FINAL DRAFT

LACKAWANNA-LUZERNE REGIONAL PLAN

COMPREHENSIVE PLAN AND LONG-RANGE TRANSPORTATION PLAN FOR LACKAWANNA & LUZERNE COUNTIES, PA

LACKAWANNA-LUZERNE
COME, SHAPE THE FUTURE

A Guide for Integrating Land Use, Transportation, Economic Development and Sustainability in the Region

Prepared For:

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LACKAWANNA-LUZERNE
COME, SHAPE THE FUTURE

CHAPTER 1

THE SETTING

Introduction

Located in northeastern Pennsylvania, Lackawanna and Luzerne Counties are comprised of 116 municipalities and home to over a half-million people. Over the years, these two counties have demonstrated a strong history of governmental cooperation and regional collaboration. This association represents a shared vision for collaborative planning and decision-making on a wide range of challenges and opportunities affecting the future of both counties. Chief among these are land use, economic development, transportation, and sustainable environmental quality.

Past collaborations include the creation of the Lackawanna/Luzerne Metropolitan Planning Organization (MPO), as well as the preparation and adoption of the first two-county open space, greenway, and outdoor recreation master plan in the Commonwealth – a plan that the Pennsylvania Department of Conservation and Natural Resources uses as a model of quality planning in Pennsylvania. Continuing with that precedent, Lackawanna and Luzerne Counties have now joined together to prepare a two-county comprehensive and long-range transportation plan. The *Lackawanna-Luzerne Regional Plan* presented in this document is therefore comprised of two critical and related planning elements, as follows:

- A *Comprehensive Plan* focused on providing an overall planning guide for the two counties and their municipalities. It establishes a framework for future growth, conservation, and preservation that strengthens existing communities and responsibly stewards natural, agricultural, and cultural resources.

- A *Long-Range Transportation Plan* (LRTP) to develop, maintain, and manage an adequate, safe, accessible, and environmentally-sound transportation system. This system will support communities and provide for the reasonably efficient movement of people and goods within and through Lackawanna and Luzerne Counties.

A Hazard Mitigation Plan for Lackawanna and Luzerne Counties was developed in conjunction with this Regional Plan. As a result of this collaborative effort, future development is being directed to avoid known or possible hazard areas. In addition, identifying possible mitigation areas for future purchase and developing transportation planning to incorporate improving evacuation routes into and out of the area was part of the overall strategy in these planning efforts. This is the first time that all three planning emphasis areas – the Comprehensive Plan, Long-Range Transportation Plan, and Hazard Mitigation Plan – have been addressed concurrently for two counties in Pennsylvania.

Purpose of the New Comprehensive Plan

The preparation of a comprehensive plan serves four purposes:

- First, and foremost, it establishes a common planning database for Lackawanna and Luzerne Counties. The database, which is detailed in Chapter Four, includes

Comprehensive Plan

Establishes common planning database

Identifies basic direction and structure

Specifies goals, policies, and individual elements

Provides specific implementation strategy and program

surveys of natural and cultural features, the current land use pattern, the road system, the systems of public services and utilities, analyses and projections of population and housing, and an examination of the rate and types of change in each county over the last 20 years.

- Second, it identifies the basic direction and structure recommended for the future of the two-county region, derived from extensive evaluation of alternative scenarios for development to the year 2035. The framework for the future is described in Chapter Two.

- Third, it specifies the goals, policies, and individual elements that will form the basis for development, conservation, redevelopment, and preservation. This information is also presented in Chapter Two.

- Fourth, it provides a specific implementation strategy and program to help achieve the goals of the Plan. This strategy and program is laid out in Chapter Three.

A comprehensive plan for the Lackawanna and Luzerne County communities provides local officials with a highly-effective planning tool. This tool will support day-to-day decisions about future development so that planning may be thoroughly rational and consistent and at the same time move the communities together in a desirable direction in terms of revitalization, open space conservation, mobility, historic resource preservation, environmental protection, community facilities, and fiscal balance.

This comprehensive plan is fully responsive to the needs of the residents of Lackawanna and Luzerne County communities. These needs were identified based on input from the Advisory Committee, public meetings, and stakeholder sessions. It contains both long-range and short-range programs, balances local needs and perceptions with regional requirements and perspectives, and has its own logic and strategy for implementation. A good comprehensive plan also serves as a “road map” for the study area, both in terms of informing and improving the practice of reviewing and approving development plans, and in projecting a coherent and mutually agreed-upon development framework and visual image of the area.

The comprehensive plan should serve as an everyday working document to be referred to regularly in the review of development proposals and in the planning of long-range capital improvements. The comprehensive plan for Lackawanna and Luzerne Counties also needs to relate to and be coordinated with local municipal and multi-municipal comprehensive plans, but at the same time must reflect the unique characteristics and setting of all of Lackawanna and Luzerne Counties. The comprehensive plan must also meet the requirements of the Commonwealth of Pennsylvania’s Municipalities Planning Code as to content and the procedure for the preparation and adoption of comprehensive plans.

Purpose of the New Long-Range Transportation Plan

The long-range transportation plan has been developed as a long-range (20+ years) planning strategy and capital improvement program and serves as a guide for

coordinated transportation planning throughout Lackawanna and Luzerne Counties. The LRTP identifies the location, size, function, and type of new or improved transportation infrastructure, focusing on a multimodal approach to transportation planning. It includes projects for highways, streets, sidewalks, trails, rail, ports, and airports, and for various modes of public transportation.

The LRTP serves as a resource to guide the wise use of public funds in the investment of a transportation system, so that cost effective infrastructure that will efficiently move people and goods throughout the region will result.

Long-Range Transportation Plan

Establishes coordinated planning guide

Identifies details of new and improved infrastructure

Guides wise investment of public funds

A LRTP is updated every four years, as required by federal law. To update the LRTP, population, and job growth trends are projected into the future, traffic levels are forecast and compared to the capacity of the road network, and the costs of needed transportation projects are estimated and compared with revenue forecasts. Many meetings are held to solicit public opinion on transportation needs and priorities. Finally, the Metropolitan Planning Organization (MPO) Board adopts a list of projects considered to be the highest priority and affordable. The recommendations of the new long-range transportation plan for Lackawanna and Luzerne Counties are detailed in Chapter Two.

A Regional Plan, Fully Integrated

The comprehensive plan and the long-range transportation plan for Lackawanna and Luzerne Counties have been combined and together are known as the ***Lackawanna-Luzerne Regional Plan***. This innovative plan takes full advantage of new and evolving planning tools and provides guidance on sustainability and integrated environmentally-sound land use and transportation systems. The traditional definition of sustainability calls for policies and strategies that meet society's present needs without compromising the ability of future generations to meet their own needs.

During the development of the Regional Plan, existing assets of each county were identified, described, and mapped. At the same time, challenges and deficiencies were brought forward for consideration in the broader functions of regional, county, and municipal programs.

The planning process for the Regional Plan represented an opportunity for the region to focus in on its identity and its prospects. Given the scale and longevity of major land developments and transportation investments and the impact they have on an area's economy and quality of life, the plan for the region's future demanded thoughtful consideration. A twenty-year Regional Plan is critical in helping the two-county area realize its vision for the future. The Regional Plan reflects both counties' input on what kind of change will be acceptable, where and at what pace; what needs to be conserved and why; and what the future of the Lackawanna-Luzerne County area should ultimately look like to those who will stay, return, or move here to be the next generation of citizens and decision-makers.

A Snapshot of Both Counties

Lackawanna and Luzerne Counties are centrally located in Pennsylvania's Northeast Region (***Figure 1.1***). The area includes the region's largest city, Scranton, with additional population centers in Wilkes-Barre, Hazleton, and Pittston. To the east are Wayne and Monroe Counties; to the south, Carbon and Schuylkill Counties; to the west, Columbia and Sullivan Counties; and to the north, Wyoming and Susquehanna Counties. The figure identifies the study area's 116 municipalities, major roadways and railroads, streams and water bodies, parks, state forests, game lands, and other managed conservation areas.

The combined physical area of Lackawanna and Luzerne Counties is approximately 1,325 square miles, or approximately 850,000 acres, and includes roughly 22 square miles of water bodies.

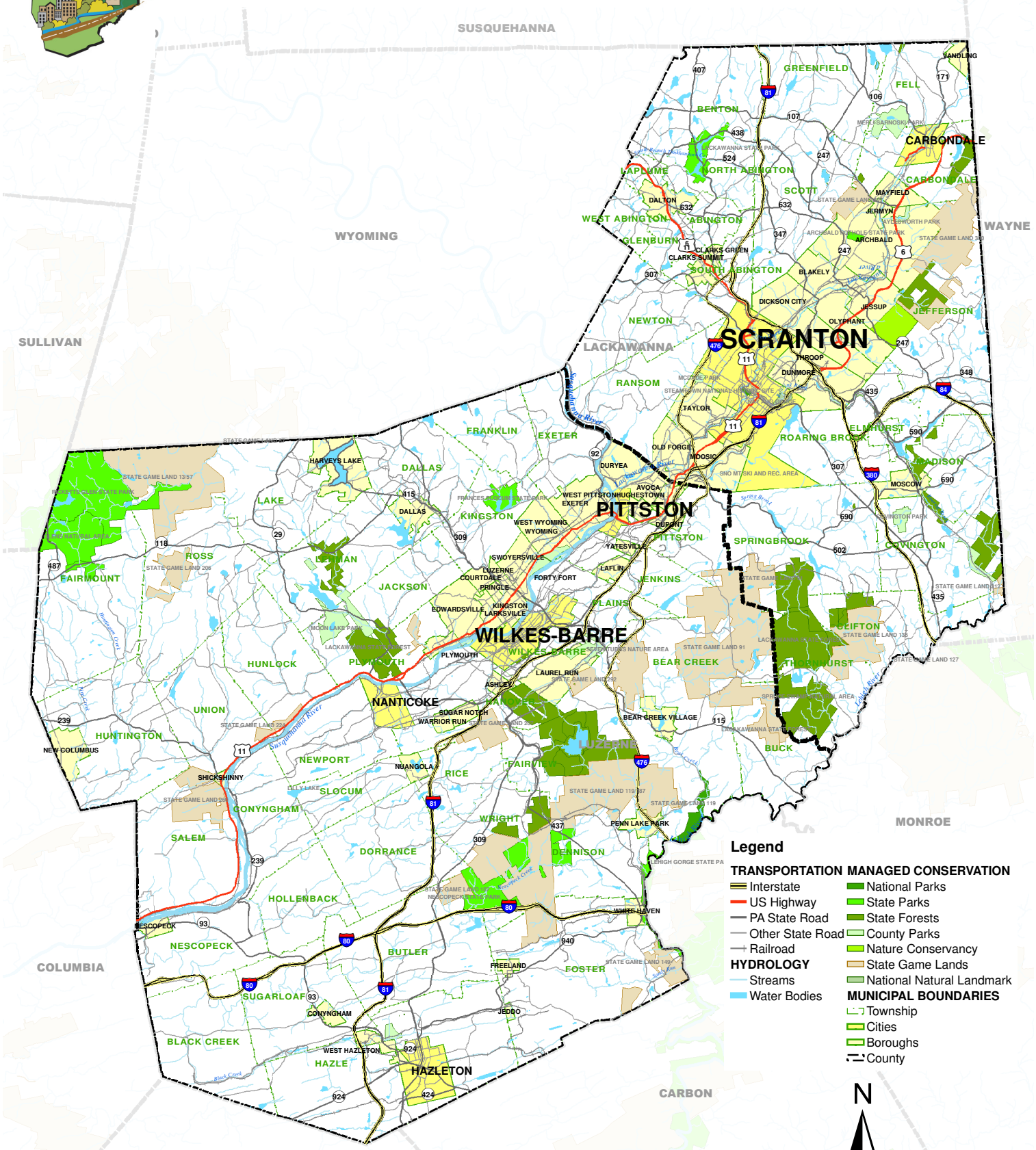
The landscape of the central portion of both counties is dominated by two major river valleys, the Wyoming and Lackawanna. These two river plains bisect the area diagonally southwest from northeast and are the lowest elevations, as low as 530 feet above sea level. Both valleys are bordered by a series of mountain ridges and upland areas on either side. This geography has elevations exceeding over 2,000 feet above sea level in some areas.

The two counties historically developed along the Susquehanna and Lackawanna Rivers, connected by important routes branching out from these valleys and including what are today PA Routes 6, 11, 29,115, 92, 93, 935, 435, and 309. Interstate highway access also plays an important role in more recent changes in development patterns, as well as regional mobility. Interstate 80 along the southern third of Luzerne County and Interstate 380 in southeastern Lackawanna County provide a link to the nearby New York City Metropolitan area. From Philadelphia, Interstate 476 (PA Turnpike NE Extension) follows the eastern edge of Luzerne County and terminates north of Scranton in western Lackawanna County. Interstate 81 bisects the two counties while connecting the cities of Hazleton, Wilkes-Barre, and Scranton to each other en route from Harrisburg and points south northward to New York State. Interstate 84 crosses the southeastern corner of Lackawanna County, providing access to New England. Construction of these roadways affected many of the municipalities in the two-county area, with new access and population and land use changes.

According to the 2010 U.S. Census, the combined total population for both counties is 535,355 persons. Lackawanna County has 40 municipalities, including 2 cities, 17 boroughs, and 21 townships. Luzerne County has 76 municipalities, including 4 cities, 36 boroughs, and 36 townships.

REGIONAL PLAN AREA

Figure 1.1



August 2009
Source: Luzerne/Lackawanna County Open Space Plan, Pennsylvania Conservation Stewardship, Lackawanna Valley Nature Conservancy, North Branch Land Trust & The Pennsylvania Protected Lands Inventory

Planning Practices of Both Counties

Lackawanna and Luzerne Counties have a history of planning together. Joint transportation planning started on June 2, 1964 with the execution of a Transportation Study Agreement between the two counties, the Cities of Scranton and Wilkes-Barre and the Pennsylvania Department of Highways that created the Lackawanna-Luzerne Transportation Study. It also included a joint operating agreement for the region's largest full service airport, the Wilkes-Barre Scranton International Airport. The Metropolitan Planning Organization (MPO) for the two counties was established as a result of the 1973 Federal Highway Act. The MPO is a body that determines how all federal and state highway/bridge funds are allocated. The Lackawanna/Luzerne MPO encompasses all areas of the two counties. The Lackawanna/Luzerne MPO consists of three committees: the Transportation Advisory Committee (TAC), the Technical Committee, and the Coordinating Committee.

The counties have also created other authorities, such as the Lower Lackawanna Sanitary Authority, to jointly treat wastewater from both counties.

New opportunities and incentives for multi-municipal planning now exist as a result of recent revisions to the Pennsylvania Municipalities Planning Code, and current policies of the Commonwealth, including Pennsylvania's Keystone Principles for Growth, Investment, and Resource Conservation. Programs offered by the Governor's Center for Local Government Services and funding sources like LUPTAP to encourage joint planning and cooperation have proven important in recent years. Of current concern are two issues: the adequacy and consistency of local and regional plans, and the recent severe reduction of state funding for county and multi-municipal planning.

Recent Planning Activities

Lackawanna and Luzerne Counties have conducted or supported noteworthy planning activities over the past 10 years. Four of these efforts are detailed below.

Scranton-Abingtons Planning Association Comprehensive Plan, 2009

The Scranton-Abingtons Planning Association (SAPA) consists of 11 municipalities in Lackawanna County, including the City of Scranton; the boroughs of Clarks Green, Clarks Summit, Dalton, and Dunmore; and the townships of Abington (now called Waverly), Glenburn, Newton, North Abington, South Abington, and West Abington. SAPA was established so that the member municipalities could achieve the benefits of multi-municipal cooperation. Their multi-municipal comprehensive plan provides SAPA municipalities with the opportunity to develop cooperative zoning, in order to allocate land uses to the most appropriate locations in the planning area instead of providing for all types of uses in each and every municipality. This strategy holds the great potential for effective long-term management of growth and development. Concurrently, the municipalities must plan for changing demands and costs of community facilities and services. These municipalities continue to work together to manage growth and change in accord with well defined, yet flexible, goals and objectives aimed at achieving an overall vision.

***Back Mountain Area Council of Governments Comprehensive Plan*, 2006**

The Back Mountain Area Council of Governments (BMACOG), made up of local officials from the four municipalities of Dallas Borough, Dallas Township, Kingston Township, and Lehman Township, guided the planning process. This comprehensive plan contains a set of initiatives proposed by residents, business owners and municipal officials. The Plan incorporates the key elements of three separate and simultaneous planning efforts -- a comprehensive plan, a detailed transportation plan, and an open space, greenways and outdoor recreation master plan.

***Lackawanna and Luzerne Counties Open Space, Greenways & Outdoor Recreation Master Plan*, 2004**

This document provides Lackawanna and Luzerne Counties with a unified approach to protecting valuable natural resources, ecologically and environmentally sensitive areas, and a network of recreational opportunities. Through this effort, a planning framework for the preservation of open spaces and the development of greenways and outdoor recreation areas at the county level was developed. The Plan's recommendations balance natural resources with the built environment in a manner that allows the region to grow while benefiting from its natural, recreational, and cultural resources at the same time.

***Scranton – Wilkes-Barre Rail Feasibility Study*, 1999**

This study provided an overview of the railroad assets in the Scranton/Wilkes-Barre corridor and evaluated their potential for passenger service or trolley/light rail service between the two cities. The study assessed each line on an individual basis, evaluating its present condition, regulatory, and institutional issues, and its anticipated market potential for passenger operations.

The Planning Process

In recognition of the need to develop a regional plan and an interest in both counties concerning the location, pace, and character of recent and future development, the elected officials of Lackawanna and Luzerne Counties agreed to participate together in the development and implementation of a Regional Plan and directed that a steering committee be formed to guide the preparation of the Plan and oversee the work of the consultant.

Through the Regional Plan preparation development, the steering committee met on a regular basis with the consultant. The committee has had several critical roles to play, including:

- Monitoring progress on the Work Program, including scheduling and coordinating all Workshops and Public Information Meetings according to the Plan's Work Program Schedule;

- Providing information and ideas to the consultant and providing data/contacts/leads and direction to the consultant for upcoming tasks in the Work Program Schedule as the process was underway;
- Reviewing study products of the consultant, providing feedback to the consultant, and participating in the consensus-building process;
- Publicizing the Regional Plan, encouraging community participation and promoting the comprehensive planning process generally and the growth management ideas that emerged during the planning process.

Community participation was a hallmark of the planning process, in order to fully inform residents and to create a strong consensus as to the most desirable and achievable common future for the two counties. Three sets of three Public Information Meetings were held across both counties during the course of the Plan preparation, for a total of nine Public Information Meetings. Three initial Public Information Meetings were held from October 14-16, 2008, upon completion of Phase A of the project. These meetings served as an introduction to the studies being undertaken and as an opportunity for the steering committee and consultant to present the range of issues and choices to be examined in the overall Regional Plan preparation process and for the steering committee and consultant to hear public comment on current conditions and future prospects. The second round of three Public Information Meetings occurred from June 16-18, 2009 at the conclusion of Phase B. The purpose of these meetings was to review the alternative concepts for the future that the steering committee had explored and an emerging framework for the future of Lackawanna and Luzerne Counties. The third series of Public Information Meetings took place on December 1-3, 2009, in order to allow public review and comment on the recommendations of the Draft Regional Plan.

These Public Information Meetings served to update local residents, business operators, landowners, and other interested parties of the progress on the *Lackawanna-Luzerne Regional Plan*, and elicited feedback on the ideas being put forward as part of the planning process.

In addition, stakeholder focus group meetings were held in January 2008 in Lackawanna County at the Scranton Cultural Center and in Luzerne County at the county's Emergency Management Agency. The six meetings focused on the following topics: transportation, land development and housing, economic revitalization, utilities, historic preservation and natural resources and open space conservation.

A joint Lackawanna and Luzerne Counties Public Hearing was held on the Draft Regional Plan on _____, for independent adoption action by the Commissioners of the respective counties. The formal review process of a Public Hearing rounded out the extensive community participation program, including the nine aforementioned Public Information Meetings.

The MPO Technical and Coordinating Committees jointly also served as a reviewing body for the evolving Regional Plan during its preparation, and both PennDOT and FHWA were active stakeholder participants. Because the Regional Plan represents, in part, an update to the MPO's Long-Range Transportation Plan, the acceptance of the Regional Plan by both the MPO and FHWA was a required step in the overall process.

The Planning Work Program

Four Phase Plan

Phase A
Identifying Opportunities

Phase B
Visioning & Land Use Framework

Phase C
Preparation of Draft Plans

Phase D
Public Review Period

The development of the Regional Plan progressed through four distinct phases that took place between 2007 and 2009.

Phase A is referred to as **Identifying Opportunities** and included the documentation of existing conditions and an analysis of those conditions. These tasks included all data collection and analysis steps and a critical examination of needs, trends, and anticipated future conditions in Lackawanna and Luzerne Counties that have formed the foundation for this Plan. Phase A culminated with the preparation of a Trend Scenario, a picture of the future in twenty-two (22) years if current trends continue and there are no changes in policy on the part of the counties. Phase A also concluded with the first set of Public Information Meetings.

Phase B was the **Visioning and Land Use Framework** phase and incorporated a series of cycles in which the consultant team and steering committee explored a variety of alternatives to the Trend Scenario and the transportation implications of each of these scenarios. These alternatives proposed different approaches to the future of the two counties and began to set priorities for a transportation system that would support this framework, including the establishment of goals and priorities for the transportation system that were in concert with SAFETEA-LU planning factors. Work within this phase allowed for the gradual convergence of a set of preferred goals determined by the steering committee and a basic policy and land use framework for the future evolution of the two counties was its product. This framework became the central focus of the second set of Public Information Meetings, which concluded Phase B.

Phase C was the **Preparation of a Draft Regional Plan** worthy of examination by the general public and consideration for adoption by Lackawanna and Luzerne Counties. The Plan was prepared first as a preliminary draft with accompanying action plans and implementation strategies. Following a review, the project team prepared the Final Draft Regional Plan. During this latter part of Phase C a third set of Public Information Meetings was held.

Phase D featured the 35-day **Public Review Period** following procedures for Comprehensive Plans as required by the Pennsylvania Municipalities Planning Code and Long-Range Transportation Plans as required by the Federal Highway Administration. This phase included a formal Public Hearing on the Final Draft Regional Plan, any final revisions to it, and the preparation of a “camera-ready” Final Regional Plan. Formal action to adopt the Plan by each set of Commissioners and to accept the Plan by the MPO and FHWA is also part of this phase.

LACKAWANNA-LUZERNE
COME, SHAPE THE FUTURE

CHAPTER 2

THE VISION

Introduction

This chapter features all elements of the vision for the future of the two-county area. Collectively, these interrelated plan elements serve as a guide for public and private sector actions regarding future growth, development, and preservation in Lackawanna and Luzerne Counties. These plan elements also incorporate a comprehensive set of goals, objectives, and actions developed to embody the needs and aspirations of the people of both counties.

As the principal expression of the future direction for the region and the interrelationships among plan elements, the Land Use Plan ties together all the other components that make up this Regional Plan. In the Land Use Plan, the recommended distribution and desired character of future land uses are described. In particular, the Land Use Plan proposes that development and redevelopment be largely directed to specific locations in the form of relatively-concentrated mixed-use settings, providing opportunities for people to live, work, and play in close proximity. The actions recommended in this chapter build on strengths while addressing weaknesses apparent in the two-county area. In doing so, the Plan provides opportunities for each county's places to prosper.

The Land Use Plan's *Priority Areas* are intended to provide a density of population sufficient to support new retail uses and community facilities, and attract employment. Concentrating jobs and residences in identified Priority Areas will increase transit ridership potential. As the demand for transit emerges, local transit authorities can offer new routes or extend existing ones.

2.1 Land Use Plan

Goal

The goal of the Land Use Plan is to achieve an overall future pattern of development that is responsive to existing and future economic, social, and cultural needs of Lackawanna and Luzerne Counties, promoting revitalization in the area's urban centers while conserving and preserving natural and agricultural resources.

Objectives

The objectives to be achieved by the Land Use Plan are as follows:

A.) Maintain existing population centers, districts and neighborhoods to ensure their continuing suitability for residential, commercial, industrial, recreational, and institutional use and their attractiveness for compatible development;

B.) Designate areas for growth that are adequate and appropriate to accommodate expected development and support an expanded transit service and can be served over the planning period mostly by existing central water and sewer systems and by an upgraded existing network of roads, as well as other public services;

C.) Accommodate non-residential development and redevelopment in areas where this kind of use is already established and where it supports other goals of the plan;

D.) Encourage mixed-use development at selected locations where it will support existing concentrations of people and jobs;

E.) Preserve and enhance commercial concentrations that are key elements in municipalities' tax base and that serve residents of the two counties;

F.) Recognize how a strengthened residential presence may provide markets for local businesses in mixed-use districts;

G.) Identify locations for non-polluting light industrial, assembly, and technology industries that provide jobs with the opportunity for advancement;

H.) Identify locations for new, redeveloped, or expanded office centers or business parks;

I.) Provide locations for new and revitalized retail and other commercial uses to meet the needs of residents for goods and services;

J.) Utilize mine-scarred land for development.

The intent of the Land Use Plan (***Figure 2.1***) is to provide an efficient and economical way to allow for both new growth and revitalization, meet a diversity of needs, support transit, reduce consumption of open space, and protect environmentally-sensitive resources. The Land Use Plan is a guide for development and redevelopment in Lackawanna and Luzerne Counties through the year 2035. It is based on the moderate rate of growth projected to occur over the planning period, including an additional increase in population of approximately 35,000 people (568,000 total) and a net gain of 24,000 housing units. Recognizing current development trends and the importance of reinvestment along the Lackawanna and Luzerne County valleys and in urban centers, the Land Use Plan is built around 'smart growth' principles, such as those embodied in the Commonwealth of Pennsylvania's *Keystone Principles*.

The Keystone Principles & Criteria for Growth, Investment & Resource Conservation were designed by the Commonwealth of Pennsylvania as a coordinated interagency approach to fostering sustainable economic development and conservation of resources through the state's investments in Pennsylvania's diverse places. These 10 principles were developed by the Interagency Land Use Team, a working group of the Economic Development Cabinet, and were adopted on May 31, 2005.

The Principles lay out general goals and objectives for economic development and resource conservation agreed upon among the agencies and programs that participated in their development. The Criteria are designed to help measure the extent to which particular projects accomplish these goals.

