years (one respondent had owned their home for 72 years). The percentage of respondents that are primary residents versus season residents were similar with primary residents at 51.2 percent and seasonal residents at 48.8 percent. The majority of respondents were adults (54.5%) or senior citizens (45.5%) and no teens completed the survey. Approximately one-third (33.8%) of the respondents had resided in either township for less than five years. Respondents from both townships **supported** the vision statement to guide future development of their community and provided 224 comments concerning the vision statement.

According to respondents, **healthcare services needed** are doctors' office / family practices, hospital, or a pharmacy; secondary health care services needed include medical clinics, dental offices, and out-patient services.

Of the respondents that indicated where they work, the majority (60.7%) work in New York or New Jersey; the average travel time to work is 46 minutes one-way with one respondent commuting 200 minutes one-way. Two students responded to the survey and 385 retirees responded to the survey.

The top **types of additional businesses** respondents could **support** or indicated as **needed** included non-franchised (locally owned) restaurants, medical clinics / doctor's offices, and a grocery store. The top types of additional businesses respondents could **somewhat support** included barber shops / hair salons, auto repair, and deli / coffee shop, and appliance / repair services. The types of businesses respondents **would not support** included franchised fast food, candy store, camera store, car rentals, and auto sales. Five hundred and two comments were received concerning where to locate businesses.

In general, respondents **avored** land use regulations to promote design patterns that preserve agriculture, forest, and environmentally sensitive lands; **avored** required setback from streams, rivers and lakes; **avored** preservation of historic features; and **avored** preservation of scenic views.

According to respondents the primary **type of public recreation and open space needed** included preserved forest lands and hiking paths; secondary types included parks, preserved ridge lines, preserved floodplains / greenways; and fishing. Four out of five respondents (80.9% in Lackawaxen and 78.8% in Shohola) **avored** preservation / conservation of environmentally sensitive lands as public recreation, open space, and greenways; Four out of five respondents (80.2% in Lackawaxen and 80.3% in Shohola) **avored** use of public dollars for public recreation and preservation/conservation of public open space and greenways.

Of the respondents that indicated a **satisfaction level concerning quality of life** in the Townships, three quarters (79.3%) of the Lackawaxen Township respondents are **satisfied** to **very satisfied** with the quality of life; and four out of five (81.1%) of the Shohola Township respondents are **satisfied** to **very satisfied** with the quality of life. Seven hundred comments were received concerning "most valued" in either township with over seven hundred (731) comments were received listing primary concerns for either township.

The following section provides combined responses for each question of the survey, as well as individual Township responses which is then followed by written comments.

**Lackawaxen Township and Shohola Township Community Survey**

Lackawaxen and Shohola Townships are developing a Multi-Municipal Comprehensive Plan. Through this effort, the Townships will be planning together for future development, preservation and conservation of lands. Your response to the survey will provide the Townships with vital information about how you would like the community to develop. Please participate by completing the survey. **Please return by July 13, 2007.** If you have questions about the survey contact:

Shawn Roe, Lackawaxen Township (570) 685-7288  
Nelia Wall, Shohola Township (570) 559-7394

Thank you for your participation!  
Lackawaxen/Shohola Citizens Advisory Committee

**General Information**

1) Are you a Township resident or property owner, or do you own property in both? (check all that apply)

<b>Lackawaxen Township</b>	<b>Shohola Township</b>
120 Resident	145 Resident
131 Property Owner	225 Property Owner

2) Do you own or rent your home? 402 Own 3 Rent How long? \_\_\_\_\_ Years  
Average = 16.4 Years Maximum = 66 Years

3) Is this your primary residence or second/seasonal home?  
282 Primary Residence 128 Second/Seasonal Home

4) Are you a:  Teen 221 Adult 198 Senior Citizen

5) How long have you lived in the township(s)? (pick one)  
109 0-5 years 64 11-15 years 60 20-30 years  
60 6-10 years 47 16 – 20 years 60 30+ years

**Community Vision Statement**

6) Do you support the vision statement below to guide future development of the Township?

<b>Lackawaxen Township</b>	<b>Shohola Township</b>
158 Yes 12 No	248 Yes 17 No

*"Lackawaxen and Shohola Townships are endowed with remarkable natural surroundings that enhance the quality of life for our residents. In order to sustain this environment and quality of life, and preserve our natural and scenic resources, our communities' vision is to effectively manage growth and development while: respecting personal property rights; providing appropriate public facilities, recreational opportunities and infrastructure; expanding opportunities for local employment; and, promoting economic activities."*

Comments:  
112 Comments

**Health Care Services**

7) What types of health care services are needed? (check all that apply)

225 Doctor's Office/Family Practice	66 Optometrists Offices	108 Out-Patient Services
118 Medical Clinics	44 Chiropractors Offices	40 Acute Care
121 Dental Offices	130 Hospital	35 Personal Care Facilities
74 Long Term Care	69 Adult Day Care Facilities	49 Pediatrics
47 Alternative Medicine	142 Pharmacy	Other: 29 Comments

**Economic Development**

8) Where do you work?  
28 In Lackawaxen Township 26 In Shohola Township 24 Other in Pennsylvania  
129 In New York /New Jersey 50 Other in Pike County 1 Student 187 Retired

How long do you travel to work? Average = 45.2 Minutes, 180 Minute Maximum Minutes (one way)

**Lackawaxen Township and Shohola Township Community Survey**

9) In addition to existing businesses, what types of businesses do you feel you would support in the Townships and the greater region? (circle the top 5 businesses)

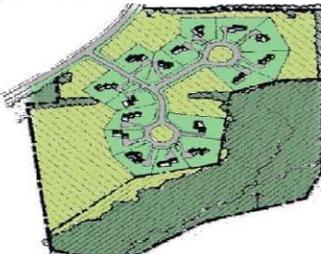
Top 5 Results	Business Type	Check One		
		Supported and Needed	Somewhat Supported	Would Not Be Supported
46	Non-franchised (locally owned) Restaurants	193	112	28
12	Franchised Fast Food	33	65	188
13	Book Stores	89	107	74
10	Barber Shops/Hair Salon	89	114	72
20	Professional Offices	78	106	80
3	Gift Stores	44	104	105
10	Home Occupations/ Home Offices	64	99	91
25	Movie Theatre	126	70	109
3	Movie Rentals	48	88	114
54	Medical Clinics/Doctor's Offices	198	85	36
8	Coffee Shops	83	99	86
0	Candy Store	25	81	144
4	Florist	39	105	110
46	Grocery Store	166	85	54
41	Pharmacy/Drug Store	153	89	52
17	Gasoline Station	102	85	90
11	Convenience Store	79	98	90
12	Auto Repair	73	98	94
9	Clothing Store	65	81	117
16	Deli/Coffee Shop	101	113	60
8	Arts/Crafts Store	56	95	109
32	Bakery	136	106	51
1	Camera Store	21	80	152
9	Computer Sales/Repair	38	91	130
4	Equipment Rental Store	35	96	126
3	Car Rentals	34	59	160
1	Auto Sales	14	45	189
1	Funeral Homes	28	84	135
17	Day Care Facilities	66	96	104
10	Appliance Repair/Service	64	115	92
	Other: 53 Comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other: 19 Comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10) Identify where would you like to see these businesses located in your Township?

Comment:  
240 Comments

**Environmental Protection**

11) Do you favor land use regulations that promote development design patterns that will preserve agricultural, forest and environmentally sensitive lands?



Lackawaxen Township

199 Yes 16 No

Shohola Township

163 Yes 25 No

Diagrams to left depict alternative development patterns