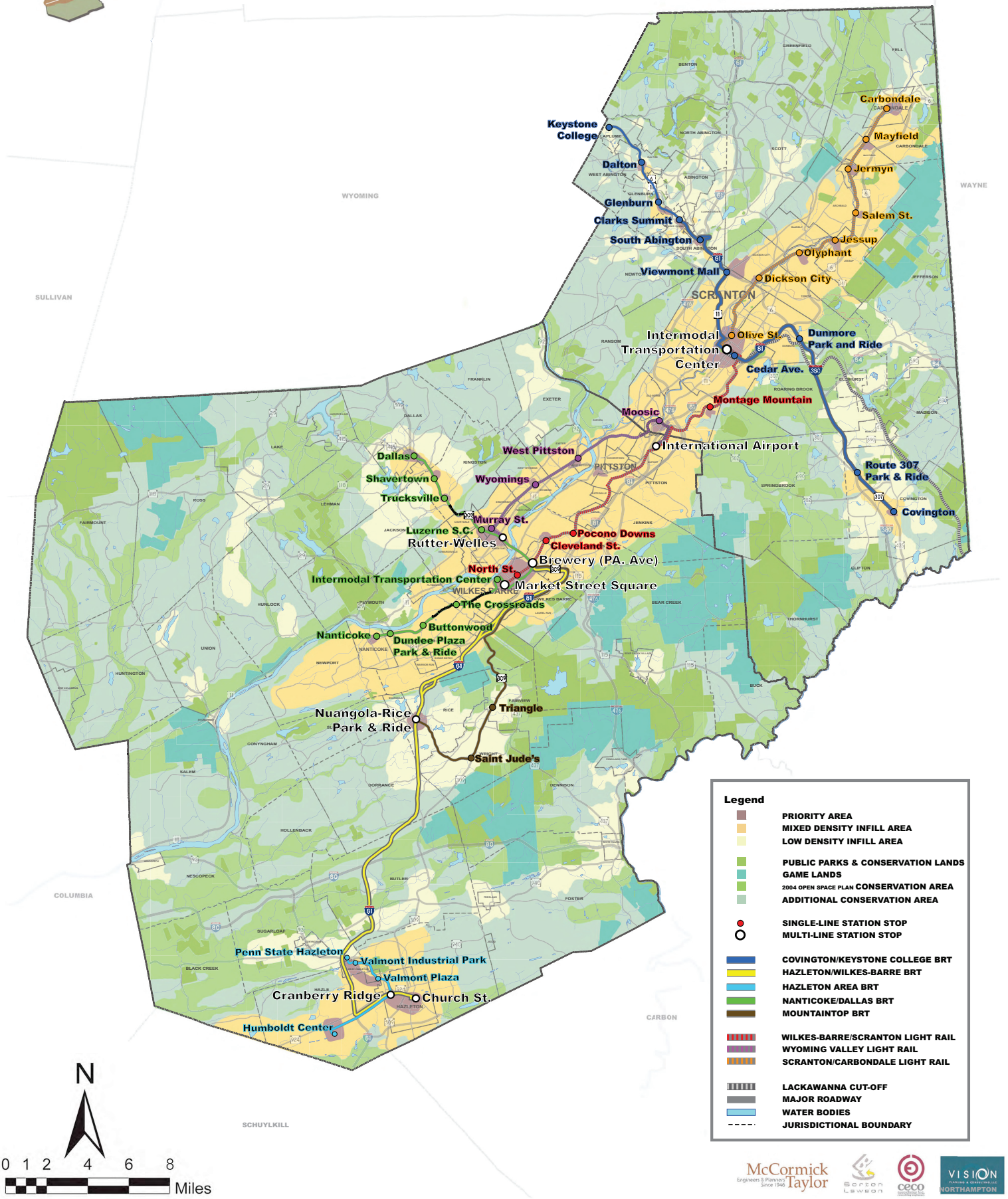
These are the Keystone Principles:

1. Redevelop First;
2. Provide Efficient Infrastructure;
3. Concentrate Development;
4. Increase Job Opportunities;
5. Foster Sustainable Businesses;
6. Restore and Enhance the Environment;
7. Enhance Recreational and Heritage Resources;
8. Expand Housing Opportunities;
9. Plan Regionally; Implement Locally; and
10. Be Fair.

The Land Use Plan was derived from the exploration of alternatives undertaken in Phase B, *Visioning and Land Use Framework*, as part of the overall Regional Plan preparation process. Allocation of future population to prospective locations in the two-county area in the exploration of alternatives allowed a convergence of a set of land use ideas that were then fleshed-out and refined in Phase C, *Preparation of a Draft Regional Plan*. (For further discussion of this process, see Chapter One.)

Figure 2.1

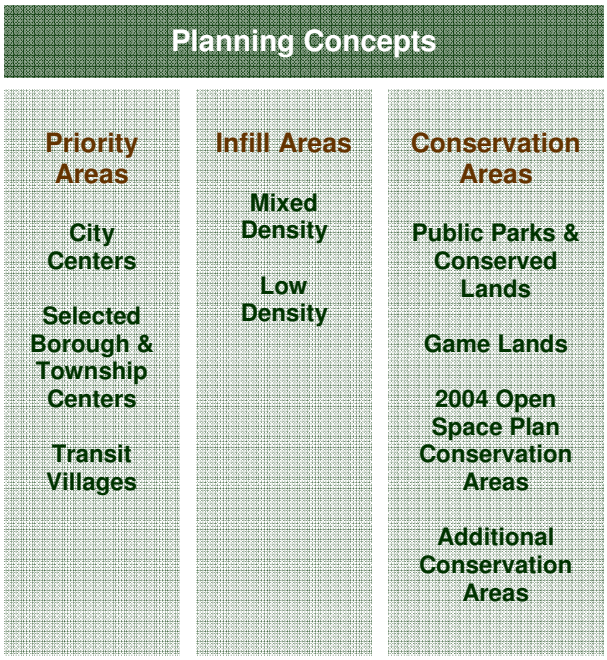
Draft Land Use Plan, April 2011



Major Planning Concepts

The Land Use Plan is structured on a framework of *Priority Areas* for targeted growth and revitalization, *Infill Areas* for additional growth, and *Conservation Areas* for agricultural, recreation, and open space uses. It is through this framework that both counties may support their existing centers, minimize sprawl, and promote the conservation of natural resources.

The Land Use Plan builds upon existing infrastructure such as roads, water, and sewer systems, and adds missing features to ensure appropriate access and servicing in all parts of Lackawanna and Luzerne Counties.



The Land Use Plan also contains a network of rapid transit routes to promote accessibility throughout the region. A strong component of this Plan, *multimodal accessibility* offers many advantages to residents and business operators and provides solid support for mobility in a high-fuel-cost future.

When combined together and targeted to Priority Areas, public and private initiatives will be able to provide new housing, employment, and recreation opportunities in an efficient and economical way. These initiatives will lay the foundation for a transportation system that will give residents real choices in how they commute, shop, or get to school and other destinations.

Priority Areas, Infill Areas, and Conservation Areas are distributed throughout the two counties. Examples of each are shown below.

Priority Areas:

A. City Centers, such as downtown Scranton, Wilkes-Barre, Hazleton, and Carbondale;

B. Selected Borough and Township Centers, such as Kingston, Archbald, or Clarks Summit; and

C. Transit Villages, including the vicinity of the Viewmont Mall in Dickson City Borough and Scranton, or Shavertown Station in Kingston Township.

Infill Areas:

A. Mixed Density Infill Areas are located along the valleys of the Susquehanna and Lackawanna River basins between Conyngham Township and the City of Carbondale, as well as in adjacent lands outside of the valleys surrounding Priority Areas.

B. Low Density Infill Areas include existing residential development in many townships as well as smaller boroughs outside of proposed rapid transit service areas. Such areas may also abut Mixed Density Infill Areas, such as is the case of Lehman or Fell Townships.

Conservation Areas:

A. Public Parks and Conserved Lands identifies all State and County Parks as well as public and private conservation areas.

B. Game Lands, including all hunting and fishing areas under the Pennsylvania State Game Commission's jurisdiction.

C. 2004 Open Space Plan Conservation Areas, determined based on conservation area attributes and the projected ability to create a connected network of open spaces and greenways as recommended in the *2004 Open Space, Greenways & Outdoor Recreation Master Plan for Lackawanna and Luzerne Counties*.

D. Additional Conservation Areas include agricultural and wooded areas where development is generally discouraged, particularly in a future context where incentives are in place to develop within designated areas for urban and suburban activity.

Growth and revitalization are directed to a limited number of locations in response to a number of factors, as follows:

1. Recognition that expected population increases across the two counties over the next 20+ years will be relatively modest;
2. Public funding to support the creation of new infrastructure will need to be applied strategically to maximize benefits to the area;
3. Greater economies will be possible for public service providers by focusing the building of new infrastructure and the supply of public services in a limited number of locations;
4. Focused development allows for the conservation of sensitive environmental areas, farmland, woodlands, and open space that are highly valued by residents of the two counties; and
5. Targeted growth is a logical response to the anticipated higher energy costs of the coming two decades.

Concept 1 – Priority Areas

Priority Areas include the existing settings of City Centers as well as selected Borough and Township Centers and proposed Transit Villages. Within each of the 30 identified Priority Areas, the Land Use Plan proposes a combination of housing, shopping, employment, community facilities, and public open space by incorporating existing buildings, adaptively reused structures, and new construction. Priority Areas are intended to be mixed-use areas. Priority Areas, shown on the Land Use Plan figure, will provide for the housing and activity needs of those entering the work force and older residents interested in downsizing their residences. Priority areas will also provide small shops and offices and larger employment centers.

Although the components cited above are shared by each of the three types of Priority Areas, there is a clear difference in the scale, density, and approach that needs to be taken in downtown Hazleton versus Dallas Borough or the Viewmont Mall, for example. Each mixed-use environment should develop in a manner that fits within the characteristics of each setting. In some Priority Areas, there will be an emphasis on vertical mixing of uses, with buildings including ground floor retail shops, restaurants, and services with offices and/or residences above. Other Priority Areas will emphasize horizontal mixing of uses, with residential uses predominantly next to commercial uses.

All Priority Areas will provide expanded opportunities for pedestrian activity, including adequate sidewalks, on-street parking, landscaping, and pedestrian linkages to adjacent areas. Priority areas will be served by public water and sewer.

Priority Areas are categorized into three types:

> **City Center Priority Areas** consist of the following six urban areas. From largest to smallest, the cities of Scranton, Wilkes-Barre, Hazleton, Pittston, Carbondale, and Nanticoke. Within the three largest cities, Priority Areas are expanded beyond their traditional commercial centers to also include adjacent neighborhoods.
>
> City Center Priority Areas allow for the highest concentrations of residential uses and employment and provide a high level of transit service. Some City Centers include several intermodal stations and *core zones*. Serving as a hub of transit activity, core zones are where initial new higher-density mixed-use development and redevelopment will occur, with ground floor retail shops, restaurants, and services, and offices and/or residences on the floors above.
>
> Adaptive reuse of existing buildings and “infill” of new buildings into the existing block structure are strongly encouraged. In the larger cities, former industrial and warehousing buildings will be converted to medium-to-high-density residential development, as well as retail and office uses. This combination of uses will often be structured as ground floor retail shops, restaurants, and services, with offices or residences above. Former industrial areas may also offer live-work structures, attractive to artisans for the co-location of residences, studios, and galleries, and to other individuals and families as well. Adaptively-reused buildings and new infill structures will be completed with sensitivity toward the historic context.

Selected Borough and Township Center Priority Areas are community focal points and hubs of mixed-use activity promoting downtown revitalization through the support of new residential, retail, and office uses. These areas will also attract residents from more distant locations for shopping and dining. Although they also contain traditional building forms and uses, Borough and Township Centers are smaller in scale than City Centers and are not always centers of employment. Throughout Lackawanna and Luzerne Counties, 12 Borough and two Township Center Priority Areas are located in the following municipalities:

Borough & Township Center Priority Areas

- **Archbald Borough**
- **Clarks Summit Borough**
- **Dallas Borough**
- **Dalton Borough**
- **Dickson City Borough**
- **Glenburn Township**
- **Jermyn Borough**
- **Jessup Borough**
- **Kingston/Pringle/Luzerne Boroughs**
- **Mayfield Borough**
- **Moosic Borough**
- **Olyphant Borough**
- **South Abington Township**
- **West Pittston Borough**

Concentrations of development and redevelopment are typically residential and retail mixed use. In Priority Areas such as West Pittston or Moosic Boroughs, where light rail transit service might become available, concentrations of people are necessary to justify the public transportation investment, and so residential densities will resemble those in City Centers.

New and infill development should also be compatible with the existing character of each community with sensitivity to the historical context. In many locations, different uses will be mostly next to one another — shops will be down the street from residences, for example. Selected Borough and Township Centers incorporate pedestrian amenities, civic open space, street trees, pocket parks, and pedestrian links to adjacent areas. This concentration of activity is a prerequisite for an improved level of public transportation service, especially in the case of Bus Rapid Transit-served centers and light rail-served centers.

Transit Village Priority Areas, like City Centers and Borough and Township Centers, have concentrations of mixed-use activities. Here, however, the emphasis is not on revitalization, but on transit-oriented development supportive of multimodal mobility and new residential options appropriate for the planning period. In Transit Village Priority Areas residents can get services close at hand and commuters have choices concerning how to get to and from work. The ten Transit Villages also offer future intercept park-and-ride opportunities, where commuters from areas beyond Priority Areas can drive and catch transit vehicles to other destinations.

Proposed Transit Village Priority Areas

- **Cleveland Street Station, Plains Township**
- **Covington Station, Covington Township**
- **Shavertown Station, Kingston Township**
- **Humboldt Center Station, Hazle Township**
- **Montage Mountain Station, Moosic Borough**
- **Nuangola-Rice Station, Rice Township**
- **Penn State-Valmont Industrial Park-Valmont Plaza Stations, West Hazleton Borough**
- **Wyomings Station, West Wyoming Borough**
- **Trucksville Station, Kingston Township**
- **Viewmont Mall Station, Scranton and Dickson City Borough**

Transit Village Priority Areas will play a variety of roles across Lackawanna and Luzerne Counties. Four such locations will involve transformations of existing settings that already attract people for education, employment, shopping, or entertainment. Over the planning period, potential for multimodal transit hubs with expanded opportunities for pedestrian activity and linkages to adjacent areas will be realized. These locations are the following:

1. Hazle Township's Humboldt Center (Industrial Park);
2. Scranton and Dickson City Borough's Viewmont Mall;
3. Moosic Borough's Montage Mountain; and
4. West Hazleton's conglomeration of three proposed transit stations: Penn State Hazleton, Valmont Industrial Park, and Valmont Plaza.

In other locations, four neighborhood centers will emerge around transit stations at currently-vacant or -underutilized sites. These areas include the following new transit villages:

1. Plains Township's Cleveland Street Station at S. Oak Street;
2. West Wyoming Borough's Wyomings Station northwest of the Wyoming Avenue intersection;
3. Kingston Township's Shavertown Station around Main Road and Memorial Highway;
4. Kingston Township's Trucksville Station at S. Pioneer Avenue and Memorial Highway.

Two Transit Village Priority Areas develop from highway access and with transit service. Rice Township's Nuangola-Rice Park & Ride Station is proposed along the south side of Church Road and abutting the west side of the I-81 interchange. Covington Township's Covington Station is near Route 307 and Main Street. Although they include a potential mix of residential and commercial uses, in each

area the intercept park-and-ride facility is a key component. Residents and commuters who live outside of Priority Areas or transit station catchment areas, but are a reasonable driving distance away, could travel to one of these lots, park, and board a transit vehicle to their destination.

Priority Areas Recommended/Not Recommended Uses and Characteristics

Recommended

- Mixed-use, multi-story buildings, with retail shops at ground level, and offices or apartments above;
- Commercial buildings interspersed with community uses such as library, post office, educational centers, museums, galleries;
- Residential uses within walking distance of community uses and commercial services;
- Pedestrian-oriented buildings, directly accessible from sidewalks;
- Pedestrian-oriented lighting, benches, and landscaping; and,
- Parking structures or lots to meet the needs of those who live, work and shop in this area.

Not Recommended

- "Big-box" retail, office, or other business uses that require large single-floor selling or working spaces;
- Single-floor, free-standing, single-use retail buildings;
- Large surface parking lots; and
- Sparse or non-existent landscaping.

Core Zones and Catchment Areas

The Priority Areas on the Land Use Plan also show themselves to be generally located in the valleys, and aligned along important routes like Route 309, Routes 6/11, and I-380. The linear pattern means that road connectivity will be good. It also suggests that transit service can be provided along these multiple spines to link priority areas together. The Plan proposes a system of rapid transit routes consisting of 49 proposed stops supporting different modes of transit that will link each Priority Area with one another.

Although every Priority Area includes at least one station stop or transportation hub, not every transit station is within a Priority Area. Every station or stop however, has a *core zone* of lands right around the station. (Note that the International Airport station is an exception.) The farthest limit of station-related territory is referred to in this Plan as a *catchment area* and includes lands that are roughly within ½-mile of the transportation hub (see also *Section 2.2*, Transportation Plan). Throughout every core zone and

catchment area, pedestrian accessibility, safety and other amenities are emphasized, with traffic calming, landscaping, lighting, and appropriate street furniture. Civic squares, parks, and urban green spaces are incorporated into development and redevelopment projects to provide public spaces for meeting, socializing, and recreation.

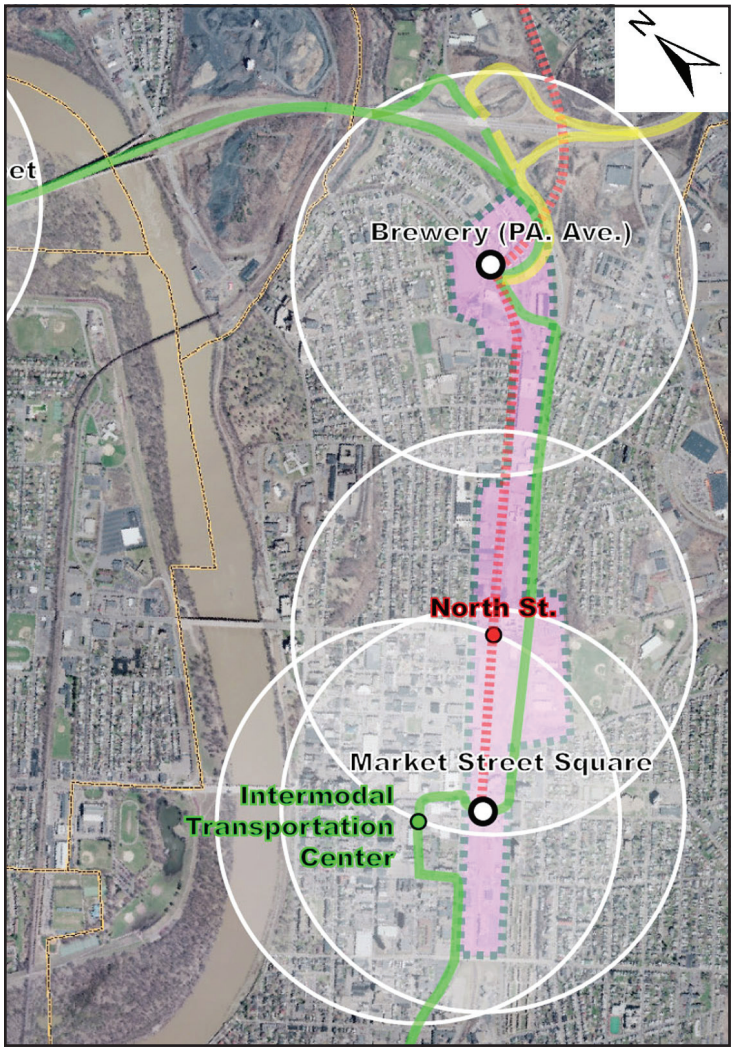
Core zones have been looked at with respect to available land for development and/or redevelopment for all 49 proposed transit hubs. Some stations are close enough to one another that they may also share the same core zone. These delineations have development and/or redevelopment potential that may range from substantial to moderate, but also provide for base acreage for new construction. These core zones are also locations where development or redevelopment efforts should first occur. The following pages show aerial photos of the 45 core zones, which encompass 49 proposed transit stations, and their core zones and catchment areas. ***(Figure 2.2)***

Catchment areas may be largely built-up already, as in the case of some existing centers, or still largely open and available for development. This ½-mile distance corresponds to the approximate distance that transit users may be expected to walk to reach the hub. Additional redeveloped sites outside of a Priority Area's core zone should next occur within the ½-mile catchment area surrounding the respective transit stations.

Figure 2.2: Identified Core Zones and Catchment Areas

A total of 45 core zones (shown in pink) and catchment areas (white circles) encompass 49 proposed transit stations[1]:

Wilkes-Barre/Scranton Light Rail



Wilkes-Barre City,
Wilkes-Barre Intermodal Transportation Center/
Market Street Square Station;
North Street Station;
Brewery (Pennsylvania Avenue) Station

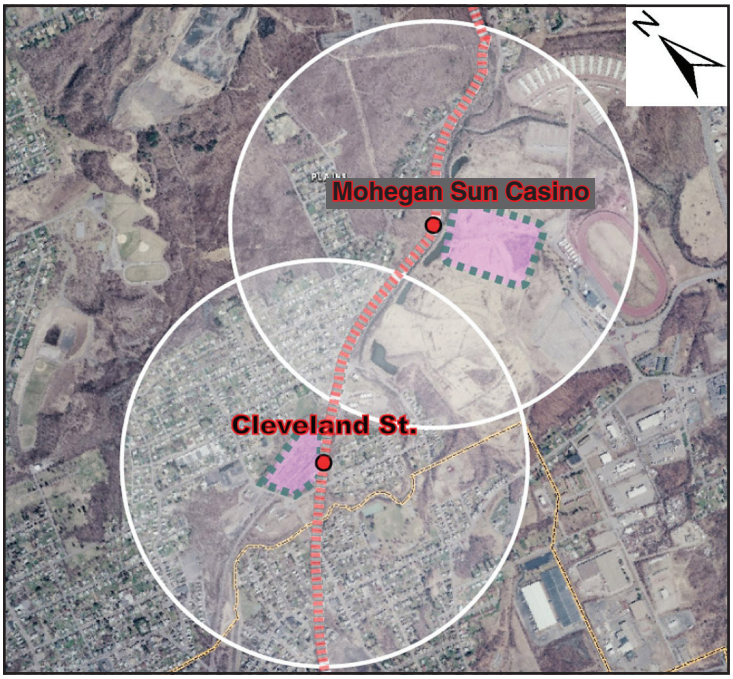
164.7 acres

This expansive core zone includes three transit stops between Pennsylvania Avenue and Wilkes-Barre Boulevard, spanning between the vicinities of the Chestnut Street intersection to the north and South Street to the south. This area is a combination of commercial office and retail, formerly vacant industrial lands, and active industrial uses.

0 0.5 1 Miles

1 Detailed transit route and station descriptions are provided in ***Section 2.2 Transportation Plan*** later in this chapter.

Wilkes-Barre/Scranton Light Rail



Plains Township, Cleveland Street Station

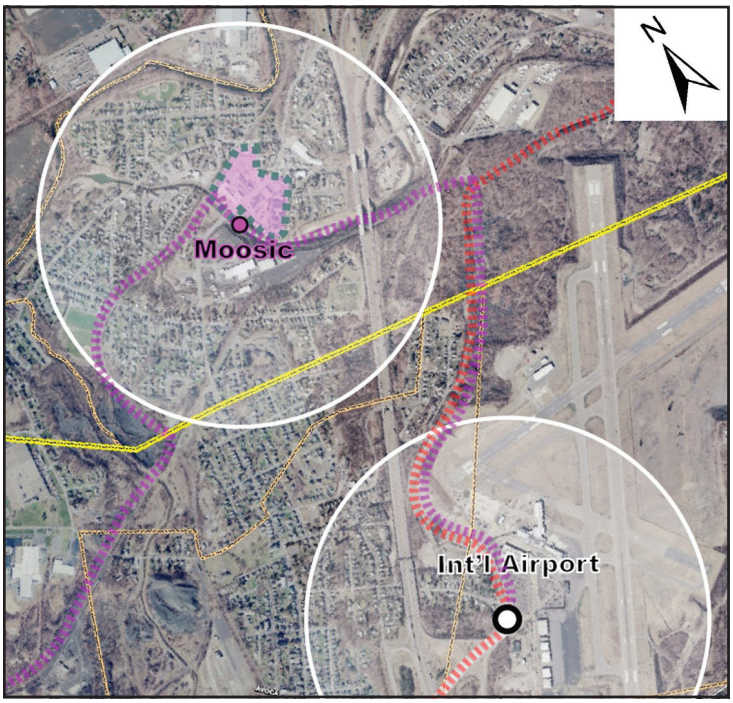
7.5 acres

Mostly vacant land at northeast corner of S. Oak and Cleveland Streets.

Plains Township, Mohegan Sun Casino Station

12.0 acres

Available lands west of the race track abutting the east side of a new rail extension.

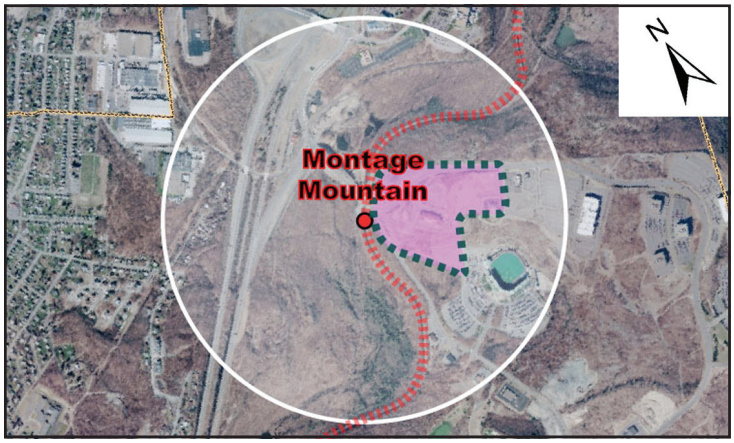


Pittston Township, International Airport Station

Located at the Wilkes-Barre Scranton International Airport, transit connections with the Wyoming Valley Light Rail line are provided at this station.

0 0.5 1 Miles

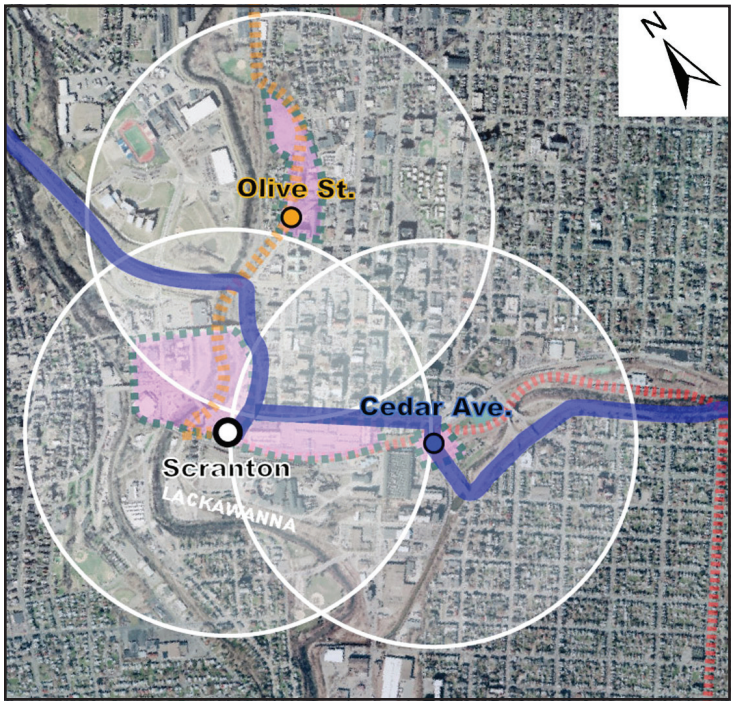
Wilkes-Barre/Scranton Light Rail



Moosic Borough, Montage Mountain Station

36.0 acres

Reconfiguration of the Montage Mountain area parking to allow for rail access to entertainment attractions and may include potential for intercept park-and- ride service.

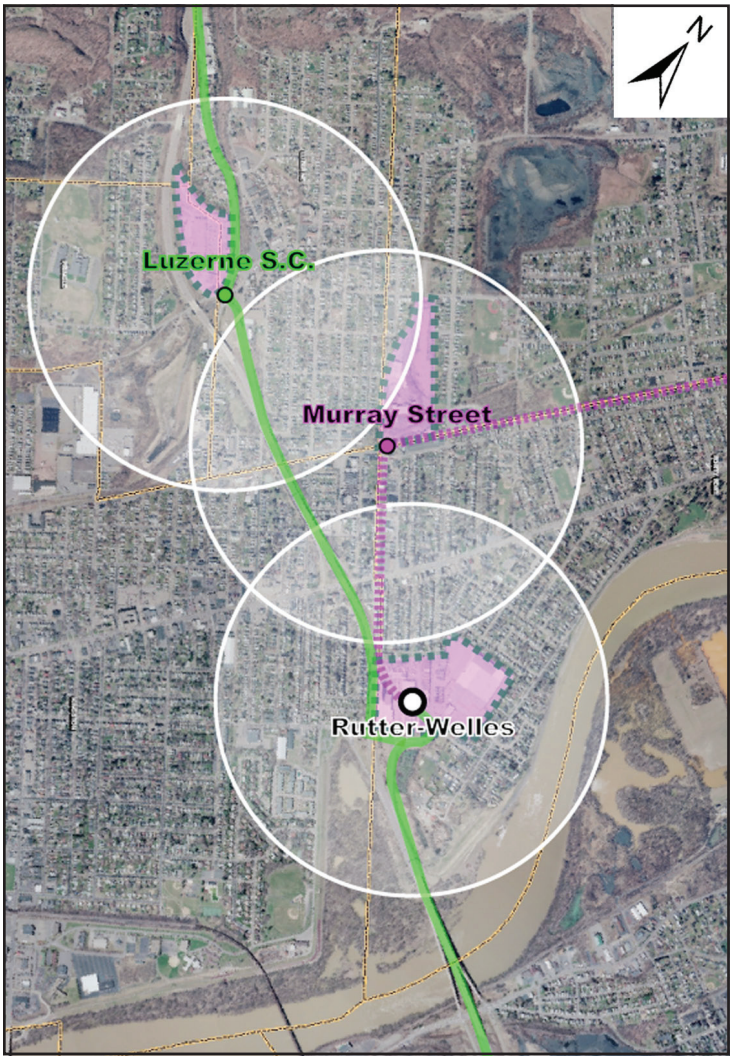


Scranton City, Scranton Intermodal Transportation Center

80.0 acres

Includes portions of Steamtown and lands north of existing rail as far west as 8th Street and as far north as Linden Street on the west side of the Lackawanna River and Lackawanna Avenue on the east side.

0 0.5 1 Miles



Forty-Fort Borough, Rutter Avenue-Welles Street Station

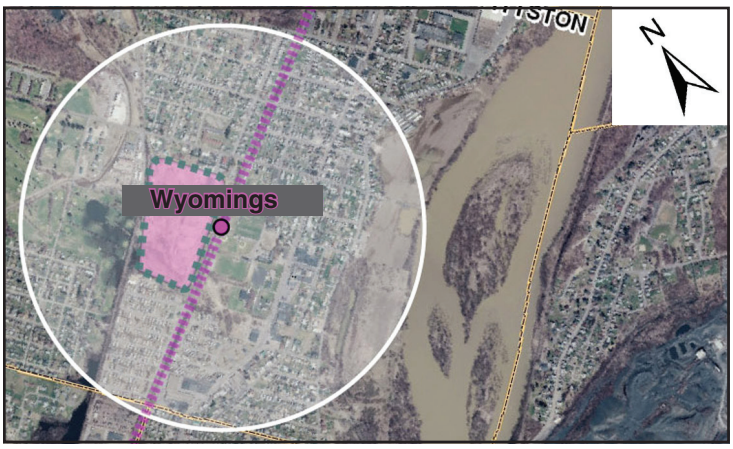
40.0 acres

Abutting the northeast corner of the Rutter Avenue and Route 309 interchange, including a large property on the immediate east side of Welles Avenue, are several industrial sites with a small number of single-family detached dwelling units along Welles Ave. This site also includes an abandoned rail right- of-way that parallels Route 309.

Forty-Fort Borough, Murray Street Station

29.0 acres

South of Chapel/Church Street, north of Murray Street, and between Miller and Slocum Streets, this site presently consists of vacant parcels and light industrial uses.



West Wyoming Borough, Wyomings Station

28.0 acres

Situated on the boundary between Wyoming and West Wyoming Boroughs, west of 8th Street. There is an extensive underutilized area around the station, mostly to the north of the tracks, which represents a transit-oriented redevelopment opportunity of considerable acreage.

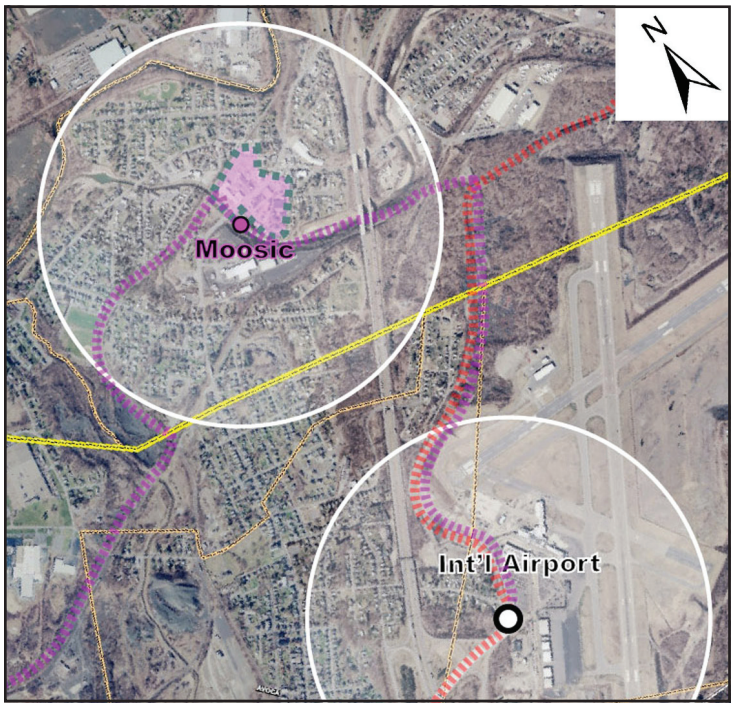
0 0.5 1 Miles

Wyoming Valley Light Rail

West Pittston Borough, West Pittston Station

6.5 acres

Between Netter and Ash Streets and abutting a freight line, this site is currently in light industrial use.



Moosic Borough, Moosic Station

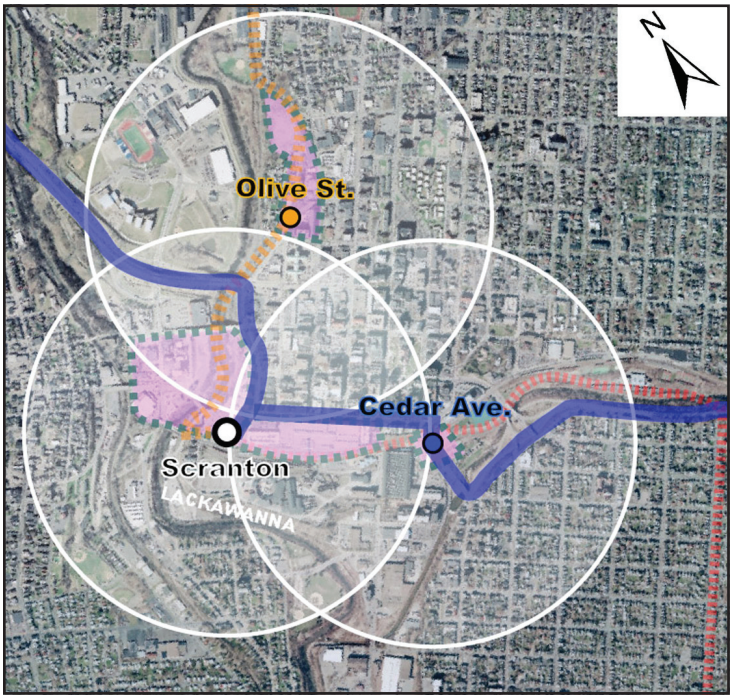
16.0 acres

Includes both sides of US-11 between the Lackawanna River to the south and Main Street – 4th Street – Springbook Avenue to the north. Present land uses include light manufacturing (custom boxes) as well as auto-oriented businesses and dealerships.

Pittston Township, International Airport Station

See page 2-14.

0 0.5 1 Miles



Scranton City, Scranton Intermodal Transportation Center

See page 2-15.

Scranton City, Olive Street Station

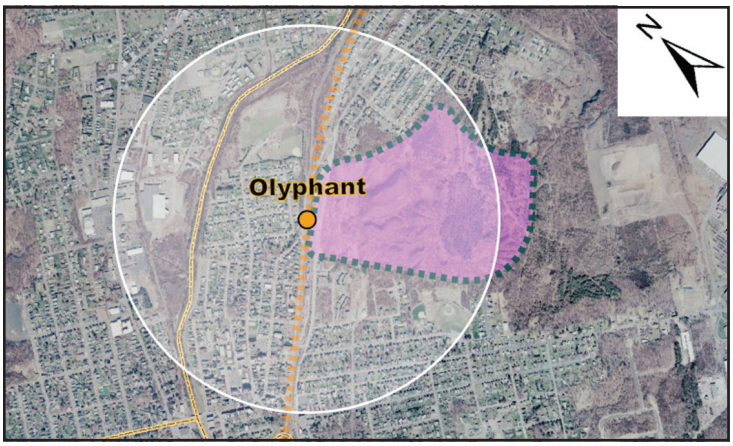
13.0 acres

Includes vacant land west of Capouse Avenue between Green Place and Olive Street along the east side of the Lackawanna River.

Dickson City Borough, Dickson City Station

10.7 acres

Land to the northwest of the Bank Street/ Route 6 intersection. This site is mostly undeveloped, with several single-family detached dwelling units along the western edge.



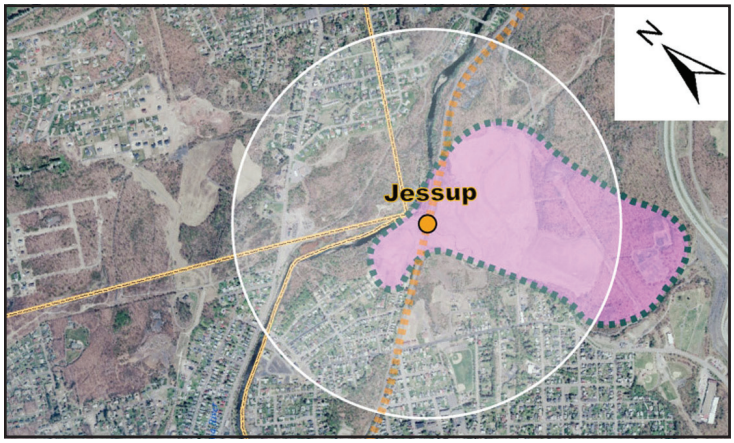
Olyphant Borough, Olyphant Station

138.0 acres

Located between North Valley and Garfield Avenues near the intersection with Lynch Street. Potential for new transit-oriented development exists immediately east of Garfield Avenue.

0 0.5 1 Miles

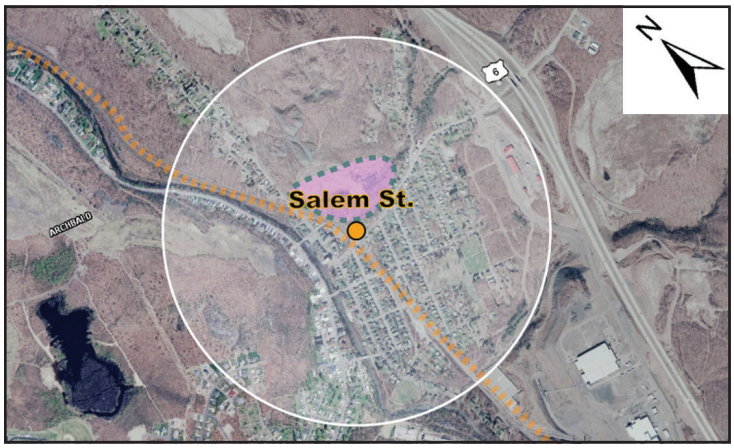
Scranton/Carbondale Light Rail



Jessup Borough, Jessup Station

135.0 acres

Vacant site located along Breaker Street, north of Lena Lane and Hill Street and to the east of the rail line. This site is adjacent to mixed residential/commercial areas and less than 1/2 mile from US Route 6. Potential exists for residential mixed use development to occur surrounding the proposed passenger rail station.



Archbald Borough, Salem Street Station

15.0 acres

Sloping terrain, predominantly vacant land north of Salem Street, southeast of Hill Street and along the east side of the tracks.

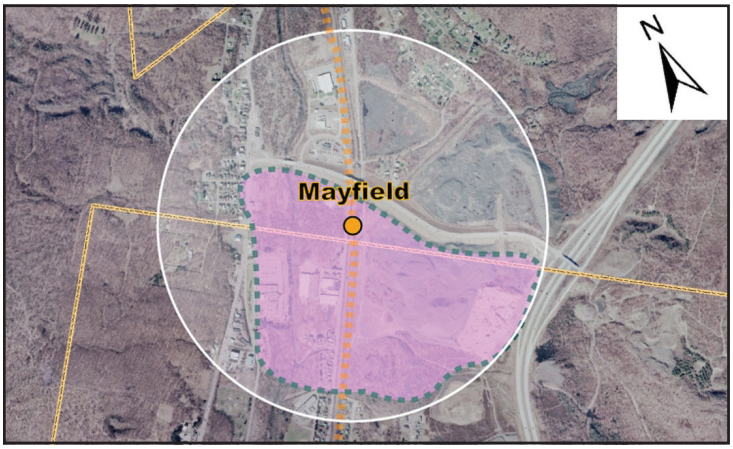
Jermyn Borough, Jermyn Station

12.5 acres

Vacant land northwest of the Delaware and Chestnut Streets intersection.

0 0.5 1 Miles

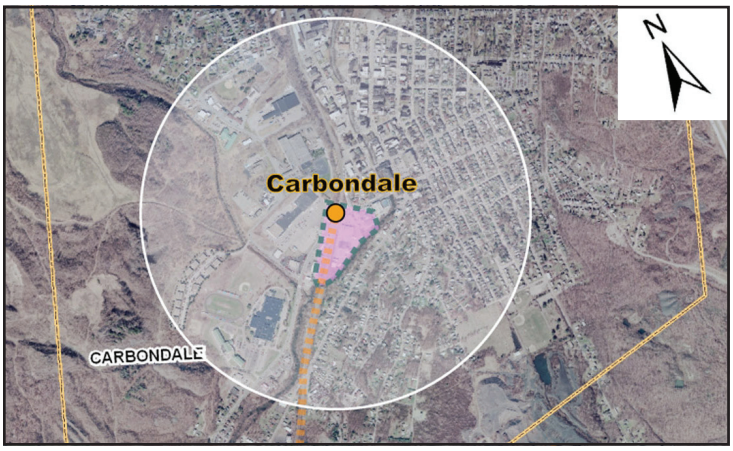
Scranton/Carbondale Light Rail



Mayfield Borough, Mayfield Station

192.0 acres

Former coal mining site located south of Meredith Street, between Lackawanna Avenue and the Casey Highway (Route 6). Potential exists for residential mixed use development to occur surrounding the proposed passenger rail station.



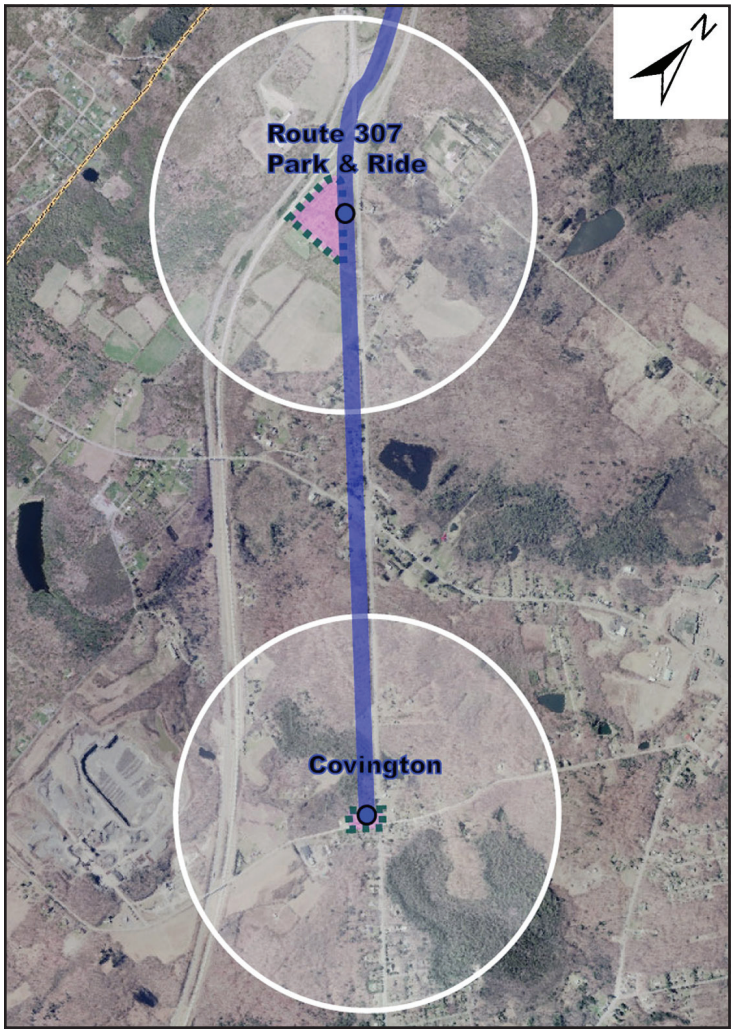
Carbondale City, Carbondale Station

11.5 acres

Retail and industrial site adjacent to the Lackawanna River and 8th Avenue.

0 0.5 1 Miles

Covington/Keystone College BRT



Covington Township, Covington Station

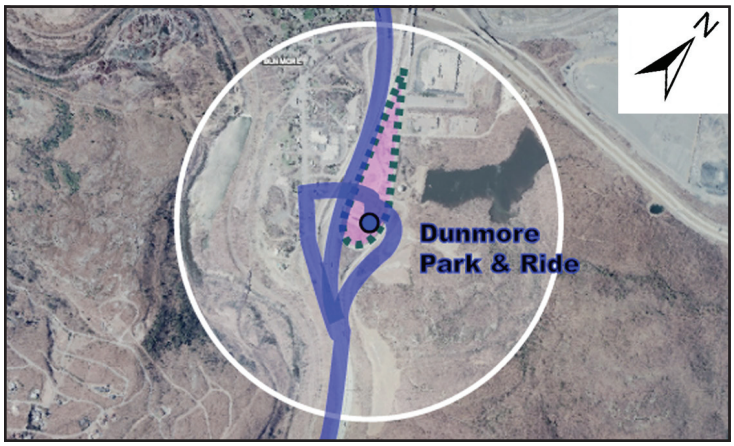
1.2 acres

Vacant parcel at the northwest corner of Dorantown Road and Route 307. Surrounding land uses currently support single-family detached housing.

Covington Township, RT 307 Park & Ride

15.6 acres

Vacant land to the southwest of the Route 307 and Interstate 380 interchange.



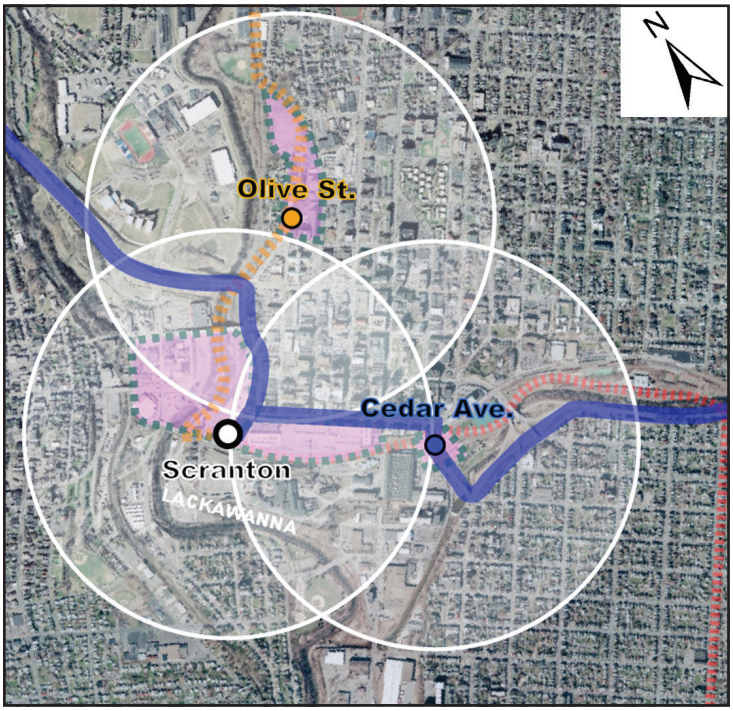
Dunmore Borough, Dunmore Park & Ride

14.5 acres

Integrating the Holiday Inn and several businesses on the north side of Tigue Street to provide an intercept park-and-ride.

0 0.5 1 Miles

Covington/Keystone College BRT



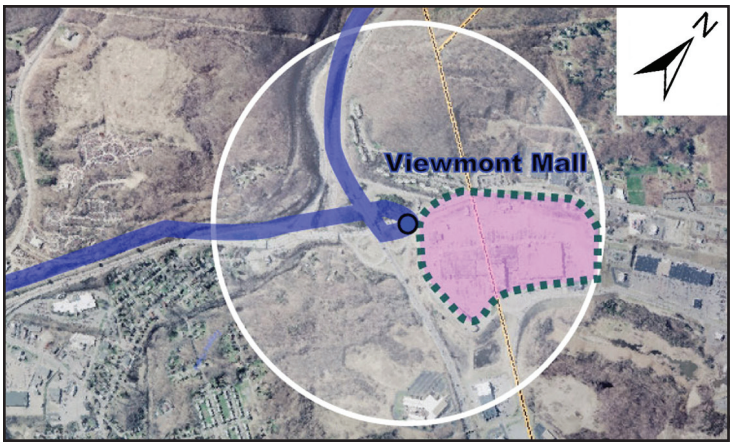
Scranton City, Cedar Avenue Station

1.5 acres

Bound by existing rail to the north and east, Scranton Expressway (US-6) and Lackawanna River to its south and the Steamtown National Historic Site to the west.

Scranton City, Scranton Intermodal Transportation Center

See page 2-15.



Scranton City and Dickson City Borough, Viewmont Mall Station

68.3 acres

Regional retail center located at the Route 6 and Interstate 81 interchange. May include higher densities of residential and commercial mixed uses with improved access to the Covington-Keystone College BRT line.

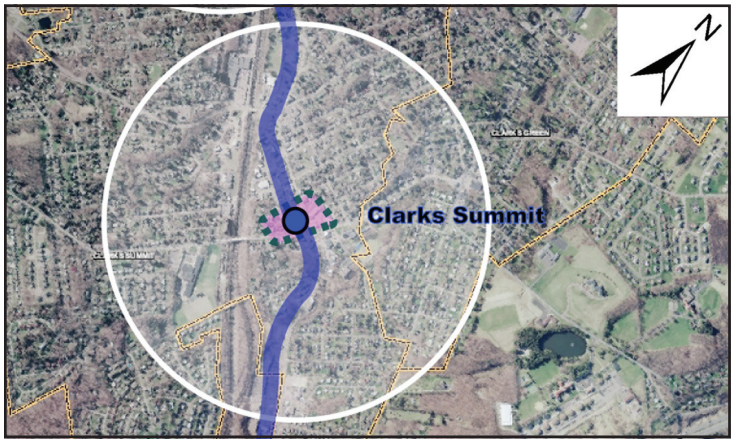
South Abington Township, South Abington Station

4.0 acres

Available lands to the south of the Abington Road intersection and north of the I-476 and I-81 Interchanges to the south along Routes 6 and 11.

0 0.5 1 Miles

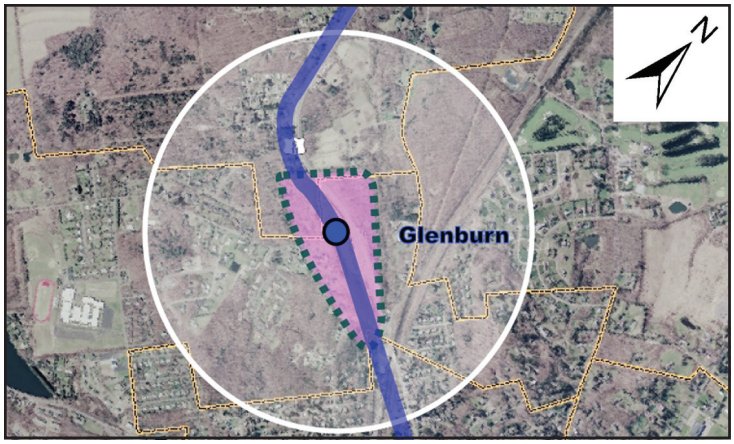
Covington/Keystone College BRT



Clarks Summit Borough, Clarks Summit Station

4.0 acres

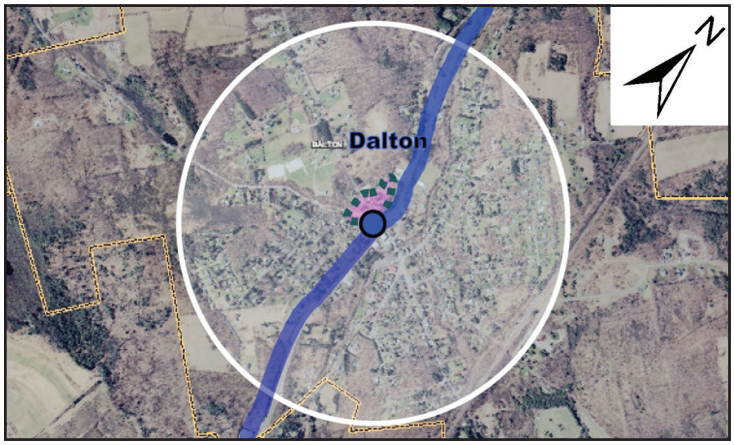
North of Winola Road and west of North State Street, the site includes retail uses along State Street as well as light industrial use in back.



Glenburn Township, Glenburn Station

35.0 acres

Includes land north of the Old State Road intersection along both sides of Route 6/11. Intermittent commercial businesses are currently present.



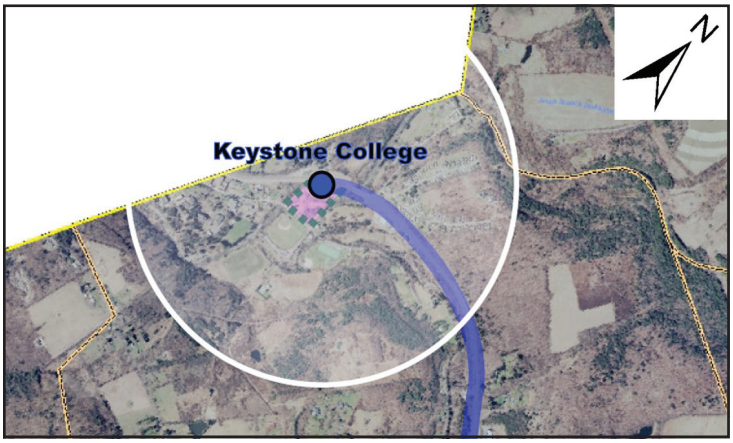
Dalton Borough, Dalton Station

3.5 acres

This site is mostly undeveloped, with several single-family detached dwelling units along the western edge. Includes lands to the northwest of the Bank Street/Route 6 intersection.

0 0.5 1 Miles

Covington/Keystone College BRT

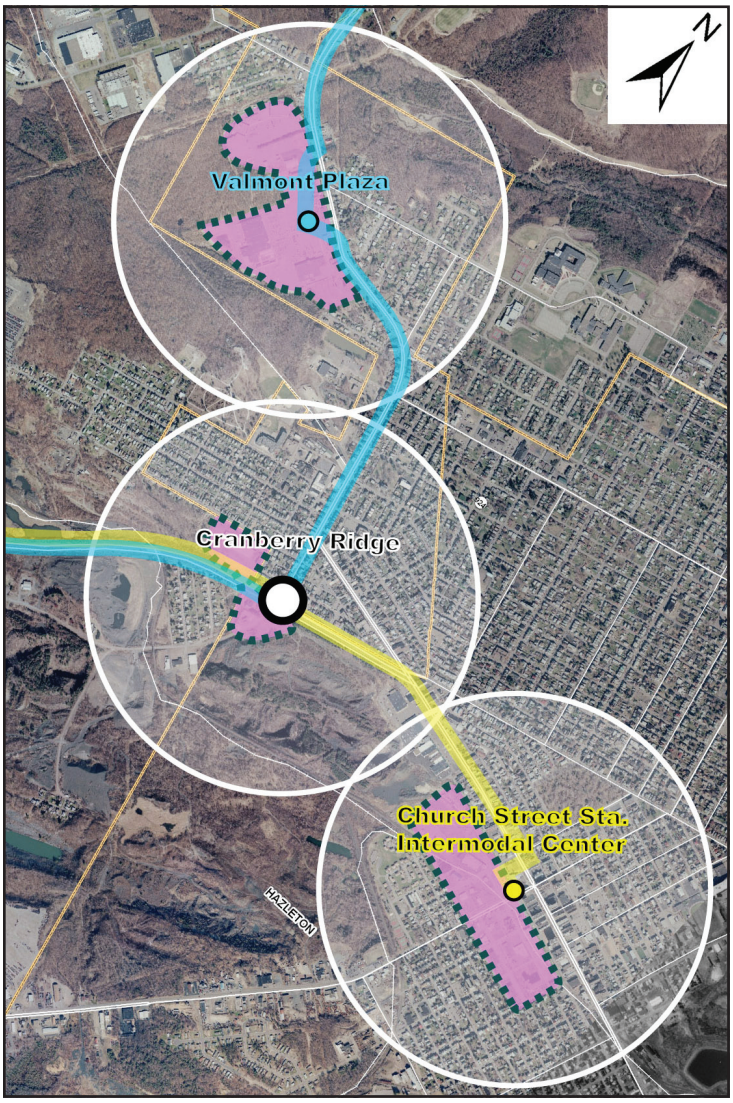


La Plume Township, Keystone College Station

17.0 acres

At the southwest corner of the intersection of US Route 6 and S. Overbrook Road and adjacent to the Keystone College campus.

Hazleton/Wilkes-Barre BRT



Hazleton City, Church Street Station Intermodal Center

app. 62.0 acres

A transportation center, open since November 2009, stretches from Church Street to Laurel Street, just one block south of Hazleton's Broad Street (Route 93). It provides residents of Greater Hazleton a central hub for local, regional and long-distance bus transportation.

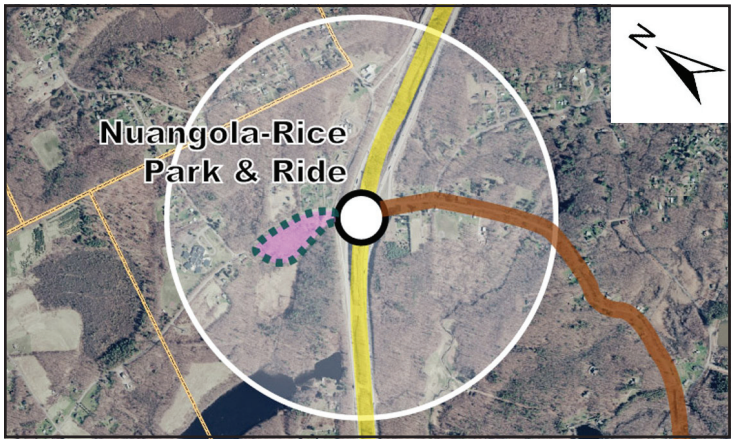
Hazleton City, Cranberry Ridge Station

15.0 acres

At Cranberry Road and PA Route 924, this bow-tie-shaped site includes commercial businesses in the southeast corner as well as light industry in the northwest corner.

0 0.5 1 Miles

Hazleton/Wilkes-Barre BRT



Rice Township, Nuangola-Rice Park & Ride Station

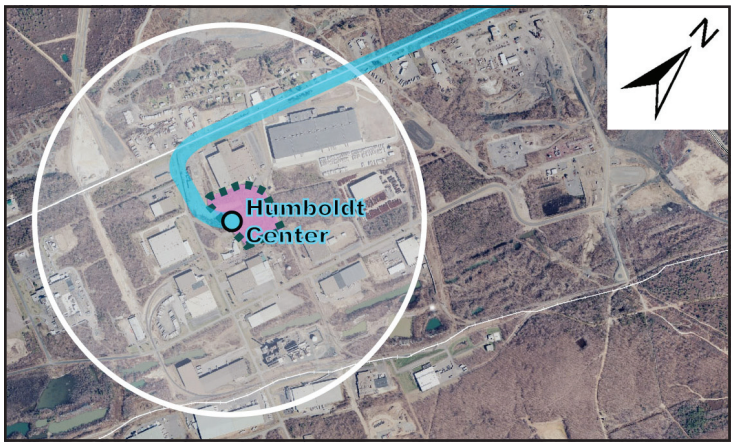
10.75 acres

BRT station hub and park-and- ride lot located along the south side of Church Street to the immediate west of Interstate 81 interchange.

Wilkes-Barre City, Brewery (Pennsylvania Avenue) Station

See page 2-13.

Hazleton Area BRT



Hazle Township, Humboldt Center Station

15.0 acres

Open parcel in rear of active industries near the intersection of Maplewood Drive and PA Route 924.

0 0.5 1 Miles

Hazleton Area BRT

Hazleton City, Cranberry Ridge Station

See page 2-24.

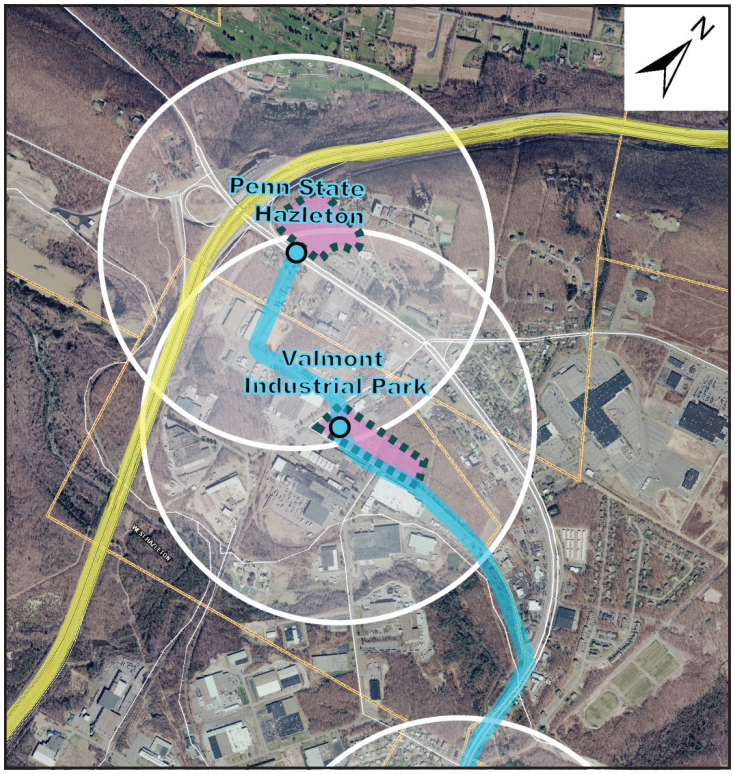
Hazleton Area (West Hazleton Borough), Valmont Plaza Station

65.5 acres

Commercial retail center located at Irving Street and Susquehanna Boulevard (PA Route 93).

0 0.5 1 Miles

Hazleton Area BRT



West Hazleton Borough, Valmont Industrial Park Station

12.0 acres

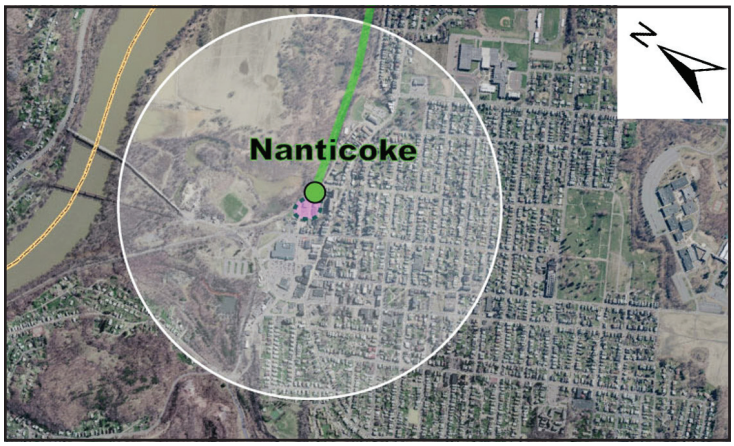
Open lot on north side of Dessen Drive; supports Hazleton Area BRT service to the Valmont Industrial Park.

Sugarloaf Township, Penn State Hazleton Station

17.5 acres

Proposed terminus for the Hazleton Area BRT service line. Station site is the northeast corner of the PA Route 93 and I-81 interchange, between Route 93 and University Drive.

Nanticoke/Dallas BRT



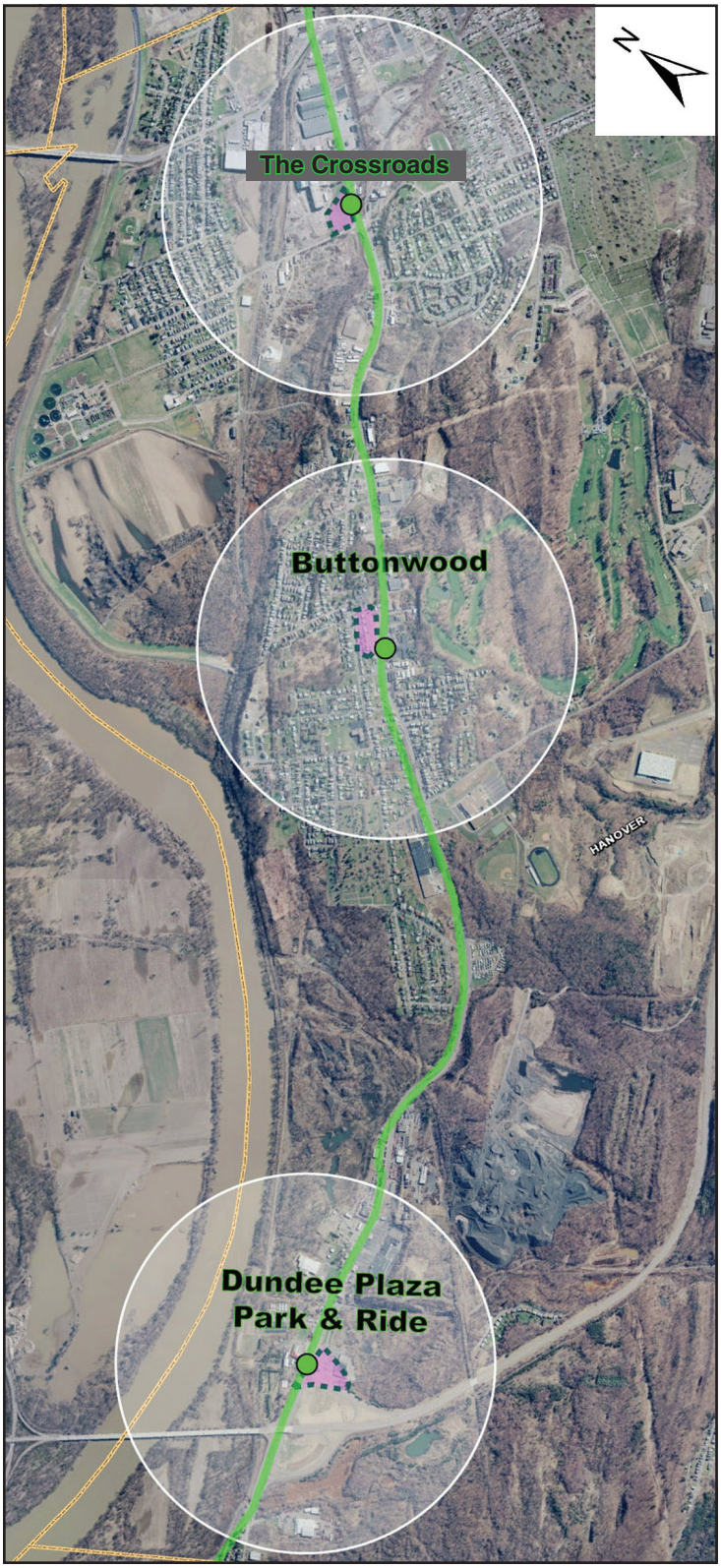
Nanticoke City, Nanticoke Station

2.0 acres

Triangular site comprised of redeveloped parcels bound by Railroad Street to the south and west and an active freight rail line along the north and east.

0 0.5 1 Miles

Nanticoke/Dallas BRT



Hanover Township, Dundee Plaza Park & Ride

4.0 acres

A reconfigured parking area at Dundee Plaza at the southeast corner of the Route 309 and Sans Souci Parkway interchange.

Hanover Township, Buttonwood Station

2.0 acres

Across from the Hanover Area Junior Senior High School on the south side of Sans Souci Parkway. This site is currently vacant and bounded by Newman and Pine Streets.

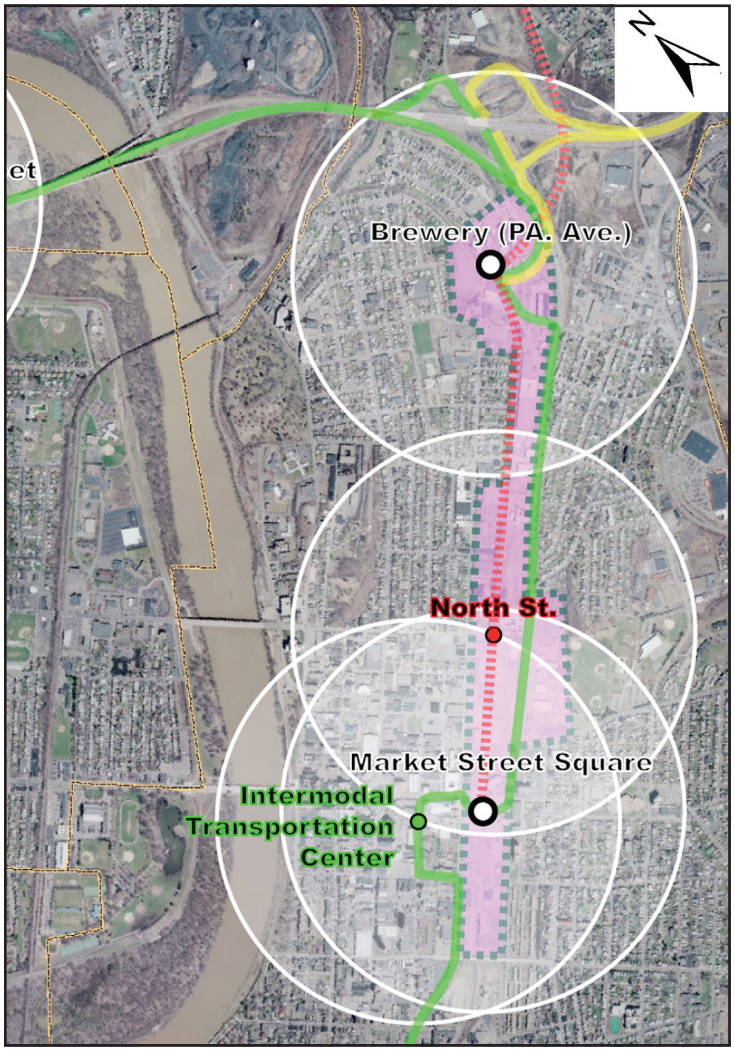
Hanover Township, The Crossroads Station

2.5 acres

At the northeast corner of the Fellows Avenue and Sans Souci Parkway intersection. This portion is vacant right-of-way land abutting the intersection.

0 0.5 1 Miles

Nanticoke/Dallas BRT



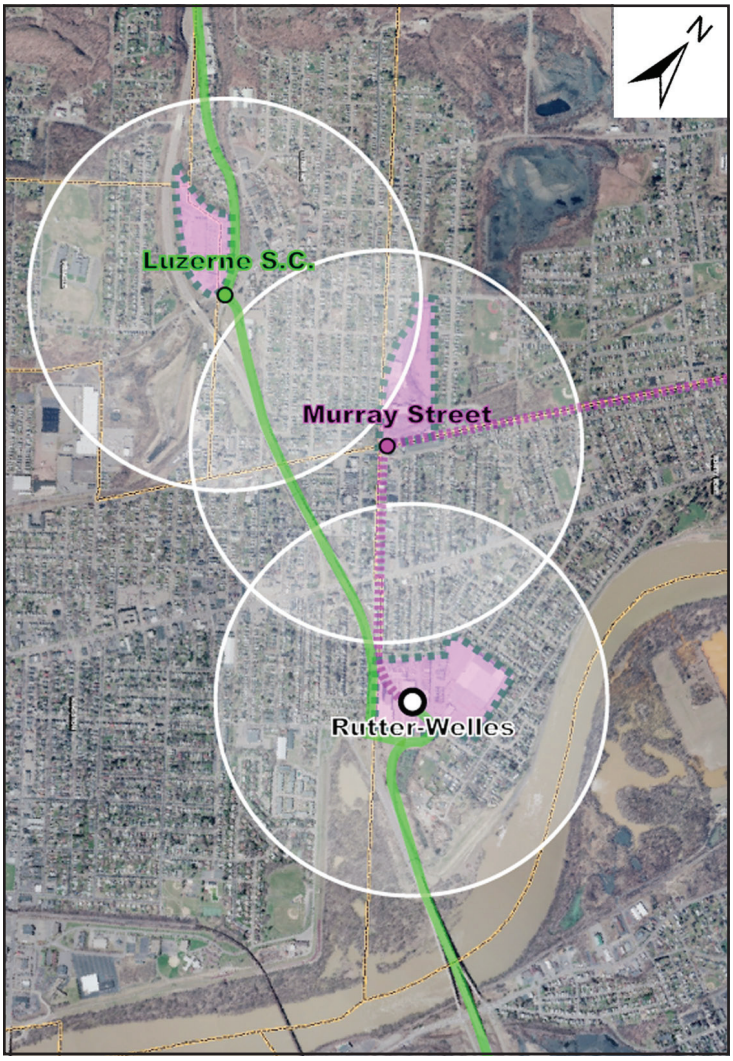
Wilkes-Barre City, Wilkes-Barre Intermodal Transportation Center/ Market Street Square Station; Brewery (Pennsylvania Avenue) Station

164.7 acres

This expansive core zone includes three transit stops between Pennsylvania Avenue and Wilkes-Barre Boulevard, spanning between the vicinities of the Chestnut Street intersection to the north and South Street to the south. This area is a combination of commercial office and retail, formerly vacant industrial lands, and active industrial uses.

0 0.5 1 Miles

Nanticoke/Dallas BRT



Forty-Fort Borough, Rutter Avenue-Welles Street Station

See page 2-16.

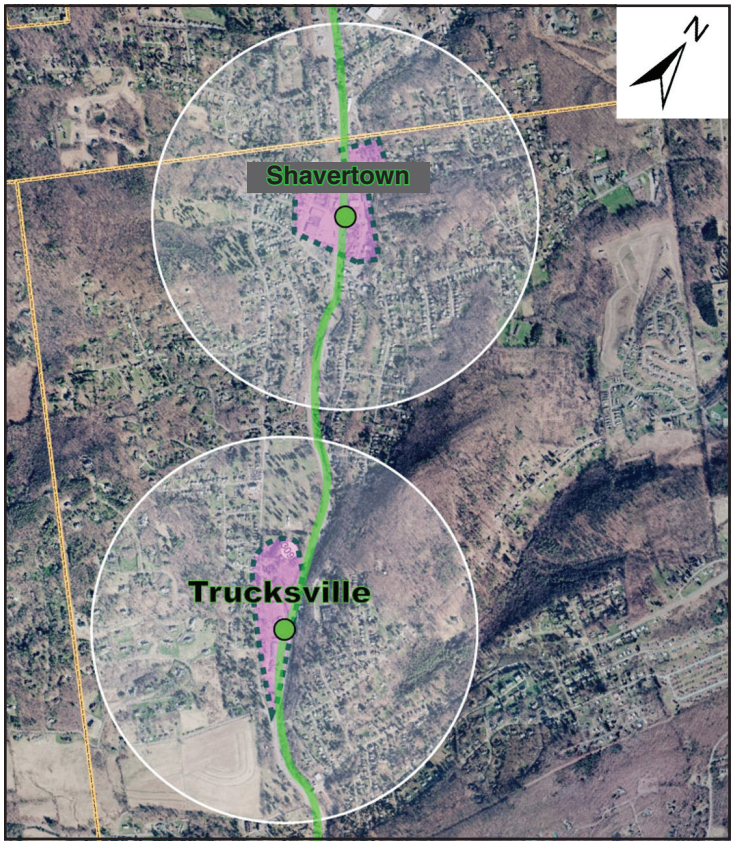
Luzerne Borough, Luzerne Shopping Center Station

23.0 acres

Adaptive reuse of Luzerne Shopping Center includes the reconfiguration of its parking area adjacent to Union Street, north of the Evans Avenue entrance to Route 309.

0 0.5 1 Miles

Nanticoke/Dallas BRT



Kingston Township, Trucksville Station

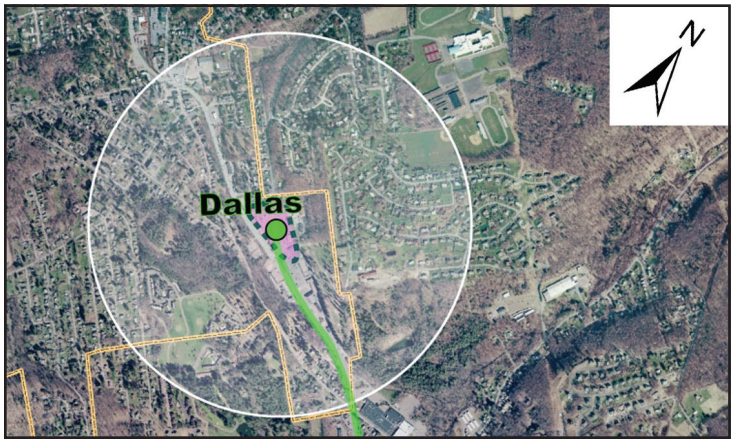
17.5 acres

Highway commercial businesses adjacent to the west side of the Memorial Highway, to the immediate north of the Route 309/Pioneer Avenue intersection.

Kingston Township, Shavertown Station

11.5 acres

Shavertown's business center, loosely bordered by Ferguson Avenue, W. Center Street, N. Main Street, and W. Franklin Street.

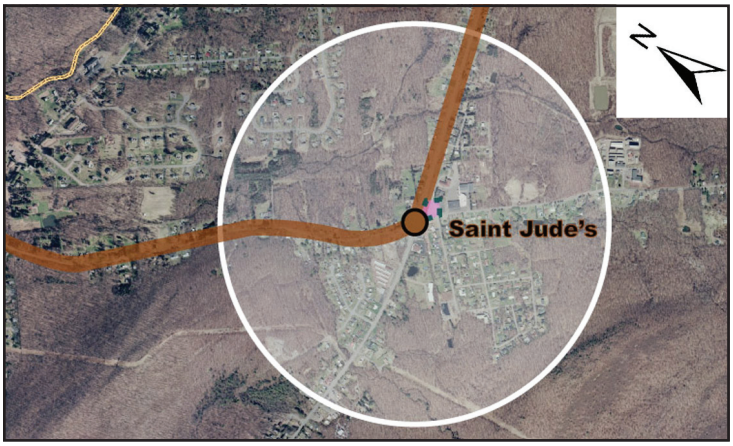


Dallas Borough, Dallas Station

5.5 acres

Proposed reconfiguration of retail shopping areas (Dallas Village Shopping Center).

0 0.5 1 Miles



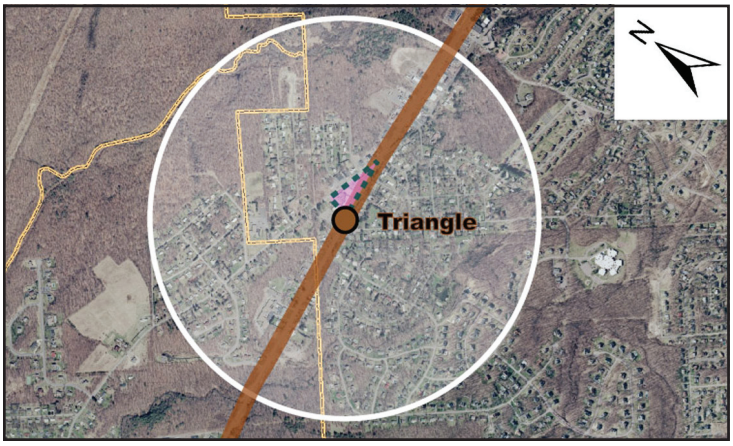
Rice Township, Nuangola-Rice Park & Ride Station

See page 2-25.

Wright Township, Saint Jude's Station

1.3 acres

At the northeast corner of Church Street and S. Mountain Boulevard (PA Route 309). A transit station for the Mountain Top BRT line is proposed for the immediate vicinity of this intersection, at or adjacent to St. Jude's School.



Fairview Township, Triangle Station

5.5 acres

This site proposes a reconfiguration of this commercial center to include improved access to the Mountain Top BRT line. The site location is at Main Road and Route 309.

Wilkes-Barre City, Brewery (Pennsylvania Avenue) Station

See page 2-29.

0 0.5 1 Miles

Concept 2 – Infill Areas

Infill Areas occur at various locations in Lackawanna and Luzerne Counties, and provide opportunities for new development and redevelopment on properties that are vacant or underutilized. The Land Use Plan identifies two classifications of Infill Areas, *Mixed Density Infill Areas* and *Low Density Infill Areas*. While these are not expected to be targeted locations for public investment, they will continue to be locations where people live, work, and play. For most of these areas, life will proceed through the next 20 years much as it has over the recent past. New residences will be built, others will be upgraded, new shops will be opened and existing businesses will be enlarged. New employment and educational opportunities may also occur in Infill Areas where more land may be available for redevelopment.

An important aspect of Infill Areas is their proximity to Priority Areas. Future growth and development in Infill Areas will support multimodal linkages to nearby Priority Areas, including bicycle and pedestrian access (see *Section 2.2*, Transportation). Where these linkages include freight service, opportunities for industrial uses will occur, such as Newport Township's Whitney Point Industrial Park (formerly Daniel Flood Industrial Park).

The two types of Infill Areas are distinguished by the following characteristics:

Mixed Density Infill Areas include river valley settings between Newport Township and the City of Carbondale and in the Greater Hazleton Area and may overlap with catchment areas of nearby transit hubs. Shown in an ochre color on the Land Use Plan map, areas for Mixed Density Infill development also include lands that are adjacent to Priority Areas such as Dallas or Clarks Summit Boroughs.

The proximity of Priority Areas and public transit service to lands designated as Mixed Density Infill Areas is significant. The intensity of infill residential, commercial, and even industrial uses varies through the Mixed Density Infill Areas, with greater densities closer to Priority Areas and public transit.

Low Density Infill Areas are either on the periphery of Mixed Density Infill Areas or at other locations within the boundary of the two counties. Shown in a cream color on the Land Use Plan map, these areas include small boroughs such as Freeland, small townships such as Elmhurst, or are in municipalities such as Hunlock or Scott Townships. These latter areas are where development has historically occurred in patterns of relatively low density in municipalities that are otherwise largely open. The extent of these Low Density Infill Areas is not expected to increase appreciably over the planning period. Instead, significant new development will be directed to Priority Areas and, to a lesser extent, Mixed Density Infill Areas.

Concept 3 – Conservation Areas

Conservation Areas include sensitive environmental features, scenic landscapes, agricultural lands, as well as recreational sites and other cultural resources. Four

classifications of Conservation Areas are identified on the Land Use Plan map: *Public Parks and Conservation Lands, Game Lands, 2004 Open Space Plan Conservation Areas*, and *Additional Conservation Areas.* Development is directed to Priority Areas and Infill Areas with the intent of limiting development in Conservation Areas.

Except for agricultural, recreational, and resource-based enterprises, there should be no new commercial or industrial uses in these areas. Maintaining agriculture in Lackawanna and Luzerne Counties is linked to the economic sustainability and quality of life of the entire population. Agricultural areas will provide opportunities for growing and marketing produce and value-added products that can be sold locally and regionally.

The four types of Conservation Areas are identified by the following characteristics:

Public Parks and Conserved Lands account for all state, county, and municipally-owned recreational and open space parcels as well as privately held open space (see also *Section 2.5*).

Game Lands include all lands managed by the Pennsylvania Game Commission (PGC) for wildlife and for hunting, trapping, and fishing. These lands do not permit farming or development and are either donated to or purchased by the PGC.

2004 Open Space Plan Conservation Areas have been designated by *the Open Space, Greenways & Outdoor Recreation Master Plan for Lackawanna and Luzerne Counties.* Determination was based on conservation attributes and the ability to create a connected network of open spaces and greenways. The 2004 Open Space Plan Conservation Areas are categorized into five groupings: Highlands, Natural Areas, Agrarian Lands, Greenways, and Trails. (See also *Section 2.5*). Highlands, Natural Areas, and Agrarian Lands are described below:

1. Highlands are found mostly along ridges and undeveloped mountainous areas such as the Moosic Mountain Highlands in Jefferson Township, the Penobscot Mountain highlands in Conyngham and Slocum Townships or the Bald Mountain highlands in Ransom Township. Many of these areas contain well-known mountain ridges and forested areas that contribute to the scenic quality of the area;
2. Natural Areas contain unique ecological communities or critical watersheds and are found throughout the study area. These areas are important for protecting water quality and providing habitat such as are found in the Harveys Creek and Lake Scranton natural areas.
3. Agrarian Lands are associated with prime farmland. These areas have large tracts of land suitable for farming based on state level data.

Additional Conservation Areas include agricultural and wooded areas throughout both counties where only scattered, very low density residential areas may exist. Over the planning period, development within such areas will be strongly discouraged. Instead, strong incentives will be provided to develop within areas designated for urban and suburban activity.

Various plan implementation techniques will be applied to bring about the desired result. Discouragement of development in rural areas may be achieved through the acquisition of agricultural conservation easements, the adoption of agricultural zoning, and the Transfer of Development Rights (TDR) to Priority Areas and Mixed Density Infill Areas.

Each county currently has a farmland preservation program and there are several organizations active in the two counties, including Countryside Conservancy, Delaware Highlands Conservancy, Lackawanna Valley Conservancy, Natural Lands Trust, North Branch Land Trust, The Nature Conservancy, The Pocono Heritage Land Trust, Wildlands Conservancy, and other regional and national conservation groups.

The Land Use Plan recognizes the importance of an extensive, interconnected natural and open space network throughout Lackawanna and Luzerne Counties. It is important to remember that the Plan promotes the following natural, agricultural, and open space network components:

- Environmental resource protection and natural areas retention and conservation, including surface water, floodplains, wetlands, steep slopes, and woodlands;
- Agricultural lands, including preserved agricultural lands;
- Recreational lands, including playing fields, parks, public and civic space, and golf courses;
- Deed-restricted permanently undeveloped lands secured as part of land development approvals;
- Recreational trails, including local and regional facilities that are easily reached and that are highly interconnected;
- A pedestrian/bicycle system, consisting of pathways, trails, and sidewalks within or just adjacent to roadway rights-of-way, that links the different parts of each county and provides non-motorized access to open space and recreational sites as well as to schools, shopping, and cultural facilities; and
- Buffers between incompatible land uses where feasible.

General Disposition of Residential, Commercial, and Industrial Land Uses

Residential

The housing element of the Lackawanna-Luzerne Regional Plan (see *Section 2.3* of this chapter) explains in detail the intended locations for residential use, incorporating a gradation of densities from very low to high. Distinctions among residential categories are made according to gross density limits rather than by specific housing types to increase flexibility in responding to natural site conditions, public recreational needs, and market demands for a range of housing types and site sizes. On newly developing tracts, it is intended that this flexibility should lead toward open space conservation, as well as the opportunity for development of a range of housing types to meet the needs and desires of the present and future residents of the county.

Commercial

The Land Use Plan directs most new commercial development into multi-story, mixed-use buildings, typically 3 to 5 stories and sometimes greater in height, within each Priority Area. ("Commercial" refers primarily to consumer-oriented retail activity, but also most office uses as well.) In Mixed Density Infill Areas, single-use commercial buildings will occur, but the multi-story, vertical mixed-use model described for Priority Areas is strongly encouraged. A major goal of the plan is to reinforce borough and city business districts while simultaneously conserving rural landscapes and reducing transportation demands; an emphasis on existing centers and selected new ones for both retail and office activities in conjunction with residential, institutional, and civic open space uses supports these goals.

Large amounts of strip and highway-oriented retail development occurred over the past few decades along Route 6309, Mundy Street, and Highland Park Boulevard in Wilkes-Barre Township; Route 6 through the Borough of Dickson City; O'Neill Highway in Dunmore Borough; and along the Route 93 corridor in West Hazleton Borough and PA 309 Corridor in the Back Mountain. These retail areas include several malls and large "box" retail businesses (see also *Section 4.1*). Infilling to transform such locations to a character similar to that described in the previous paragraph is encouraged, but further linear expansion is not.

Throughout Lackawanna and Luzerne Counties, over 15 office parks are currently located in areas close to Interstate 81 between Hanover Township in Luzerne County and Scott Township in Lackawanna County. Commercial office parks are also found along the Route 6 Casey Highway corridor from Scranton north to Carbondale and in Butler Township east of the I-80 and I-81 interchange (see also *Section 4.1*). Similar to the direction for strip and highway-oriented retail development, above, a transition toward the mixed-use model is encouraged and further spreading into undeveloped "greenfields" strongly discouraged.

Additional commercial uses in existing centers ensure their long-term economic viability, which is the critical component toward maintaining community functions and character. If carefully planned and designed, new uses in older communities can enhance their traditional historical style. The combination of new and existing residential areas, focused on traditional centers, allows for home-work and home-shopping connections that are physically close and present the opportunity for short-distance and -duration trips by automobile or alternate means, such as bicycle or on foot.

Industrial

Industrial growth will focus on development near or redevelopment of the other industrial parks and other industrial areas in the county. Some of these areas, including the Humboldt and Crestwood Industrial Parks, have Keystone Opportunity Zones (KOZ) and Keystone Opportunity Expansion Zones (KOEZ) designations in order to stimulate economic development in these locations. The type of uses projected for these locations will be, for the most part, light industrial. Within the region as a whole, traditional heavy or "smokestack" industry has generally given way to enclosed manufacturing, assembly, and warehousing facilities which are not noxious and present similar appearances to office or commercial structures.

2.2 Transportation Plan

Goal

The Transportation Plan is intended to achieve a safe and efficient transportation system that is compatible with the natural, agricultural, and developed areas of Lackawanna and Luzerne Counties and that provides viable transportation alternatives, including driving, biking, walking, and public transportation.

The following goals incorporate the SAFETEA-LU planning factors and take into account the statewide emphasis on asset management that addresses the condition of existing infrastructure, such as the accelerated bridge program currently underway within the Pennsylvania Department of Transportation (PennDOT):

1. Support the economic vitality of the region, especially by enabling global competitiveness, productivity, and efficiency by increasing the accessibility and mobility options available to people and goods;

2. Increase the safety and security of the transportation system for motorized and non-motorized users;

3. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and two-county area planned growth and economic development patterns;

4. Enhance integration and connectivity of the transportation system across and between modes, for people and freight, in an effort to promote efficiency in system management and operation;

5. Emphasize preservation and connectivity of the existing transportation system (all modes);

6. Ensure consistency with the fundamental principles of Title VI and Environmental Justice.

Objectives

The objectives of the Transportation Plan are as follows:

A.) Provide access to and interconnectivity between Priority Areas through a variety of modes, including public transit;

B.) Promote the establishment of internal circulation systems for Priority Areas that are walkable, bikable, and transit-friendly;

C.) Encourage the development and expansion of the public transportation system that serves Lackawanna and Luzerne Counties and opportunities for multimodal integration allowing for easy switching from one mode of transportation

(pedestrian, bicycle, automobile, bus, train) to another; and encourage the combination of the three regional transit operators;

D.) Identify roadway corridors, segments, and intersections with safety problems, along with methods of eliminating these deficiencies;

E.) Identify roadway corridor, segment, and intersection changes that would enhance circulation, economic growth, and quality of life;

F.) Identify freight and rail changes that would enhance circulation and economic growth;

G.) Maintain an acceptable level of service on the two counties' arterial roads;

H.) Explore opportunities to expand use of freight rail to serve existing and future businesses and identify prospective locations for an intermodal freight center;

I.) Identify and set priorities for projects that are appropriate for inclusion on Lackawanna and Luzerne Counties' Transportation Improvement Programs (TIP) and PennDOT's 12-Year Highway Program;

J.) Develop opportunities for travel by means other than private automobiles including bicycle and pedestrian transportation; pay particular attention to links to open space and recreational amenities within and adjacent to the two counties;

K.) Promote bicycle- and pedestrian-friendly roadway design in order to advance safe and convenient travel opportunities.

L.) Promote the growth and utilization of existing air transportation in the region.

Looking out twenty years, as this Regional Plan does, reveals the prospect of much higher energy costs than exist at present. A preview of this occurred when energy prices spiked in 2008. The response at the time was dramatic, with sudden declines in Vehicle Miles Traveled (VMT), changes in behavior, and people asking for increased transit services. It is therefore reasonable and prudent to have in place an approach to transportation for Lackawanna and Luzerne Counties that fits with a high energy cost future. Focusing development and redevelopment at locations where residents can get services close at hand and where commuters have some choices concerning how they get to and from work makes sense. The Plan seeks to improve mobility in support of focused development and redevelopment, including upgrades to the system of roadways, sidewalks, and multi-use pathways.

This Plan requires further investment in added frequency and capacity in Lackawanna and Luzerne Counties' five key local transit agencies, including Lackawanna County's Coordinated Transportation and the Luzerne-Wyoming County Transportation Department. The County of Lackawanna Transit System (COLTS) serves the City of Scranton and surrounding areas of Lackawanna County Monday through Saturday. The Luzerne County Transportation Authority (LCTA) serves the city of Wilkes-Barre and surrounding areas Monday through Saturday. Hazleton Public Transit (HPT), a service of the City of Hazleton's Department of Public Services, operates nine routes in the City

of Hazleton and surrounding townships and boroughs Monday through Friday, with limited service on Saturdays and Sundays (see also *Section 4.2*).

The Transportation Plan proposes to upgrade the safety, connectivity, convenience, and efficiency of each county's transportation network in a way that is compatible with its 30 identified Priority Areas and abutting Infill Areas and connections to those locations from other parts of the two counties. This includes maintaining and improving access and mobility for vehicles, bicycles, pedestrians, and transit patrons.

The Plan also recognizes the importance of rail extensions for freight movement. Lackawanna and Luzerne Counties both include two Class I railroads – Norfolk Southern and Canadian Pacific. In Lackawanna County, additional rail service is provided by the Northeast Regional Railroad Authority and the Reading, Blue Mountain and Northern Railroad. In Luzerne County, feeder service from the Luzerne County Rail Authority, as well as The Reading, Blue Mountain and Northern Railroad, is provided (as described in *Section 4.2*).

The Plan also encourages the utilization of the existing infrastructure around the airport and would promote the connections between the Moosic area and Montage Mountain area to leverage existing transportation infrastructure and make more transportation connections between existing and proposed development areas and the existing international airport. Other development areas are also proposed around existing public and private service airfields.

Mobility and Major Planning Concepts

The Land Use Plan's major planning concepts outline three types of settings for Priority Area development and redevelopment activity: City Centers, Borough & Township Centers, and Transit Villages. While this Transportation Plan describes transportation infrastructure improvements to support mobility throughout the Lackawanna-Luzerne County areas, the Transportation Plan also stresses support for these Priority Area settings. In every case, the development or redevelopment in these areas should be seen as an opportunity to improve the transportation network.

Priority Areas Transportation

The City Centers, Borough and Township Centers, and Transit Villages Priority Areas all anticipate development and redevelopment over time. Increases in population provide an important opportunity to both meet multimodal transportation needs created by the development and redevelopment and also to improve the surrounding transportation network. This objective can be accomplished by promoting improved rapid transportation linkages that are designed and constructed in concert with planned development and redevelopment.

All of the Priority Areas need to have effective systems of mobility to allow circulation within each setting (by various modes) and to connect to external systems of roads, transitways, and trails. The Land Use Plan shows a number of locations for new Transit Villages, but most Priority Areas are found in existing centers — to be reinforced and revitalized over the planning period. For existing settings, the challenge will be to

optimize the existing roadway system so that a balance is achieved between movement of motorized vehicles and the establishment of transit, pedestrian, and bicycle-friendly streetscapes that are key to retaining current residents and attracting new residents, employment, and activity.

Roadways identified to support Bus Rapid Transit (BRT) service, such as Interstates 81 or 380 and State Highways including PA 309 and US 11 and even some local roadways, may include future improvements allowing for exclusive travel lanes for transit vehicles. This challenge however, can only be met if plans for new configurations are put into place in the short term and funding options for phased construction explored in the longer term.

The proposed Light Rail System will use existing rail lines and/or will share active freight lines, which will minimize the expense of constructing new tracks. However, new rail will be needed in some areas, primarily within the City of Wilkes-Barre and in the vicinity of the Mohegan Sun Casino and the Wilkes-Barre/Scranton International Airport

The role access plays in “smart growth” development across Lackawanna and Luzerne Counties is significant. The inclusion and integration of freight service, for example, can provide Mixed-Infill Areas with opportunities to combine residential and commercial uses with new cleaner industrial sites. Where new rail is to be added, supporting freight service can be as necessary for employment opportunities as passenger service.

Infill Areas Transportation

Although the Land Use Plan identifies 30 Priority Areas, most are surrounding at least one of 49 potential transit hubs identified in this chapter. Therefore, the majority of Mixed Density Infill Areas and several adjoining Low Density Infill Areas either overlap with catchment areas for public transit or fall in close proximity to their service. Integration of Infill Areas with transit and neighboring Priority Areas is important. The emergence of multimodal corridors with characteristics of “complete streets” – corridors with sidewalks, crosswalks, bike lanes, transit shelters, and pedestrian-oriented lighting and amenities (and perhaps even transit lanes) – will promote this integration.

Good pedestrian, bicycle, and public and private vehicular access to transit stations and Priority Areas promotes greater intensities of land use activities near station hubs and encourage stronger ridership for both BRT and passenger rail service. Although many of the proposed transit stations and Priority Areas may already include adequate access from surrounding neighborhoods, greater emphasis should be placed on connectivity among Priority Areas, including newer centers such as Transit Villages as well as any additional transit stations (whether associated with Priority Areas or not).

Improved Public Transportation Service

The plan for future transit service in Lackawanna and Luzerne Counties includes both new passenger rail (primarily, although not exclusively, light rail) and new Bus Rapid Transit (BRT) modes. These are shown on the Land Use Plan and discussed in detail below.

Passenger Rail

The Transportation Plan builds on the 1999 feasibility study of a potential light rail line from Scranton to Wilkes-Barre and as well as the Lackawanna Cut-Off Project, to re-institute passenger rail service on the abandoned rail right-of-way of the Lackawanna Cutoff and over existing freight right-of-way in Pennsylvania. The re-instituted rail line would provide service from Scranton to Hoboken, New Jersey or to New York Penn Station via transfer to Mid-Town Direct service, by connecting to the existing NJ TRANSIT Montclair-Boonton and Morris & Essex Lines.

There are a large number of active, inactive, and abandoned rail lines across Lackawanna and Luzerne Counties. The Delaware & Hudson, Delaware, Lackawanna & Western, Lehigh Valley Railroad, and Erie Railroad among others were attracted to the Wyoming and Lackawanna Valley's vibrant coal industry in the mid-nineteenth century and built lines here. All provided freight service as well as long-distance passenger service. Between Scranton and Wilkes-Barre, there was also an electric interurban line named the Lackawanna & Wyoming Valley, supporting both passenger and freight service until 1952.

Through a combination of existing and abandoned rail, the Transportation Plan proposes three light rail lines for the future: A *Red Line* linking Scranton and Wilkes-Barre, with several future Priority Area stops as it heads up the Lackawanna Valley; a *Purple Line*, coming south from the International Airport on the west side of the Susquehanna River until the vicinity of Route 309; and an *Orange Line*, making use of an existing track from Scranton to Carbondale.

"Light rail" indicates the modern form of a trolley or streetcar, in this instance running on tracks in an exclusive right-of-way (although light rail can conceivably run on tracks on a street in mixed traffic, as many trolleys or streetcars did in the past). An example of existing light rail in the two-county area is the Laurel Line, currently operating as a tourist attraction out of downtown Scranton. This line could someday be used for passenger rail service.

Red

Wilkes-Barre to Scranton Light Rail

Light rail service between the cities of Wilkes-Barre and Scranton is demarcated in red. The twenty-mile-long transit route largely incorporates the use of approximately 17 miles of existing rail and three miles of proposed track. The following eight station stops, listed south-to-north, are proposed:

Proposed Wilkes-Barre to Scranton Light Rail Station Stops

- Wilkes-Barre Intermodal Transportation Center/ Market Street Square (Wilkes-Barre)
- North Street (Wilkes-Barre)
- Brewery (Pennsylvania Avenue) (Wilkes-Barre)
- Cleveland Street (Plains)
- Mohegan Sun Casino (Plains)
- International Airport (Pittston)
- Montage (Moosic)
- Scranton Intermodal Transportation Center

Wilkes-Barre Intermodal Transportation Center/Market Street Square Station is located at the intersection of Wilkes-Barre Boulevard and Market Street in the City of Wilkes-Barre. At this station, transit connections with the proposed Nanticoke/Dallas BRT (Green) Line are provided. Light rail service parallels N. Pennsylvania Avenue for ¼ mile northeast on existing rail before arriving at North Street.

North Street Station is located near the intersection of Pennsylvania Avenue and E. North Street in the City of Wilkes-Barre. Transit service heading northeast toward Brewery Station continues on same tracks for an additional mile.

Brewery (Pennsylvania Avenue) Station is situated to the immediate southwest of the Rt. 309 and Wilkes-Barre Blvd interchange, within the City of Wilkes-Barre. The proposed station site is north of the intersection of Wilkes-Barre Blvd. and Conyngham Ave. The station also provides transit connections with the proposed Nanticoke/Dallas BRT (Green), Hazleton/Wilkes-Barre BRT (Yellow) and Mountaintop (Tan) Lines. Service to Cleveland Street Station to the north and east is supported by roughly 1¼ miles of existing rail.

Cleveland Street Station is adjacent to the intersection of Mayock and S. Oak Streets in Plains Township. From this station, service to Mohegan Sun Casino Station includes a combination of existing and proposed new rail. Northbound, transit operates on an existing line for ¾ mile before connecting onto a ½-mile portion of a new east/west rail crossing the Luzerne Shopping Center entrance road to the east and arriving at Millcreek Road and Pocono Downs.

Mohegan Sun Casino Station is located at Millcreek Road (Route 315) near Pocono Downs Road in Plains Township. Proposed northbound service to Wilkes-Barre Scranton International Airport is supported by ¾ of a mile of added north/south track parallel to Route 315 and ½ mile of east/west track following utility line right-of-way before connecting to existing track. Service continues northeast on 5¾ miles of rail before diverting onto new track beneath the US-11 Pittston Avenue bridge near Avoca Borough. Light rail service continues for 1 mile along side Route 315/Terminal Road before arriving at the International Airport Station.

International Airport Station is located at the Wilkes-Barre Scranton International Airport in Pittston Township. Transit connections with the Susquehanna Valley Light Rail (Purple) Line are provided at this station. Northbound light rail service to Montage Mountain Station operates on a combination of proposed and existing rail. Light rail exits the airport on a ½ mile of new track that follows the western edge of the airport and

parallels Dawson Street north, before joining an existing rail line as it turns east for ¾ mile. After crossing under the PA Turnpike, this line heads north around the eastern side of Rocky Glen Pond for nearly 2½ miles before arriving at Montage Mountain Station.

Montage Mountain Station in Moosic Borough is adjacent to an existing rail line at Glenmaura National Blvd. Service leaving Montage Mountain Station northbound for downtown Scranton is supported primarily by 4¾ miles of existing rail currently supporting the Historic Steamtown Trolley Line. Abutting the eastern side of Interstate 81 this route continues north for 2¼ miles before crossing I-81 to the west and entering a existing subway tunnel. Rail exits the subway line roughly 1 mile north before turning west for approximately 1½ miles before arriving at Scranton Station.

Scranton Intermodal Transportation Center is the terminus for light rail service from the City of Wilkes-Barre. The station is adjacent to Lackawanna Avenue and Cliff Street in Downtown Scranton. Additional transit connections include the Scranton/Carbondale Light Rail (Orange) Line as well as the Covington/Keystone College BRT (Blue) Line.

Purple

Wyoming Valley Light Rail

Light rail service between Forty-Fort/Kingston and the Wilkes-Barre Scranton International Airport is demarcated in purple on the Land Use Plan map. The majority of this 12¼-mile transit route is comprised of 10½ miles of existing and 1¾ miles proposed rail servicing primarily the west side of the Susquehanna River. The following six station stops, listed south-to-north, are proposed:

Proposed Wyoming Valley Light Rail Station Stops

- Rutter-Welles (Forty-Fort)
- Murray Street (Forty-Fort)
- Wyomings (West Wyoming Borough)
- West Pittston
- Moosic
- International Airport (Pittston)

Rutter-Welles Station is located on the municipal boundary of Kingston and Forty-Fort, near the Rutter Avenue exit of Route 309 at Rutter Avenue and Welles Street. At this station, connections with the Nanticoke/Dallas BRT (Green) Line are provided. Service to Murray Street Station operates along a ¼ mile stretch of new north/south rail utilizing an existing rail right-of-way adjacent to Rutter-Welles Station.

Murray Street Station is located roughly 250 feet to the east of the Routes 309 and 11 interchange along Murray Street in Forty-Fort Borough. The station is linked to an existing adjacent east-west freight line. Service continues northeast to Schooley Avenue Station along this freight line for 4½ miles closely following Wyoming Avenue (US 11) before arriving at the Wyomings Station.

Wyomings Station is situated on the boundary between Wyoming and West Wyoming Boroughs, west of 8th Street. There is an extensive underutilized area around the station, mostly to the north of the tracks, which represents a transit-oriented redevelopment opportunity of considerable acreage.

West Pittston Station is north of Maple Street and south of the intersection of Ash and Ann Streets in West Pittston Borough. Service to Moosic Station continues to utilize this existing line and its bridge crossing over the Susquehanna River for 1½ miles before diverting northeast at a split in the rail line in Duryea. Service continues northeast for approximately two miles before arriving at Moosic Station.

Moosic Station is proposed to the southeast of the intersection of Birney Avenue (US. 11) and Erie/Orange Streets. Service to the International Airport Station continues northeast for roughly 1¼ miles along existing track before diverting onto new tracks heading south for 1½ miles paralleling Dawson Street and then along the western edge of the airport before arriving at its final station.

International Airport Station is the terminus for light rail service from Kingston/Forty-Fort. The station is located at the Terminal Road intersection at Wilkes-Barre Scranton International Airport in Pittston Township. Transit connections with the Wilkes-Barre to Scranton Light Rail (Red) Line are provided at this station.

Orange

Scranton to Carbondale Light Rail

Light rail service between the cities of Scranton and Carbondale is shown on the Land Use Plan map in orange. The 16-mile transit route utilizes existing freight lines and other existing rail and includes the following nine proposed stops, listed south-to-north:

Proposed Scranton to Carbondale Light Rail Station Stops

- Scranton Station
- Olive Street (Scranton)
- Dickson City
- Olyphant
- Jessup
- Salem Street (Archbald)
- Jermyn
- Mayfield
- Carbondale

Scranton Station is located near the intersection of Lackawanna Avenue and Cliff Street in downtown Scranton. From this station, transit connections with the Covington/Keystone College BRT (Blue) and Wilkes-Barre to Scranton Light Rail (Red) Lines are provided. Light rail service within the city continues ½ mile north to Olive Street by way of an abandon freight rail line.

Olive Street Station is proposed at the northeast corner of the intersection of Olive Street and Capouse Avenue. Service continues on same tracks for 3¼ miles before arriving at Dickson City Station.

Dickson City Station provides light rail service to the borough as well as North Scranton. The location is ¼ of a mile north of the I-81/US 6 interchange and roughly 300 feet east of Main Street. Service to Olyphant continues northeast for ¼ mile before changing tracks via 50 feet of new rail and proceeds to cross and then follow the Lackawanna River along its east side for an additional 2½ miles before reaching the next station.

Olyphant Station is located between N. Valley and Garfield Avenues near the intersection with Lynch Street. The potential for new transit-oriented development potential exists immediately east of Garfield Avenue. Service to Jessup Station continues northeast for 1¾ miles.

Jessup Station is roughly ¼ miles north of Hill Street and also includes an opportunity for new transit-oriented development. Service to Salem Street Station is supported by existing tracks northeast for ½ mile before switching tracks and continuing for 1½ miles north into Archbald Township's Salem Street Station.

Salem Street Station is in close proximity to the Lackawanna River's east side on Salem Street in Archbald Township. The station is also roughly ½ mile west of the Casey Highway (US 6). Service continues north on this rail between the Lackawanna River and US 6 for 2 miles before arriving at Jermyn Station.

Jermyn Station is near the north side of the intersection of Chestnut and Delaware Streets in East Jermyn. Delaware Street would provide multimodal access to the light rail service from Jermyn's business center on the west side of the Lackawanna River. Rail service continues northeast along an existing freight line for 1½ miles to Mayfield Station.

Mayfield Station is located adjacent to the eastern side of the Oak Street and Lackawanna Avenue intersection. The potential for new transit-oriented development exists along the eastern side of the proposed station. Light rail service continues on the same tracks following the Lackawanna River approximately 2 miles before crossing over to the river's west side and continuing for an additional ¼ mile north into Carbondale Station.

Carbondale Station is the terminus of the Scranton-Carbondale (Orange) Line. The station is proposed for the intersection of 8th and Mill Streets in the City of Carbondale, across the Lackawanna River from downtown.

Bus Rapid Transportation

A future with passenger rail service is an attractive one for both counties. However, except perhaps for the Scranton-to-New Jersey line, which has a head start, these prospective new lines will not be easy to implement. They will take a lot of money, upgraded tracks and signals, legal agreements with other railroads, and new rolling stock. They may not be open for business within the 20-year time frame of the Lackawanna-Luzerne Regional Plan. For more immediate solutions, this Plan recommends a system of Bus Rapid Transit (BRT) service for the two counties. BRT is a technology that is here today and becoming popular all over the country. It is relatively inexpensive, flexible, and can be upgraded as interest, ridership, and funding become available.

BRT is bus service that is, at a minimum, faster than traditional local bus service and, at a maximum, includes grade-separated bus operations. The vehicles are usually specialized, more attractive, and more comfortable than traditional transit buses. To reduce travel time and to provide faster service, BRT may incorporate Intelligent Transportation Systems (ITS) technologies that provide for elements like off-vehicle payment, rapid boarding, and electronic guidance for berthing.

One of the best features of BRT service is the way it allows transit agencies to take advantage of the existing network of roads. In a relatively short period of time, for instance, a BRT service could be up and running on I-81 from Hazleton to Wilkes-Barre. Designated stops could be in place at interchanges along the way where park-and-ride lots allow commuters who live a reasonable driving distance away to travel to the lot, park, and take BRT to their destination. Over the 20-year term of this Plan, as passenger demand may dictate and as funding may become available, BRT has the flexibility to evolve into something a little more, such as being able to run in an exclusive lane that is part of the I-81 cross-section, thereby bypassing highway congestion.

The Land Use Plan map shows five projected BRT lines: the *Blue Line* Covington-Keystone College line, via Route 307, I-380, I-81, Downtown Scranton, US 11, I-81, and US 6/11; the *Yellow Line* Hazleton-Wilkes-Barre BRT, traveling primarily along I-81; the *Light Blue Line* Hazleton Area BRT; the *Green Line* Dallas-Wilkes-Barre-Nanticoke BRT, traveling in the right-of-way of Route 309, in the right-of-way of some additional roadways, and utilizing its own right-of-way in its approach to Nanticoke; and the *Tan Line* Mountain Top BRT.

Blue

Covington/Keystone College BRT

BRT service between the Township of Covington and Keystone College by way of Scranton is demarcated in blue on the Land Use Plan map. The 25-mile rapid transit route is supported by a network of existing limited-access highways and local roadways. A designated peak-hour transit lane in each direction is recommended on existing roadways where sufficiently-wide shoulders exist and other supportive conditions are present. Transit vehicles will share lanes with mixed traffic where transit lane designation is not feasible. The following are the eleven station stops, listed south-to-north, along the Blue Line:

Proposed Covington/Keystone College Bus Rapid Transit Station Stops

- Covington
- Route 307 Park & Ride (Covington)
- Dunmore Park & Ride (Dunmore)
- Cedar Avenue (Scranton)
- Scranton Intermodal Transportation Center
- Viewmont Mall (Scranton)
- South Abington
- Clarks Summit
- Glenburn
- Dalton
- Keystone College

Covington Station is adjacent to PA 307 in Covington Township. Scranton/Dalton-bound BRT service follows PA 307 for 2½ miles before arriving at the Route 307 Station.

Route 307 Park & Ride is located to the immediate east of the Interstate 380 interchange with PA 307. This station provides an opportunity for an intercept park-and-ride lot and during peak hours commuters heading to or coming from Scranton have the opportunity to switch modes at this location. BRT service to Dunmore Park-and-Ride is supported by transit vehicles operating on 7½ miles of Interstate 380 North.

Dunmore Park & Ride is proposed for the interchange of Tigue Street and I-380. Similar to the Route 307 and I-380 Park-and-Ride, this site promotes the interception of commuters bound to and from Scranton from both I-380 and I-84 corridors and beyond. Service to Bogart Station in downtown Scranton includes use of I-81 South (¼ mile north of Dunmore Park-and-Ride) and Scranton Expressway (2¾ miles south along I-81). BRT vehicles arrive at Bogart by way of Cedar Avenue, approximately ¼ mile north of the terminus of the Scranton Expressway and about one mile west of I-81.

Cedar Avenue Station in downtown Scranton is located at southeast corner of Bogart Place and Cedar Avenue. Service to Scranton Station continues north on Cedar Avenue for 200 feet before turning left and continuing west on Lackawanna Avenue for ½ mile.

Scranton Intermodal Transportation Center is located near the intersection of Lackawanna Avenue and Cliff Street in downtown Scranton. From this station, transit connections with the Wilkes-Barre/Scranton Light Rail (Red) and Scranton/Carbondale Light Rail (Orange) Lines are provided. BRT service within the city continues west on Lackawanna Avenue ¼ mile, north on 7th Street for a ¼ mile, and north on US 11 (Scranton Expressway) for 3¼ miles before arriving at Viewmont Mall Station.

Viewmont Mall Station includes an ambitious reconfiguration of its surrounding shopping center into an environment supportive of transit-oriented development and multimodal mobility. The station site is identified to the immediate north of the Scranton Expressway and Interstate 81 within city limits. Because of this location, an opportunity

for intercept park-and-ride also exists. BRT service to South Abington is supported by transit vehicles entering I-81 North at Viewmont Mall for 2¼ miles before merging on to PA 6/11 north for ½ mile before arriving at the next station.

South Abington Station is adjacent to Routes 6/11 (State Street) along its east side and immediately to the north of the PA Turnpike Northeast Extension bridge span (Freedom Bridge) in South Abington Township. Service to Clarks Summit Station is supported with BRT service continuing on State Street for roughly one mile.

Clarks Summit Station is identified north and west of the intersection of Winola Road and State Street (Routes 6/11). The site is located in downtown Clarks Summit, less than 200 feet behind State Street businesses along the east side of the freight rail line (Canadian Pacific). Service to Dalton Station resumes northwest on North State Street (Routes 6/11) for 3¼ miles.

Glenburn Station in Glenburn Township includes land north of the Old State Road intersection along both sides of Route 6/11. There are currently intermittent commercial businesses in the area.

Dalton Station is the next-to-last stop for BRT service from the Township of Covington. The station is located roughly ¼ mile to the south of the Borough's center along the east side of Routes 6/11 (S. Lackawanna Trail).

Keystone College in La Plume Township is the terminus for the Blue Line BRT service. The station is located at the southwest corner of the intersection of US Route 6 and S. Overbrook Road and adjacent to the Keystone College campus.

Yellow

Hazleton/Wilkes-Barre BRT

BRT service between the City of Hazleton and City of Wilkes-Barre is demarcated in yellow on the Land Use Plan map. The 30-mile rapid transit route primarily operates along rights-of-way of Interstate 81 and portions of PA 309. Where feasible, an exclusive BRT travel lane in each direction is the ultimate objective, but is not a prerequisite for BRT service; BRT may operate in mixed traffic. It should be noted that in several states, DOTs permit buses to use the paved shoulder of major highways, some of them limited-access highways.

This BRT service route provides improved access between the Hazleton area and the central river valleys of the two counties. This route also promotes connections to transit services branching out from the cities of Wilkes-Barre and Scranton. The Hazleton/Wilkes-Barre Line includes the following four south-to-north stops:

Proposed Hazleton/Wilkes-Barre Bus Rapid Transit Station Stops

- Church Street (Hazleton)
- Cranberry Ridge (Hazleton)
- Nuangola-Rice Park & Ride (Rice)
- Brewery (Pennsylvania Ave) (Wilkes-Barre)

Church Street Station Intermodal Center is located at Church and Laurel Streets along the south side of Mine Street. Wilkes-Barre-bound BRT service would follow Broad Street northwest for roughly ½ mile and turn west/southwest onto PA 924 for an additional ½ mile before arriving at Cranberry Ridge Station.

Cranberry Ridge Station is located at the intersection of South Broad Street and PA 924 in Hazleton. Transit connections with the Hazleton Area BRT (Light Blue) Line are also provided. Service continues west on PA 924 for 2 miles before entering on to Interstate 81 North and exiting for the Nuangola-Rice Station 16 miles to the north.

Nuangola-Rice Park-and-Ride Station is in Rice Township and is roughly 1¼ miles southeast of the Borough of Nuangola and immediately west of the highway interchange. This is a location for primarily for BRT park-and-ride service, with commuters driving to the park-and-ride lot from surrounding areas. Service to Wilkes-Barre continues for an additional 16 miles on I-81 before merging onto PA 309 North for Brewery Station in Wilkes-Barre.

Brewery (Pennsylvania Avenue) Station is the terminus for BRT service from the City of Hazleton. The station is situated to the immediate northeast of the Rt. 309 and Wilkes-Barre Blvd interchange, and adjacent to the intersection of N. Washington Street and George Avenue in Wilkes-Barre. Additional transit connections include the Nanticoke/Dallas BRT (Green), Mountaintop (Tan) and Wilkes-Barre-to-Scranton Light Rail (Red) Lines.

Light Blue

Hazleton Area BRT

Bus rapid transit (BRT) service between Hazle Township and West Hazleton Borough by way of Hazleton City is demarcated in light blue on the Land Use Plan map. The 6-mile rapid transit route is supported by a network of both new and existing roadways. The new service roads, although limited in length, are reserved for BRT vehicles.

A designated peak-hour transit lane in each direction is recommended on existing roadways where sufficiently-wide shoulders exist and other supportive conditions are present. Transit vehicles will share lanes with mixed traffic where transit lane designation is not feasible. The following are the five station stops, listed south-to-north, on the Light Blue line:

Proposed Hazleton Area Bus Rapid Transit Station Stops

- Humboldt Center (Hazle)
- Cranberry Ridge (Hazleton)
- Valmont Plaza (West Hazleton)
- Valmont Industrial Park (West Hazleton)
- Penn State Hazleton (Sugarloaf)

Humboldt Center Station is located at the southwest corner of the intersection of Forest Road and Maplewood Drive in Hazle Township, and services the Humboldt Industrial Center. Transit to Cranberry Ridge Station in the City of Hazleton is supported by northbound BRT service on Maplewood Drive for ½ mile and 3 miles east along PA 924.

Cranberry Ridge Station is located at the intersection of South Broad Street and PA 924 in Hazleton. Transit connections with the Hazleton/Wilkes-Barre BRT (Yellow) Line are also provided. Service continues north on Broad Street for ½ mile then northwest on Susquehanna Boulevard (PA 93) arriving at Valmont Plaza Station.

Valmont Plaza Station is adjacent to Susquehanna Boulevard in a shopping center in West Hazleton Borough. Opportunities exist here to reconfigure the shopping center into an environment supportive of transit-oriented development and multimodal mobility. BRT service continues on Susquehanna Boulevard north for an additional ½ mile then west onto a proposed new service road for ½ mile before arriving at Valmont Industrial Park Station.

Valmont Industrial Park Station provides BRT service to the surrounding industrial and corporate businesses in West Hazleton. The station site is at the intersection of Jaycee Drive and a proposed service road. Service to Penn State Hazleton Campus follows Jaycee Drive north for ½ mile, west on Dessen Drive (900 feet), north on Kiwanis Boulevard (¼ mile) to Susquehanna Boulevard west (700 feet).

Penn State Hazletown Station, in Sugarloaf Township, is the terminus for BRT service from Hazle Township. The station is located adjacent to Susquehanna Boulevard at the intersection with University Drive.

Green a

Nanticoke/Dallas BRT

BRT service between the City of Nanticoke and Borough of Dallas by way of Wilkes-Barre is shown in green on the Land Use Plan map. The 9-mile rapid transit route is supported by a network of both new and existing roadways. The new service roads, although limited in length, are reserved for BRT vehicles. A designated peak-hour transit lane in each direction is recommended on existing roadways where sufficiently-wide shoulders exist and other supportive conditions are present. Transit vehicles will share lanes with mixed traffic where transit lane designation is not feasible. The following 12 station stops are on the Green Line, listed south-to-north:

Proposed Nanticoke/Dallas Bus Rapid Transit Station Stops

- Nanticoke
- Dundee Plaza Park & Ride(Hanover)
- Buttonwood (Hanover)
- The Crossroads (Hanover)
- Intermodal Transportation Center (Wilkes-Barre)
- Market Street Square (Wilkes-Barre)
- Brewery Station (Pennsylvania Ave.) (Wilkes-Barre)
- Rutter-Welles (Forty-Fort)
- Luzerne Shopping Center (Luzerne)
- Trucksville (Kingston Twp.)
- Shavertown (Kingston Twp.)
- Dallas

Nanticoke Station is proposed at Railroad and Chestnut Streets in the City of Nanticoke. Wilkes-Barre/Dallas-bound BRT service is supported initially on a proposed east/west service roadway. Eastbound, this new road would parallel a neighboring freight rail for ¾ of a mile before merging onto the existing Sans Souci Parkway. Approximately ¼ mile east of this merge, BRT vehicles arrive at the Dundee Plaza Station/Park-and-Ride.

Dundee Plaza Park & Ride Station is located to the immediate east of Sans Souci Parkway and South Cross-Valley Expressway (PA-29) in Hanover Township. This station also provides an opportunity for an intercept park-and-ride lot and during peak hours commuters heading to or coming from Wilkes-Barre have the opportunity to switch modes at this location. Service to Buttonwood Station follows Sans Souci Parkway northeast for roughly two miles.

Buttonwood Station is located at the signalized intersection of Sans Souci Parkway near Hanover High School in Hanover Township's Buttonwood section. Transit service to The Crossroads Station follows Sans Souci Parkway northeast for a little over one mile.

The Crossroads Station is the last station stop in Hanover Township and is situated on existing right-of-way lands at the northeast corner of the Fellows Avenue and Sans Souci Parkway intersection. Service from this station to the Wilkes-Barre Intermodal Transportation Center would continue northeasterly along the final ½ mile stretch of Sans Souci Parkway before diverting onto a new southeast/northwest service road.

This service road in Wilkes-Barre parallels existing freight rail lines for ¾ of a mile before joining Thomas Street (existing), then Pennsylvania Avenue. BRT vehicles travel southeast on Pennsylvania Avenue for approximately 1½ miles before turning northwest at E. Northampton Street (500 feet), northeast onto S. Washington Street (500 feet), and arriving at the Intermodal Transportation Station.

Wilkes-Barre Intermodal Transportation Center is located on the north side of S. Washington Street between E. Northampton and Market Streets in downtown Wilkes-Barre. At this station, transit connections with LCTA Transit are also provided. BRT service exits the Intermodal Transportation Center onto South Washington Street; to get to Market Street Square, buses would turn left onto East Northampton Street, then turn left onto Wilkes-Barre Boulevard.

Market Street Square Station is closest to the intersection of Wilkes-Barre Boulevard and Market Street in downtown Wilkes-Barre. At this station, transit connections with the Wilkes-Barre to Scranton Light Rail (Red) Line are provided. BRT service continues northeast on Wilkes-Barre Boulevard for 1¾ miles before arriving at the Brewery Station.

Brewery (Pennsylvania Avenue) Station is to the immediate northeast of the Route 309 and Wilkes-Barre Blvd interchange. The proposed site is adjacent to the intersection of N. Washington Street and George Avenue in the City of Wilkes-Barre. Transit connections with the Hazleton/Wilkes-Barre BRT (Yellow), Mountaintop (Tan), and Wilkes-Barre to Scranton Light Rail (Red) Lines are also provided at this station. Nanticoke/Dallas BRT service enters on to PA 309 North for 1½ miles, crossing the Susquehanna River before arriving at Rutter-Welles Station.

Rutter-Welles Station is near the Rutter Avenue exit of Route 309 at Rutter Avenue and Welles Street, on the municipal boundary of Kingston Borough and Forty-Fort Borough. At this station, connections with the Susquehanna Valley Light Rail (Purple) Line are provided. Service to Luzerne Shopping Center Station is provided also by way of Route 309 north for an approximate distance of one mile northwest before exiting directly onto Union Street.

Luzerne Shopping Center Station in Luzerne Borough is at the intersection of Union and Buckingham Streets. BRT service follows Union Street northwest for ½ mile, then merging on to Route 309 North for an estimated 2¼ miles before arriving at the Trucksville Station.

Trucksville Station in Kingston Township is located adjacent to the intersection of S. Pioneer Avenue and Memorial Highway. From this location, Route 309 continues on Memorial Highway. Service to Shavertown Station is provided by continuing BRT service northwest on Memorial Highway for 1¾ miles.

Shavertown Station in Kingston Township is identified at the intersection with Main Street and Memorial Highway. Rapid transit vehicles follow the Memorial Highway from Shavertown to its terminus in Dallas Borough, ½ mile north.

Dallas Station is proposed at the intersection of Route 309 (Tuckhannock Highway) and Route 415 (Memorial Highway), located in Dallas Borough less than a half mile south of the borough's business center.

Tan

Mountaintop BRT

BRT service between the City of Wilkes-Barre and Rice Township is shown in tan on the Land Use Plan map. The approximately 18-mile rapid transit route is supported by existing roadways. A designated peak-hour transit lane in each direction is recommended on existing roadways where sufficiently-wide shoulders exist and other supportive conditions are present. Transit vehicles will share lanes with mixed traffic where transit lane designation is not feasible. The following are the four station stops, listed southwest-to-northeast, along the Tan line:

Proposed Mountaintop Bus Rapid Transit Station Stops

- **Nuangola-Rice Park & Ride (Rice)**
- **St. Jude's (Wright)**
- **Triangle (Fairview)**
- **Brewery (Pennsylvania Ave) (Wilkes-Barre)**

Nuangola-Rice Park & Ride Station provides BRT service to Rice Township, roughly 1¼ miles southeast of the Borough of Nuangola and immediately west of the highway interchange. This is a location primarily for BRT park-and-ride service, with commuters driving to the park-and-ride lot from surrounding areas. Transit connections with the Hazleton/Wilkes-Barre BRT (Yellow) are also available. Service to Wilkes-Barre begins southeast along Church Road (SR 2047/CR 21) for approximately 3 miles before arriving at St. Jude's Station at PA Route 309.

Saint Jude's Station is located at the northeast corner of the intersection of South Mountain Blvd. (PA Route 309) and Luzerne County Route 21 in Wright Township. Service to Triangle Station continues north along South Mountain Blvd. for roughly 2½ miles.

Triangle Station is situated at the shopping center at the intersection of Main Street and South Mountain Blvd. (PA Route 309) in Fairview Township. BRT service to Wilkes-Barre Brewery Station continues north on Route 309 for 4¼ miles before merging onto Interstate 81 north for approximately 5 miles, west on the Cross Valley Expressway (Route 309) for 2 miles, and then arriving at Wilkes-Barre's Brewery Station.

Brewery (Pennsylvania Avenue) Station is the terminus for BRT service from the Nuangola-Rice Station. This hub is situated to the immediate northeast of the Rt. 309 and Wilkes-Barre Blvd interchange and adjacent to the intersection of N. Washington Street and George Avenue in Wilkes-Barre. Additional transit connections include the Nanticoke/Dallas BRT (Green) and Wilkes-Barre to Scranton Light Rail (Red) Lines.

Improved Freight Transportation Service

According to the Scranton-Wilkes-Barre Rail Feasibility Study, potential demand for rail freight services can be generated from two sources -- linking existing businesses to rail service and the development of new businesses accessible to existing rail service. Lackawanna and Luzerne Counties already provide cost competitive and dependable rail service and publicizing this fact is probably the most important aspect of increasing freight transportation service over the planning period.

In terms of new alignments for freight, the following are recommended linkages:

- Hanover Township, along the north side of the Sans Souci Parkway; and
- Newport Township at the Whitney Point mixed-use industrial park in Newport Township.

Pedestrian and Bicycle Network

The provision for safe and convenient movement of pedestrians and bicyclists is an important element of the Plan. Creating a two-county-wide trail system for walking, hiking, and cycling will permit pedestrian and bicycle access to a variety of destinations. Non-vehicular access for residents to adjacent and nearby communities, schools, special natural features, shopping, and specific sites for recreational facilities will promote physical fitness, conserve energy resources, and improve air quality. Multi-purpose trails for walking, biking, and hiking will frequently be part of greenways that will also provide appropriate buffers between high-volume traffic arteries and residential areas. Development of trails in conjunction with roadway improvement projects will be encouraged. Circulation enhancements that encourage non-motorized transportation alternatives, such as bicycle lanes and pedestrian paths, will be considered when planning changes to roadways. Overall, the future pedestrian and bicycle network will be an extension of the current system (See Figure 4.2.5).

Both counties will encourage the identification and preservation of scenic roadway corridors as a way to preserve the rural character of the landscape and reinforce the two-county area open space network. (This issue is discussed further in the Historic and Cultural Resources Plan in Section 6 of this chapter.)

It is recommended that within Priority and Infill Areas, sidewalks or other forms of all-weather pedestrian paths be provided in locations where pedestrian travel may reasonably be expected to occur or where it is to be encouraged. These improvements can be incorporated into local streetscape improvement projects. Between growth areas, on selected highways and rural roads, shoulders should be installed wide enough to provide for pedestrians and bicycles. Bicycle and pedestrian paths will be considered integral with major new residential developments and as part of the interconnected county-wide open space system.

In should be noted that frequently existing municipal Subdivision and Land Development ordinances (SALDO) require the installation of sidewalks in conjunction with new land developments. However, applications for SALDO approval usually ask municipal elected officials to waive this requirement and frequently such waivers are granted. Going forward, SALDO sidewalk requirements should be in place and should be upheld by not being waived.

2.3 Housing Plan

Goal

The goal of the Housing Plan is to provide for a diversity of housing opportunities in harmony with existing development and the historical and natural environments.

Objectives

The objectives of the Housing Plan are as follows:

A.) Facilitate a range of housing types, sizes, and price levels, to respond to changing housing needs and to provide housing for various stages of the life cycle, household configurations, and income levels;

B.) Maintain the character of existing residential neighborhoods;

C.) Establish existing, new, and rehabilitated housing units as an integral component of emerging mixed-use Priority Areas;

D.) Reduce vacancy rates in urban areas;

E.) Create workforce housing to allow individuals entering the labor force to be able to live in the communities where they work;

F.) Ensure a high level of housing quality, both for new construction and for the existing housing stock;

G.) Promote the use of green building techniques and energy efficient housing design.

The Housing element of the Regional Plan explicitly recognizes the division of each county into Priority and Mixed Density Infill Areas for housing growth and Conservation Areas as the non-growth portion of the region. Conservation Areas include most of the land area of Luzerne and Lackawanna Counties, and are proposed primarily for agriculture, resource conservation, environmental protection, and recreation, with housing having only a very minor role. Priority and Mixed Density Infill Areas are designated as the primary locations for housing development and redevelopment.

The Housing element permits realistic opportunities for land development, to be implemented through the Regional Plan, local plans, and county and municipal zoning regulations. Changes in future residential development patterns are a key ingredient toward ensuring a higher quality of life and a more sustainable future for the two counties. Guided by this Plan, cooperation among state, county and local governments and property owners and developers can achieve success for all parties.

Housing and Major Planning Concepts

Priority Area Housing

The 30 Priority Areas located throughout Lackawanna and Luzerne Counties represent significant opportunities to develop and redevelop properties for mixed uses, including residential components. Parcels in these areas are suitable for higher-density residential uses, such as multi-family (apartment) and single-family attached (townhouse) units, and perhaps specialized residential uses such as life-care facilities. These areas may have prospects for new residential uses in place of current uses or may include new multiple-use (residential and commercial, for example) structures consistent with the special character intended for these parts of both counties.

Demographic and other changes may mean that residential units in mixed-use developments can tap into an increasing need for housing structural types other than single-family detached units that meet the needs of residents entering the work force and those wishing to downsize their dwellings. Higher density residential construction in conjunction with commercial/mixed-use initiatives in Lackawanna and Luzerne Counties will be able to respond to current and expected market demands over the planning period.

With a mix of commercial services, restaurants, and community functions, as well as advantages with respect to proximity to transportation and employment, these areas should be well-positioned to gain attractive, market-rate dwelling units at these locations, while also providing opportunities for the addition of smaller, moderately-priced units.

City Center Priority Areas such as Scranton, Wilkes-Barre, and Hazleton are considered the most appropriate for the highest densities of development, above 12 dwelling units per acre, and could range much higher. Many of these sites would include multi-family residential buildings and the “vertical mix” of commercial and residential uses in structures.

Borough and Township Center Priority Areas include communities such as Dalton or Kingston Boroughs that are also appropriate locations for multi-family residential uses. Their densities however, are at more moderate levels, generally closer to the seven-to-twelve dwelling units per acre range. Housing types may include single-family attached dwellings as well as multi-family residential units in the form of dwellings located just above a first floor retail or service commercial use. Overall densities are appropriate when they are compatible with the local context and consistent with local aspirations.

Transit Villages identified in Dickson City at the Viewmont Mall or around Shavertown Station in Kingston Township, for example, provide opportunities for residential densities higher than most Borough and Township Center Priority Areas, but may also be lower than those in City Center Priority Areas (7-18 dwelling units per acre). The highest intensities of residential development are encouraged within transit *core zones*.

Infill Area Housing

Infill Areas provide opportunities for new development and redevelopment on properties that are vacant or underutilized. Mixed Density Infill Areas highlight the historic settlement pattern in the Wyoming and Lackawanna Valleys, around Hazleton, and existing mixed development at locations along Route 6/11 into the Abingtons, along Route 309 up to Dallas, and in the Covington vicinity. While these are not expected to be targeted locations for public investment, new housing will be built and others will be upgraded.

Low Density Infill areas occur at various locations in the two counties and correspond to where established low density, mostly residential, development already exists. As with the Mixed Density Infill designation, new development is welcome here, although in the case of Low Density Infill, such development will be at a low density and predominantly residential.

New development or redevelopment of these areas will provide opportunities for new or rehabilitated housing stock to be built using green building principles and both counties will encourage environmentally-friendly housing construction.

> **Mixed Density Infill Areas** include existing single-family detached and attached dwelling units adjacent to transit stations and Priority Areas. Densities can range from medium-high (seven-to-twelve dwellings per acre) in Scranton or Wilkes-Barre to medium-low (four-to-eight dwellings per acre) in such places as Hazle Township or Archbald Borough.
>
> **Low Density Infill Areas** are predominantly located in townships that are not very built up, such as Ross or Scott Townships. These areas are characterized by existing single-family detached dwelling units located on large lots of one or more acres in size. Future low density development will be highly clustered, using a development strategy commonly referred to as “conservation development” that concentrates the location for development and limits the disturbance of land for dwelling construction. This method of development includes a high percentage of permanent open space and natural resource protection that occurs in conjunction with land development.
>
> In general, cluster development reduces the amount of land consumed for residences when compared with conventional development methods, while at the same time preserving a portion of development tracts for permanent open space uses. This form of development design technique concentrates buildings in specific areas on a site to allow the remaining land to be used for agriculture, preservation of environmentally-sensitive areas, permanent buffers, open space, or recreational uses. Cluster development can involve only modest set-asides of land for these uses, or can involve set-asides of eighty percent or more of the whole tract being considered for development. From the point of view of the Housing Plan, the latter kind of development is preferred, since more permanent open space would result.

Cluster development should be promoted for any new subdivisions in areas designated for low density development, in order to conserve natural and open space resources. In addition, if there is any flexibility when considering what portion of a tract to reserve as open space, the emphasis will be placed on setting aside lands that are contiguous to or complementary to existing open space, environmentally sensitive areas or other related amenities.

Residential Classifications

Very-Low Density: One Dwelling Unit per 25 Acres

Residential development for most of the extent of both counties, except Priority and Infill Areas, should reflect very low densities. This is in keeping with the need to encourage continuing agricultural production, as well as the protection of both counties' historic and rural landscape, and the preservation of environmentally-sensitive resources.

The chief tools towards achieving very-low density residential development outside designated growth areas are development regulations such as zoning. The two counties and their municipalities need to work cooperatively to achieve suitable regulations which will permit some degree of residential development in Conservation Areas, but not at the expense of the primary functions indicated for these areas in the plan. Regulatory flexibility is recommended, giving property owners a variety of choices if they choose to develop their land and containing various economic inducements to build compactly and to support the long-term goals and objectives of the plan for these areas.

Development regulations for very-low density residential areas should be based on the principles of agricultural zoning outlined in Agricultural Resources (*Section 2.6* of this chapter). For conventional residential development an overall density limit of one dwelling unit per 25 acres might be widely adopted in Luzerne and Lackawanna Counties. Density gains could be achieved, however, by landowners who consent to utilize Transfer of Development Rights (TDR) options. In general, the economic incentives built into land use controls will be employed to help maintain the rural character of non-urbanized areas.

Medium-Low Density: One to Four Dwelling Units per Acre

Residential development within Infill Development Areas should occur at significantly higher densities when compared to rural and agricultural areas. The enactment of zoning ordinances supporting this idea is the principal measure by which the counties and their municipalities can promote development within designated areas as opposed to rural areas.

Medium-low density development in the two-county area should be at densities between one and four dwelling units per acre, with an average of 2.5 dwelling units per acre. Medium-low residential densities are usually associated with single-family detached housing types on generous lots, but the Housing element of the Regional Plan recommends that cluster development be promoted in these areas.

Regulatory flexibility and zoning incentives in medium-low density areas are recommended. Regulations may offer landowners conventional zoning for traditional medium- and large-lot residential construction, and a variety of options, including special conditions and associated benefits, for development that is supportive of the Regional Plan and local plans.

Medium and Medium-High Density: Three to 12 Dwelling Units per Acre

Areas close around the center of boroughs and cities and new Priority Areas, as well as in Mixed Density Infill Areas, with their existing or anticipated public services, accessibility, community facilities, employment, and shopping areas, are recommended for medium- and medium-high density residential use. For development at the medium-density end of this range, conventional single-family and lot-line detached dwelling units are likely structural types. Medium- and medium-high density areas in Luzerne and Lackawanna Counties should be at densities between three and twelve dwelling units per acre, with an average of five dwelling units per acre.

Medium-high density residential development, found principally at the center of several existing boroughs and villages, is expected to occur in conjunction with these urban places, and to include a wide variety of structural types, including small-lot single-family detached dwellings, single-family attached (townhouse), and multi-family (garden apartment, mid-rise apartment) units. Provisions for on-site or neighborhood permanent open space must be made. A diversified housing mix, attractive to various household types and income levels, will be pursued for boroughs, villages, and cities.

As outlined under "Commercial Uses" in *Section 2.1*, a major goal of the Plan is to reinforce city and borough business districts. New residential development in and around these districts is a critical component in support of this goal, but this development must be undertaken in a manner that is sympathetic to the character of historic borough, village, and city centers. Appropriate housing types in borough business districts should be encouraged. In particular, multi-family units that occur in buildings with commercial and office storefronts should be encouraged for both new construction and renovation of existing buildings.

High Density: 12+ Dwelling Units per Acre

Areas in Lackawanna and Luzerne Counties receiving a high density designation include the most urban areas of Hazleton, Scranton, and Wilkes-Barre, as well as several Transit Village Priority Areas. High density housing is at a minimum of 12 dwelling units per acre and generally in the form of multi-family structural types. Such redevelopment should take advantage of an expanded transit service as well as walkability, access to employment, shopping, and recreation areas. Increases in the level of residential populations in more urban places is also important for economic revitalization as it is for increasing personal security. By promoting ground floor commercial space, new mixed use high density housing can increase pedestrian traffic and promote resident activity and social interaction over a daily span of 16 to 18 hours. These areas may include former commercial and industrial buildings converted into residential space, such as “loft” apartment units.

Affordable Housing

Housing affordability in Lackawanna and Luzerne Counties is formally assisted through a combination of privately- and publicly-operated facilities and publicly-administered programs for low- and moderate-income families and individuals. However, for most residents of the two counties, housing affordability questions must be addressed without the availability of formal subsidies.

Traditionally, housing costs in the two-county area have been relatively low. Although population has decreased in some municipalities due to lack of economic opportunities, the availability of low-cost housing provides an incentive for people to remain in or move to the region. As this housing plan focuses, in part, on maintaining and providing opportunities for residential use within existing boroughs and cities, the counties should continue to explore opportunities for providing additional housing in conjunction with community revitalization efforts.

The two counties should continue to pursue state and federal funding where it is available for new construction, rehabilitation, low-interest mortgages, and rental-assistance programs. Increased economic opportunities in both counties would also assist residents to afford suitable housing.

Fair Share

The term “fair share” comes from legal decisions that have been made, beginning in the mid-1970s. Courts have held that local government land use regulations must allow for the housing needs of people who may desire to live within municipal borders. In that regard, an ordinance may not exclude legitimate uses of land, such as multi-family housing, either by specifically prohibiting the use or by failing to make provisions for the use. Each municipality, then, must do its fair share in accommodating various housing types that may be in demand in a region.

In addition to being a legal requirement, providing a fair share of housing types makes sense for local businesses that need a diversity of workers to meet their varied needs. A diverse workforce can be seen as a competitive advantage for corporations to remain or to locate within the two-county area.

While Lackawanna and Luzerne Counties currently contain a diverse mix of housing types, both counties will continue to promote providing a fair share of housing types. The central concepts of the Regional Plan will provide opportunities to increase the diversity of housing options within the two-county area. The higher density housing options allowed within Priority Areas and Mixed Density Infill Areas make possible the provision for affordable housing in a way that new development confined solely to single family detached housing would not.

Still, high density housing options may not produce affordable units without concerted efforts by the state, the two counties, local municipalities, and housing advocates. Discussions by county and municipal leaders with developers and non-profits may yield opportunities to build some affordable units as part of new developments. For example, integrating workforce housing within a multi-unit development is possible through

choices in the square footage and the amenities within the unit, and can also be achieved without substantially changing the outward appearance of a unit, thereby allowing units of differing costs to be easily located near each other within a development. Developers could also be offered incentives such as an expedited review process, or increased density allowances (the most common way to achieve workforce housing in Pennsylvania).

In order to encourage housing options for people of all incomes, the two counties could convene a task force to discuss best practices within Pennsylvania and throughout the nation in order to determine whether and how to implement policies that respond to the circumstances and needs of Lackawanna and Luzerne Counties. The region may consider expanding that conversation to neighboring counties in order to consider the challenges and benefits at a larger scale and potentially learn from the best practices of others. Resources and guidance are available, including an Urban Land Institute study of how to implement affordable, workforce housing in the Washington DC, Chicago, and Atlanta regions. The study describes specific strategies to encourage affordable housing and provides examples intended to stimulate actions in other communities.

2.4 Community Facilities Plan

Goal

The goal of the Community Facilities Plan is to provide public services and facilities in the most cost-effective and environmentally-sensitive manner, taking into account the existing and future residential and non-residential needs of the two-county area.

Objectives

The objectives of the Community Facilities Plan are as follows:

A.) Locate community facilities such as libraries, post offices, senior centers, parks, and health care and emergency services at strategic locations within the two-county area, particularly in Priority Areas, to meet existing and future needs;

B.) Promote high quality, educational opportunities for all residents through locating expansions and added facilities in Priority Areas where population concentrations and multiple modes of transportation exist;

C.) Encourage additional intergovernmental cooperation and shared municipal services;

D.) Construct new public safety and emergency service facilities in a manner consistent with the International Building Code for high wind, snow and flood damage prevention.

Community facilities provide basic services to ensure the health, safety, welfare, and enrichment of residents. The number, type, and adequacy of the facilities influence the quality and general livability of communities. Additionally, these facilities increase each county's ability to retain and attract new residents and businesses.

Note that a separate *Joint County Hazard Mitigation Plan* provides a more complete analysis and strategy for public safety and emergency preparedness.

Community Facilities and Major Planning Concepts

Priority Areas are the places targeted for future residential, retail, and employment growth. It makes sense for community facilities to locate here, where concentrations of people are and where accessibility is good.

The existing 25 public libraries should be maintained, but also expanded to serve Priority Areas. As these 30 locations across the two counties grow, library branches should consider expanding their facilities and/or providing additional branch facilities to serve as a strong civic/community component for Priority Areas.

Public and private schools and institutions of higher learning are also appropriate for these Priority Areas, and opportunities to build partnerships with these significant employers will be pursued. Educational facilities at these places dovetail with employers' needs for a workforce close at hand.

Priority Area (and Infill Area) residents, workers, students, and visitors will be able to access recreational facilities that are either in close proximity and/or accessible through a network of open spaces, trails, and greenways as described in the next section of this chapter.

Intergovernmental Cooperation

Each of the two-county area's 116 municipalities has traditionally been responsible for providing its citizens with basic public services and facilities. As municipalities experience growth or decline, and demands for services and facilities change, meeting the needs of citizens has become more and more challenging for many municipalities.

Over time, declining municipal revenues of municipalities have produced much duplication of services and facilities. Greater intergovernmental cooperation is needed so that services and facilities can be provided more efficiently and economically. Member municipalities in a consortium, for example, can participate in money-saving joint purchasing programs and other joint services. Long-range land use planning, multi-municipal comprehensive plans, capital improvement plans, and municipal budgets are other tools that can help municipal decision-makers identify opportunities and strategies for increased intergovernmental cooperation.

To ensure that emergency response services are the most efficient, adequate, and cost-effective, future service areas need to be based not on political boundaries, but on boundaries determined by physical features such as road systems, rivers and topography that affect the ability of emergency responders to reach destinations quickly. Municipalities should work together to consider needs for additional or modernized police, fire, and or EMS stations to accommodate future growth and investment.

Public Safety Services

Community-based emergency medical service providers, such as fire companies and ambulance corps, must compete with a variety of other private operators seeking support from residents. Police stations throughout Pennsylvania compete for the same funds. As demand outpaces available funds, many municipalities in the two-county area are finding it increasingly difficult to provide adequate police services. Some local municipalities are beginning to rely more heavily on state and county police protection, especially if they are unable to provide 24-hour service.

Most of the fire departments in Lackawanna and Luzerne Counties are volunteer, which also raises the concern of adequate manpower. These conditions can tax a fire department's ability to provide sufficient service. These issues raise the need for coordination between fire departments to ensure adequate equipment, staffing, and other resources.

Consolidation of these services could achieve an economy of scale that would reduce municipal expenses. According to the *Regional Police Services in Pennsylvania* manual, consolidation requires the abolishment of political subdivision boundaries for police services and the unification of existing police departments into one regional police department. Increasingly, municipalities are contracting out these services to neighboring municipalities.

Educational Services

The quality of education has a strong influence on the health of communities in terms of attracting business and residents. Each county should also consider developing recommendations and strategies as part of the *Parks, Recreation, Open Space and Greenways Plan* (*Section 2.5*) to promote a safe route for students to walk to school without using private property or unsafe road crossings. The plan should include how to install or improve sidewalk networks adjacent to the elementary, middle, and high schools, as well as adding traffic calming elements to surrounding streets.

Furthermore, all high school graduates need opportunities for advanced education in order to compete in the workplace. A large unskilled population is a detriment to the two-county area's economic growth and to a high standard of living in today's economy. The provision of skilled labor for high productivity industries and increasingly skilled processes is required. The human resources in Lackawanna and Luzerne Counties are only potential resources unless that potential can be realized through workforce education and skills development.

Healthcare Services

Use of Internet technology has had wide application in the provision of healthcare services. Regional organizations can share health care data among health care organizations using a wide array of information technologies. The technology also gives residents receiving services the ability to look for information themselves. Nonetheless, residents still need to travel to receive services. As new health care facilities are planned, efforts will be taken to ensure that they will provide equitable access for all residents. New or expanded health care services should be located at or near Priority Areas with easy access via transit, automobile, and walking. Each County Human Services Department will advocate and encourage equitable access to medical service for residents within the two-county area.

2.5 Parks, Recreation, Open Space, and Greenways Plan

Goal

The goal of the Parks, Recreation, Open Space, and Greenways Plan is to develop a system of linked recreation resources, providing a variety of outdoor recreation opportunities while protecting and preserving important natural features and environmentally-sensitive areas.

Objectives

The objectives of the Parks, Recreation, Open Space and Greenways Plan are as follows:

A.) Develop an assistance program for local municipalities to develop and adopt open space plans and code amendments that support the 2004 *Open Space, Greenways and Outdoor Recreation Master Plan*;

B.) Establish effective regulations to limit development in Conservation Areas;

C.) Promote prospective development in Priority and Infill Areas that will result in the creation of permanent and contiguous open space and significant publicly-accessible parks and civic spaces;

As development progresses, it becomes more difficult to set aside significant areas of open space and to maintain greenway connections throughout the two counties. In 2004, an Open Space, Greenways & Outdoor Recreation Master Plan was adopted, providing a vision for the two-county area and providing a framework for a regional system of open space and greenways that should be expanded upon at the local level through subsequent planning and implementation efforts. Municipal leaders are encouraged to pursue joint planning efforts and to work together on implementation.

Parks, Open Space, & Greenways and Major Planning Concepts

Priority Areas and Infill Areas

Reinvestment and new development within all three types of *Priority Areas* and both *Mixed Density* and *Low Density Infill Areas* are to also include access to green space. Each Priority Area is an appropriate location for public spaces such as civic squares and pocket parks as well as neighborhood parks. The creation of these spaces may serve a dual purpose for residents, employees, shoppers, and transit users: An opportunity to enjoy greenery in close proximity to residences, offices, stores, and transit areas as well as connections to nearby significantly-sized parks, community facilities, and residential/commercial concentrations via greenways and trails.

Conservation Areas

The widespread pattern of protected natural areas, permanent open space, sensitive natural features, existing and proposed trail network, and other areas to be preserved in Conservation Areas in the Land Use Plan forms the backbone of a two-countywide open space system. The open space system, based as it is on existing natural features, can be said to be, in some ways, already established. In many instances, floodplain and wetlands regulations, administered by municipalities and/or state and federal agencies, already prohibit or restrain most development. The overall objectives are to logically extend corridors of open space to tie the system together, give it permanent protection, and facilitate improved public access, where appropriate. Conservation Areas have a variety of ecological, hydrological, and terrestrial resources located within them and the appropriateness of the various kinds of human activities that may take place in parts of Conservation Areas will be evaluated as specific parcels or corridors are being considered for recreational use.

Parks

The primary focus of parkland in this section relates to outdoor recreation. Consisting of both active and passive activities, types of outdoor recreation are linked to the natural topography and landscape. Passive recreation is considered low impact with minimal impact on natural resources, including walking, picnicking, and habitat observation. Having a larger impact on resources, active recreation includes climbing, hiking, swimming, biking, fishing, skiing, motorized sports, and horseback riding, but also includes athletic facilities for organized sports such as baseball, softball, soccer, and tennis.

Parks should offer places for athletic fields, passive open space, trails, and playground equipment. New parkland for public use in the two-county area can come into being in a variety of ways. Several means are possible, including the following methods:

1. Outright purchase by municipality or county or by a private, not-for-profit organization among whose purposes is the conservation of open space land and/or operation of park and recreational facilities;

2. Dedication of property to a municipality or county homeowners association through the subdivision land development process;

3. Acquisition of an easement for open space and/or park and recreation uses by the municipality or county or by a private, not-for-profit organization; or

4. Donation of property or easements to the municipality or county or to a private, not-for-profit organization.

Fee-In-Lieu

During the planning period, the inclusion of fee-in-lieu provisions in local and/or county ordinances may become more widespread. As enabled by the Pennsylvania Municipalities Planning Code, municipalities or counties may require developers to either contribute land for recreational purposes or pay a fee representing the proportionate costs of a governmental unit to provide recreation facilities and/or improvements. Under fee-in-lieu, developers of land pay a fee to the municipality or county to provide park, recreation, and open space lands and/or facilities instead of the developer dedicating land for such purposes. Funds can then accrue for municipal or county purchase of sites for recreational purposes or easements for recreational use.

Over the next 20 years, new development in Priority and Infill Areas will take the form of construction on smaller sites than was typical in past decades and may encompass significant redevelopment of parcels. Gaining fees toward park, recreation, and open space use may be as beneficial to the two-county area as pieces of land. Fee-in-lieu provisions are flexible in concept and have been made applicable to both residential and non-residential development to maximize the ability of the municipality or county to provide appropriate park, recreation, and open space facilities for residents and employees.

Open Space

The open spaces of the two-county area are a defining characteristic of the region. Open space refers to natural landscapes undeveloped for intensive human uses and can be publicly or privately owned. Open space includes land, as well as water features, and establishes the setting for outdoor recreation. A key role for the two-county area in future parks and recreation development will be in promoting the establishment, protection, and selective development of the region-wide permanent open space system.

Lackawanna and Luzerne Counties should facilitate the development of appropriate park and recreational facilities within the framework of the overall open space system through a variety of lobbying, planning, and funding functions. These will need to be efforts undertaken in cooperation with other levels of government, with public and private interest groups, and with property owners. The proposed interconnecting permanent open space network will include lands under the direct administrative control of several entities, possibly including each of the two counties independently or even the two counties together.

Natural feature corridors are proposed to be combined with existing protected areas, such as state forests, game lands, parks, and reserved areas, and with projected linear buffers to form a permanent interconnected open space system. This permanent open space system is a critical component of the Land Use Plan, and is seen as the primary mechanism to simultaneously protect county resources and to offer long term opportunities to meet open space and recreational needs.

The continuous, interconnected, permanent open space network is intended, then, to serve several purposes, as follows:

1. Conserve areas of environmentally sensitive and culturally valuable resources;
2. Provide appropriate buffers, where possible, between areas of differing land use, such as between urban uses and agricultural ones;
3. Build upon the existing trail system for walking, hiking, and cycling;
4. Permit pedestrian and bicycle access to a variety of destinations, including adjacent and nearby communities, other residential developments, schools, special natural features, shopping, and specific sites for recreational facilities;
5. Create sites where public recreational facilities may be developed;
6. Provide for some of the private open space and recreational space needs of the residents of each new housing development;
7. Provide appropriate buffers between high volume traffic arteries and residential areas; and
8. Maintain and enhance wildlife habitat.

Greenways and Trails

Linear corridors of open space, greenways are important connectors linking wildlife habitats and ecosystems and providing access to open space and recreation spaces. A network of greenways can provide necessary connections between people and recreational facilities. Greenways link various conservation areas and can include existing and proposed trails. The *Open Space, Greenways & Outdoor Recreation Master Plan* identifies greenways along natural corridors, such as stream valleys, rivers, or ridgelines, as well as along transportation corridors like rail, canals, and roadways.

In most instances, greenways are present along important stream corridors or major rivers, including the Lackawanna, Susquehanna, and Lehigh Rivers. Greenways are linear and extend through several jurisdictions; effective protection of greenways requires multi-municipal cooperation.

There exists an extensive system of trails in the two counties already (see Table 4.5.4 in Chapter 4), with new trails and extensions of existing ones planned or in development. Over the planning period, this system can provide additional opportunities for recreation and for commuting. Linking Priority Areas, in particular, will be effective in providing transportation alternatives to residents for work, school, and shopping trips. In a similar vein, linking residences in Infill Areas to jobs in Priority Areas via trails will offer employees additional transportation choices.

2.6 Historic and Cultural Resources Plan

Goal

The goal of the Historic and Cultural Resources Plan is to protect and enhance historically- and culturally-significant areas and features of Lackawanna and Luzerne Counties.

Objectives

The objectives of the Historic and Cultural Resources Plan are as follows:

A.) Promote and protect the two-county area's historic and cultural resources;

B.) Utilize cultural resources as a tool to stimulate economic development and the emergence of Priority Areas as centers of activity;

C.) Encourage the practice of adaptive reuse as specified by the Secretary of the Interior's Guidelines for Historic Preservation;

D.) Reinforce the context and character of historic sites, road corridors, viewsheds, and landscapes;

E.) Raise public awareness of the two-county area's rich historic legacy;

F.) Develop processes and programs that will advance the preservation of the character and integrity of historic and cultural resources.

The implication of the proposed Land Use Plan on the two-county area's landscape is, by and large, the preservation of its existing character and resources. However, this preservation will occur only if the plan can be implemented. A clear and effective historic and landscape resources conservation plan will be an important part of the implementation process. The process must guide development to, and promote development in, the locations and forms outlined in the Land Use Plan, particularly in Priority Areas. It must provide specific types of regulations in order to protect rural areas from scattered and breakaway development. It must ensure that such development occurs in a manner sympathetic to the landscape being conserved. The plan must also provide options to preserve and rehabilitate the historic resources in existing communities in ways that are sympathetic to economic and other community concerns.

Protection of Historic and Cultural Resources

The two-county area is rich in historic resources. As described in *Section 4.6*, the oldest development grew around the county's waterways and crossroads. Later resources represent the growth around railroad lines and the subsequent mining communities that developed.

The region's historic fabric is often taken for granted. In rural areas, this fabric is comprised of many elements in addition to its historic buildings, including roads and site features such as boundary lines, archeological resources, park structures, and bridges. Many of these elements are integral to the landscape and one reason why the preservation of Lackawanna and Luzerne Counties' rural landscape is a central feature of the Land Use Plan. Also important is the historic fabric of each county's existing villages, boroughs, and cities. Due to economic issues, as well as trends in exurban living, the counties' existing communities have, in many cases, suffered a decline, and historic and cultural resources in these places have suffered from neglect and disinvestment.

Through the planning period, the two counties' primary role in the preservation of historic resources is to promote and assist in awareness of the need for preservation at the local level. Key to this effort will be encouragement of the establishment of municipal historical commissions, the detailed inventory and assessment of historic resources at the local level, and the adoption of municipal ordinances and review procedures requiring preservation and mitigation. The protection of historic buildings and structures should include protection of the historical contexts in which the buildings are situated. This is accomplished through the identification and protection of the historically significant landscape areas and features directly associated with the buildings under consideration. To address some of the economic issues associated with the preservation of historic resources, many programs are available including grants, technical assistance, and tax credits.

Preservation as an Economic Stimulus Tool

Studies have shown that property values increase more in designated historic areas than in non-historic areas. Future economic development in the region should take place within the context of historic preservation. This can be done through the rebuilding of traditional commercial districts based on their unique assets (distinctive architecture, pedestrian-friendly environment, personal service, local ownership and a sense of community) and through the preservation and development of historical attractions and destinations throughout the two county area. This thrust is consistent with the Land Use Plan's emphasis on Priority Areas, many of which are existing places rich in historic and cultural resources.

There are many incentives for protecting historic resources, including increased property values. Additionally, reuse of existing historic buildings supports the local tax base, stabilizes downtowns and neighborhoods, and maintains the fabric and scale of communities.

Heritage Tourism

Historic preservation is a powerful tool for economic revitalization that attracts tourists and investors and generates jobs. Heritage tourism is important to Pennsylvania and the two-county area. According to the Pennsylvania Heritage Tourism Study, visitors whose primary purpose for travel to Pennsylvania in 1997 was heritage tourism accounted for twelve percent of all state leisure travel and $2.99 billion in direct tourism spending.

In addition to the heritage tourism related activities that already take place in Lackawanna and Luzerne Counties, Lancaster County may be looked to as a good example of a well developed tourism program. Lancaster County has developed a tourism program focusing on its heritage through funding received from the Pennsylvania Heritage Tourism Initiative. Through this funding, Lancaster County has developed a very good model for promoting heritage tourism in a county. This program will be reviewed to determine its applicability for Luzerne or Lackawanna Counties.

Adaptive Reuse

Developers and property owners will be encouraged to rehabilitate and reuse historic structures whenever possible, especially within historic districts, downtown areas, and Priority Areas in existing centers of human activity. Any income-producing National Register-listed properties should consider participating in the Rehabilitation Investment Tax Credit (RITC) program. The RITC program provides tax credits to individuals that rehabilitate buildings to the Secretary of the Interior's Standards. The buildings must be income-producing and either individually listed in the National Register or within a historic district. Additionally, certain rehabilitation expenses are eligible for this credit.

Luzerne and Lackawanna Counties can also receive funding from the Redevelopment Assistance Capital Program (RACP). The Redevelopment Assistance Capital Program (RACP) funds up to 50 percent of civic construction and rehabilitation projects through State legislation as a set-aside from the State Capital Budget. A county serves as the applicant and the administrator of the project. This is a reimbursement program, so the funding has to be available up front.

Another way to encourage reuse of old buildings is through Preservation Pennsylvania's revolving fund, which is a part loan/part grant program. Preservation Pennsylvania also has low-interest loans available for the restoration or rehabilitation of specific historic properties.

Preservation of Character

Communities often consider historic sites as standing structures with little emphasis on the preservation of the historic character of road corridors, viewsheds, and landscapes. Depending on historic events, these surroundings may also be eligible for historic recognition of significance.

The preservation of farmland can protect historic structures and the adjacent landscapes. Thus the Historic and Cultural Resource Plan shares an objective with the Agricultural Resource Plan. Viewsheds also include preserving geologic resources such as mountain tops in Conservation Areas.

Pennsylvania's Heritage Parks Program can also help to protect landscape resources. This program is geared toward industrial heritage, which is well suited to the two-county area's history and development. Working with the Pennsylvania Department of Natural Resources (DCNR), other state agencies, and adjacent counties, Lackawanna and Luzerne Counties will identify possible new Heritage Areas and secure funding for their protection through this DCNR program.

Preservation of the aesthetic character of the landscape will be the primary focus along scenic byways. Designating such routes will support heritage tourism by connecting sites together and encouraging exploration of new areas. The National Scenic Byways Program is administered by the U.S. Department of Transportation, Federal Highway Administration. The program is a grass-roots collaborative effort established to help recognize, preserve, and enhance selected roads throughout the country. Since 1992, the National Scenic Byways Program has provided funding for almost 1,500 state and nationally-designated byway projects in 48 states. The U.S. Secretary of Transportation recognizes certain roads as All-American Roads or National Scenic Byways based on one or more archaeological, cultural, historical, natural, recreational, and scenic qualities. PennDOT has a statewide Scenic Byways Program as well.

Scenic routes are linear resources that require effective management in order to preserve what is unique. Any proposed changes – whether roadway or new development – within these corridors must be sensitive to the context, be it a rural landscape, scenic viewshed, or settlement.

Promotion and Education

Preserving the two-county area's heritage is important to the region's economic well-being and identity. An important step to protecting these resources is increasing public awareness so residents join in and support preservation efforts. A news campaign promoting the counties' historic resources, in addition to brochures, historic tour opportunities, and the counties' websites would be helpful to spread the word about the importance of these preservation efforts. There are a number of other local preservation groups operating in the two counties that can assist with this as well.

Preservation Actions

Among the recommended county actions with regard to historic preservation are the following:

- **Historic Resource Inventories and Assessments:** One of the priority tasks for the planning period should be the completion of a county-wide inventory of historic resources. Through the use of matching grant programs provided by the Pennsylvania Historic and Museum Commission (PHMC), the counties will coordinate and assist local municipalities and historical commissions with the inventory and assessment of historic resources within their jurisdictions.

The inventories should use the most recently updated PHMC inventory as a point of departure. The new, more comprehensive inventories should include an overview of municipal history, a review of common themes that tie the historic resources together, an assessment of individual resources and of the resources as a whole, preparation and filing of PHMC Historic Resource Survey Forms, mapping of historic resources and correlation of resources with lot numbers, an outline of county and/or municipal historic preservation goals, programs, and tools, and a bibliography. Inventories should be bound and available for use by the public. The counties should coordinate the inventory and assessments to ensure consistency. Survey information should be submitted to the

National Park Service for inclusion in the National Register database. This program should at some point become the general database for use by the counties' planning offices in preservation planning work.

- **Historic Overlay Zoning:** Lackawanna and Luzerne Counties should prepare a model historic overlay zoning ordinance and promote its incorporation into municipal zoning codes. Historic overlay zoning should be the principal historic preservation ordinance at work within the municipalities with scattered historic resources, such as townships. Historic districts should be the principal historic preservation tool at work in historic boroughs, villages, and cities (see Certified Local Governments, below).

Historic overlay zoning involves the identification and mapping of scattered historic resources throughout a municipality. It is **not** the establishment of a historic district and does not require the creation of a historic architectural review board. Historic overlay zoning protects the character of historic resources by regulating the subdivision and land development review process. It clearly communicates to developers the desire of the municipality to preserve historic resources and contexts, and it identifies those resources and contexts. Historic overlay zoning requires a developer to assess the impact of a proposed subdivision or land development plan upon the historic resources on the tract being developed as well as upon adjacent affected tracts.

Mitigation of the impact is required and/or negotiated through the exploration of design alternatives, buffering, landscaping, design standards, and other appropriate measures. Lot sizes and configurations, as well as the design and location of improvements are controlled to preserve the integrity of the historic resource and its related landscape. Demolition of historic resources can be delayed or denied by the ordinance to allow for acceptable alternatives to demolition to be negotiated. Adaptive reuse of historic resources is encouraged through the provision of special "use alternatives" not normally permitted in the underlying zoning district.

Historic overlay zoning has been successfully applied in a number of locales in Pennsylvania.

- **National Register Nominations:** Both counties' Historical Advisory Boards/ Commissions and the counties' planning staffs, in conjunction with the National Park Service, should coordinate the preparation of new nominations for listing on the National Register of Historic Places. The work should concentrate on thematic nominations of groups of significant historic resources and cultural themes singular to Lackawanna and Luzerne Counties. Possible themes could include industrial complexes and industrial archeological sites, rail stations and settlements, prehistoric archeological sites, architectural building types, mills, schools, churches, original settlements, landscapes, and structures related to state and county parks. Matching grants could be obtained for such nominations from PHMC.

- **Certified Local Governments:** The Certified Local Government (CLG) program is administered by PHMC under federal guidelines and in association with the Historic District Act (Pennsylvania Act 167) authorizing the creation of historic districts in municipalities. CLG status enables a municipality to participate in special PHMC grant programs. Both counties, through the Historical Advisory Board/Commission and county planning offices, will investigate the feasibility of establishing CLGs for all municipalities with PA Act 167 Historic Districts.

- **Other Tools for Historic Districts:** In addition to the Act 167 Historic Districts discussed above, there are other, more flexible controls for preserving historic districts allowed in Pennsylvania. These tools, which have been used successfully in municipalities throughout Pennsylvania, include Historic District Overlay Zones (previously discussed), Village Commercial Zoning, and Special Exception provisions in ordinances. Each county will encourage municipalities with historic resources that are interested in local controls to assess the appropriateness of these standards for their communities and will develop and promote model ordinances for use by local municipalities.

- **Main Street/Elm Street Programs:** There are a number of municipalities in Lackawanna and Luzerne Counties that are currently or in the process of becoming Main Street Communities. Main Street Communities receive state technical assistance and grants for commercial revitalization through historic preservation. The state has recently passed the Elm Street Bill, which provides similar assistance to residential districts adjacent to Main Street communities. Both counties should encourage suitable local municipalities to participate in these programs.

- **Additional Funding Sources:** In addition to state grants geared directly to historic preservation goals, other sources of funding can be used to further the aims of preservation and community revitalization. For instance, if historic rehabilitation guidelines are met, Community Development Block Grant (CDBG) funds can be used for housing and economic development projects for historic buildings. Additionally, federal tax credits, such as the Low Income Housing Tax Credit and the Historic Rehabilitation Tax Credit can be combined in projects where rehabilitation guidelines are met. Also, Transportation Enhancement Projects provide funding for certain types of historic transportation projects. The counties should investigate available funding sources to further the aims of revitalizing historic communities and promote these programs to local municipalities.

- **Lackawanna County Historical Society and Luzerne County Historical Society**: Both counties should find ways of providing additional assistance to their respective County historic societies to both enable and increase the basic historical data each has on file, to further organize and modernize existing collections of data, and to undertake new historical research programs. Assistance could be in the form of additional funding, coordination of grant programs, and support in fund-raising events such as yearly countywide house and garden tours. Assistance should also be provided to other locally-based historical societies.

2.7 Agricultural Resources Plan

Goal

The goal of the Agricultural Resources Plan is to maintain a strong agricultural industry and to protect farmland for agricultural use.

Objectives

The objectives of the Agricultural Resources Plan are to:

A.) Support agriculture as a viable industry;

B.) Promote sustainable agricultural practices;

C.) Promote each county's Agricultural Land Preservation Program.

The two parts of the general goal are equally important and are interrelated. If the farming industry is to continue, it is necessary that its land resource base be maintained. But the protection of the land base will not assure that the agricultural industry will remain profitable. And if farming is not profitable, there will not be an economic reason to protect the land resource. Many of the policies advocated to advance one objective will also advance the other.

If the general goal for agriculture can be achieved, the counties' residents and visitors will enjoy numerous additional benefits in addition to the maintenance of the agricultural economy and the agricultural land resource. They will avoid the social, economic, and environmental disadvantages of sprawl and the possibility will be enhanced of achieving a development pattern that is more convenient and less expensive. They will also benefit from the continuation of the traditional culture and landscape of both counties. The Agricultural Resources Plan includes the following components:

Maintain a Strong Agricultural Industry

Many factors that affect the agricultural industry are beyond the control of each county or its municipalities (for example, foreign competition, federal farm policies and programs). The Regional Plan concentrates on more local factors, addressing the fact that urbanization often results in additional financial costs to farmers, as well as conflicts between farmers and non-farm neighbors. It also provides strategies for the strengthening of the agricultural community, including increasing profitability of farming by allowing accessory activities on farms, reducing obstacles that make it difficult for young people to enter farming, and reducing obstacles to the economic expansion of the agricultural industry in the two-county area.

Minimize Financial Costs to Farmers Resulting from Nearby Urbanization

As an area develops, owners of farmland and other undeveloped land typically face higher tax bills. Land prices rise and assessments follow. Non-farm residents who move into the formerly rural area demand and get urban-style services, causing public expenditures to rise. When utility lines are extended through rural land, owners of land they pass through are typically assessed on a front-foot basis to pay for the "improvement" that the utility line represents. The Plan advocates a number of programs and measures that offset these monetary costs.

To the extent that non-farm development is limited in areas planned for farm use, the demands for urban level services are also likely to be limited. The limitation of development in agricultural areas is discussed in the Farmland Protection element, following. Utility lines should not be extended through farmland areas, because they will greatly increase the pressure for development. But if they are, owners of farmland in areas planned for agriculture should be exempted from front-foot assessments.

Often when non-farmers move into a farming area, they are annoyed by noisy, dusty, or smelly farm operations and bring pressure on the municipality to enact ordinances that will restrict farming operations, and thus cause farmers to use more costly operating techniques. The Pennsylvania Agricultural Security Areas Law prevents municipal governments from passing ordinances that restrict normal farming practices or structures in Agricultural Security Areas. The Regional Plan encourages owners of farmland within areas planned for agriculture to petition their local governing bodies to establish Agricultural Security Areas so that their land will be afforded these and other protections.

Another approach to limiting conflicts is to give notice that agriculture is the primary industry in the area and that landowners may be subject to inconvenience or discomfort arising from accepted agricultural practices. The counties should require that such notices be entered in agreements of sale and deeds of all land in areas planned for continuation in agriculture. As a result, potential buyers who are not prepared to live in the environment of commercial agriculture are not likely to buy in the area, but those who find agricultural activities compatible will not be deterred and are likely to be good neighbors when they move in.

Minimize Conflicts with Farming Caused by Nearby Urbanization

Conflicts occur between farmers and non-farm neighbors for a number of reasons. The plan has both physical and non-physical remedies to prevent such conflicts. Additional traffic through the farm area is a basic problem. It can be remedied by locating new non-farm development where it will cause the least increase in traffic.

Non-farm neighbors must be protected against pesticides, herbicides, and other chemicals that farmers find it economically necessary to use. Therefore, a buffer of 100 feet should be required on parcels to be developed that are adjacent to any parcel in an area planned for continuation of agricultural use. Such setbacks are common in a number of jurisdictions around the country. The State of Maine requires a 100-foot setback on any land adjacent to a registered farmland tract. A larger setback should be required from an existing intensive agricultural use, such as a feedlot.

One of the best ways to minimize conflicts between farmers and non-farm neighbors is to discourage people from moving into the area who are likely to find living within an agricultural area to be incompatible. The notification procedure discussed above serves this end.

A key way of managing the demand for rural residential development is providing financial incentives to make development in Priority Areas and Infill Areas more attractive. Ways of encouraging living in these areas include Transfer of Development Rights (TDR) opportunities and state, county, or municipal investment in rehabilitating or constructing new residential units or participation in Main Street or Elm Street programs to increase the desirability of living in existing communities by encouraging commercial and residential redevelopment. A detailed discussion about TDR can be found later in this section.

Increase Profitability of Farming by Allowing Accessory Activities on Farms

Although farming near built-up areas is burdened by costs and annoyances, it has one clear advantage: it is close to customers. Farmers should be allowed to benefit from this advantage. They should be allowed, through zoning provisions, to operate seasonal farm stands on their properties, and thus capture the retail mark-up. It is, however, important to ensure against small farm stands growing into supermarkets that bring excessive traffic into the farm area. Therefore, farm stands should be limited in size (say to 600 square feet of floor area). It is not the intent of this recommendation to limit the size of larger commercial farm stands that exist in the counties along major roadways, rather it seeks to manage the size of commercial operations in farm areas.

In order to supplement farm incomes, zoning ordinances should allow farmers to operate small home industries or bed-and-breakfasts in their farmhouses. In addition, potential activities on farmland could include farm-orientated entertainment such as apple festival, corn mazes, or hayrides. These activities should be limited in size so that traffic generated is not excessive and sewage and other wastes can be disposed of adequately.

Reduce Obstacles that Make It Difficult for Young People to Enter Farming

Extremely high capital costs - for land and for equipment - make it difficult for young people to enter the farming business. In areas experiencing growth pressures the cost of land is generally much higher than what would be justified based on agricultural income from the land. The cost of land under an agricultural conservation easement is an exception. When it comes on the market, land under easement should sell at a price comparable to farm use value, because such an easement prevents the development or improvement of the land for other than agricultural purposes. Experience elsewhere indicates that the availability of farmland under easement makes it possible for beginning farmers to acquire land.

A study of 279 participants in farmland purchase of development rights programs in Massachusetts and Connecticut found that all persons who bought land already under easement said they bought it for agricultural use, 84 percent said they were able to purchase it only because the easement had reduced the value, and 44 percent said they had never owned farmland before.

Because agricultural conservation easements make farmland affordable for farming, in addition to protecting the land from development, the Regional Plan favors their acquisition, both through the Pennsylvania Agricultural Conservation Easement program and through donation of easements to conservancies.

The counties or private conservancies could help young farmers to enter farming by maintaining a registry of young farmers wishing to buy farms and farmers considering selling their farms immediately or bringing a young farmer into their operation and transferring ownership over an extended period of time. The Lancaster Farmland Trust now operates such a matching service for farmers in Lancaster County.

Farmland Protection

According to the American Farmland Trust, the United States is losing two acres of farmland every minute to new development. Protecting the Lackawanna and Luzerne Counties' agricultural heritage requires solid strategies and sound planning. This Regional Plan promotes farmland protection by the following ways:

- Agricultural Zoning
- Agricultural Conservation Easements
- Minimize Development Pressure on Farmland
- Prevent the Division of Farmland into Small Tracts
- Transfer of Development Rights (TDR'S)

Agricultural Zoning

The most promising and well-tested technique is strong agricultural zoning. Strong agricultural zoning strictly limits land uses to agriculture and related uses and limits residential development. Such zoning is common in York and Lancaster Counties and has also been adopted by Upper Tulpehocken Township in Berks County.

For municipalities in Luzerne and Lackawanna Counties that have local zoning, adoption of agricultural zoning is ultimately the responsibility of each municipality. However, Luzerne County can lead the way by adopting these zoning provisions for county administered zoning and Lackawanna County can prepare and promote model agricultural zoning provisions. Both counties can assist local municipalities by developing model ordinances and providing technical assistance to municipalities that are exploring zoning alternatives.

Agricultural zoning will greatly strengthen the Pennsylvania Agricultural Easement Program in which both counties participate. It will prove to be difficult to continue to farm farms protected by conservation easements if they are surrounded by land zoned, and someday developed, at suburban densities. Therefore, the considerable county and state funds spent for easements in such locations may ultimately be wasted if agricultural zoning is not adopted. For that reason, the Regional Plan recommends that the existence of agricultural zoning be given greater weight in the process for selecting sites on which to purchase easements.

If it is to prove effective, agricultural zoning should have the following characteristics:

1. Overall, it should permit no more than five and preferably no more than three non-farm dwelling units per 100 acres;

2. It should be the area-based allocation variety of agricultural zoning. Area-based allocation limits the number of houses that can be built on a property given its area, instead of simply setting a large minimum lot size. It establishes an overall permissible density, but requires each house to be built on a small lot, for example, one acre, and located in a place that will interfere as little as possible with agricultural activities on the remainder of the tract. The area-based allocation form makes possible much more flexibility in siting and leaves much more extended and uninterrupted areas in one ownership and available for farming;

3. Desirably, it should be the sliding scale form of area-based allocation zoning. The sliding scale form, which has been upheld by the Pennsylvania Commonwealth Court *(Boundary Drive Associates v. Shrewsbury Township, 1984*), allows somewhat higher densities of development for smaller parcels than for larger ones. This is justified because smaller parcels are less suitable for farming and often their owners have investment-backed expectations for developing them. Usually they account for a relatively small total area and so their development at somewhat higher densities does not add an excessive number of dwelling units to the agricultural zone.

   The sliding scale schedule of Upper Tulpehocken Township, Berks County provides one model for the two counties to follow:

Size of Parcel	No. of Dwelling Units Permitted
2 - 10 acres	1
10 - 30 acres	2
30 - 49 acres	3
49 - 99 acres	4
99 - 149 acres	5
149 - 199 acres	6
199 - 299 acres	7
299 - 399 acres	8
399 - 499 acres	9
499 acres & over	10

1. The allowable units should be grouped together instead of stretching along the road frontage of the tract;

2. The sizes of individual parcels are the sizes as of a given date, preferably a date well before the adoption of the ordinance;

3. The uses allowed in the zone should be strictly limited to uses that are supportive of agriculture or at least highly compatible with it;

4. Farm stands should be allowed in agricultural zones so that farmers can capture some of the retail markup on their produce. The farm stands, however, should be limited to seven months operation per year and to about 600 square feet in floor area. Otherwise, they may become intense year-round markets that bring excessive activity into the agricultural zone that conflicts with farming activities;

5. A simple and foolproof system should be instituted to keep track of the number of dwelling rights initially assigned to each parcel, the number of building permits granted, and the resulting number of rights remaining for dwellings to be built in the future.

In lieu of the sliding-scale form of agricultural zoning, some other types of the area-based allocation variety of agricultural zoning may be pursued. In all cases, however, only non-farm residential development that has overall very low densities should be permitted in agricultural areas, with strong limitations on the percentage of a tract permitted to be disturbed for development.

Agricultural Conservation Easements

The most effective measure for preventing the development of farmland is the acquisition of agricultural conservation easements, because these are legally binding instruments, which go with the deed, that prevent development forever. Local land conservancies include the Lackawanna Valley Conservancy, Countryside Conservancy, North Branch Land Trust, and Wildlands Conservancy.

The Pennsylvania Agricultural Conservation Easement (PACE) program is the best-known program for easements. In July of 1999, the Luzerne County Board of Commissioners formed a seven-member Board to oversee the Luzerne County Farmland Preservation Program and appointed a County Administrator to manage the program. In 2000, the Luzerne County Farmland Preservation Program became a reality. Since then, 22 farms totaling 2,262 acres have been preserved. Since its inception in 1991, and its first easement purchase in 1994, the Lackawanna County Agricultural Land Preservation Program has purchased the development rights for 44 parcels of farmland, ensuring that these lands will remain undeveloped and continue to be used for agriculture. As of December 2009, 3,890 acres had been preserved through this program.

The selection system now used by Luzerne and Lackawanna Counties for the PACE program specifies a number of conditions that a property must meet in order to be considered eligible. These conditions include that it be 50 acres or more, be located in an Agricultural Security Area, that 50% of the farm be cropland, pasture, or grazing, and 50% of soils must be in Agricultural Capability Class I - IV. The Plan recommends that the eligibility requirements be expanded to require that the property be in an area indicated for agricultural use in the Land Use Plan. Thus, properties planned for other than agricultural uses (such as properties in Priority and Infill Areas) would not be eligible for the PACE program.

A second method for acquiring easements is through donation to non-profit conservancies. Landowners who donate easements can count the value of the easement as a charitable donation that can be deducted from income for federal income tax purposes, thus lowering their tax liability. A number of conservancies active in the state, including the American Farmland Trust, are available for donation of easements. Established organizations to serve as models in the region include the Lancaster Farmland Trust and the York County Farmland Trust.

Acquisition of easements through the PACE program and through conservancy action, however, will account for only a small fraction of the counties' farmland. For most Pennsylvania counties, PACE allocations might be able to cover three percent of the land in farms in the county. Conservancy action might account for another three percent. Other techniques must be used if the vast bulk of farmland in the two counties is to be protected from development.

It is recommended that the assessment of preserved farms should be based on the easement or farm value, not on what it would sell for if it could be developed. Pennsylvania Act 94 states that once a farm can no longer be sold as a developable property, the tax assessment must reflect that fact.

Minimize Development Pressure on Farmland

Areas with good highway access and available sewers are well known for attracting development. Therefore, the Plan stipulates that highway improvements, such as capacity-adding projects, in agricultural areas should be kept to a minimum and that sewers should not be extended into agricultural areas. Prevention of such growth-generating infrastructure will require firm and consistent action by the counties and their municipalities.

Both counties have an important role to play in approving requests for sewer extensions or other projects that would require an amendment to a Sewage Facilities Plan. They should press their case, based on the review process and evaluation of environmental issues to the Pennsylvania Department of Environmental Protection (DEP) against any proposal to extend a sanitary sewer into an area shown as agricultural in the Regional Plan. DEP is bound to make a finding of consistency between any sewage plan or plan revision and local, county, and state plans before granting a permit.

Luzerne and Lackawanna Counties should also oppose utility extensions into areas planned for agriculture that are sought by local utility companies or authorities when proposals come before the Pennsylvania Public Utilities Commission (PaPUC). In a 1989 administrative ruling (No. A-210540 F002, concerning an application of the Columbia Water Company opposed by the County of Lancaster), the PaPUC has made it clear that the PaPUC must take local and county planning into consideration in making a decision on a utility extension.

Prevent the Division of Farmland into Small Tracts

Land in stable agricultural areas is typically in large tracts. As land is divided into smaller tracts, its price per acre generally rises, and as a result, it becomes less affordable by farmers who have to derive their income from the land. Because smaller tracts are available, the total cost of a piece of land may decrease, even though the price per acre increases. Thus, the smaller tracts may be more attractive to non-farm buyers, and they will push farmers out of the market.

In order to maintain a land market in which farmers can compete, the division of land should be limited so that parcels created will not be smaller than is appropriate for continuation of the existing types of commercial farming in the area. Limitations on land division in agricultural areas can be set by local municipalities. For example, the zoning ordinance of Hopewell Township, York County, allows division of agricultural land into two or more parcels only if each resulting parcel contains at least 100 acres. If the original parcel is less than 100 acres, land from it may be transferred to another parcel so long as the second parcel, after transfer, is at least as large as the original parcel was before transfer. The standard of 100 acres was based on the fact that typically farm cores in the township were 100 acres or larger. The farm core is the area of a farm excluding outlying tracts. It is the part of a farm that is most efficient to operate, has the most permanence, and thus forms the economic basis of the farm.

Note that the limitation on division of land into tracts of less than 100 acres does not preclude the creation of one-acre lots under sliding scale agricultural zoning.

Transfer of Development Rights (TDRs)

An effective system to direct new development to Priority and Infill Areas while protecting property owners' equity in Conservation Areas is Transfer of Development Rights (TDR). Under a transfer of development rights system, agricultural areas can become "sending" areas for development rights that are exercised within Priority and Infill Areas instead of in Conservation Areas. Under TDRs, an owner of a tract of land

can separate the rights to develop that land from the property in question and transfer those rights to a different tract of land. As a general growth management tool, TDRs can be very useful, since areas may be designated to remain undeveloped as "transferring-out" or "sending" areas for TDRs and areas appropriate for more intensive development may be designated as "transferring-in" or "receiving" areas for TDRs.

Under TDR, landowners in "sending" areas receive compensation for transferring development rights to growth areas, and the system is one whereby the financial benefits of generally rising land prices may be equitably distributed to landowners in designated growth and low-growth areas alike. It should also be emphasized that, in addition to selling his development rights for compensation, the "sending" area landowner also retains the right to use his land for non-urban uses, such as agriculture.

In Pennsylvania, the 1988 re-enactment and update of the Municipalities Planning Code (MPC) officially sanctioned "Transferable Development Rights" under Article VI, Section 619.1 and Article VII, Section 702.1. Later updates in 2000 to Article XI, Section 1102 allow transfers between municipalities. This could be a key element in encouraging development in Priority and Infill Areas while allowing Conservation Areas to remain rural and rural property owners to achieve monetary compensation for giving up their rights to develop on rural sites.

2.8 Environmental Protection Plan

Goal

The goal of the Environmental Protection Plan is to protect environmentally-sensitive areas of Lackawanna and Luzerne Counties.

Objectives

The objectives of the Environmental Protection Plan are as follows:

A.) Protect groundwater, floodplains, creeks, wetlands, mature woodlands and specimen trees, steep slopes, ridge lines, scenic viewsheds, wildlife habitat, and other environmental features of the two-county area;

B.) Institute state-of-the-art stormwater management programs and ordinances that conform to the most current best management practices in light of the needs of Lackawanna and Luzerne Counties;

C.) Protect and enhance the natural resource amenities of properties that are being developed and redeveloped.

The environmental protection element of the Regional Plan identifies the specific areas in the two counties that are environmentally sensitive, including floodplains, wetlands, aquifer recharge and wellhead areas, and other critical natural features. It also addresses wildlife and plants, and stormwater management. Information presented on these subjects is based on several sources and maps within Chapter Four that illustrate the occurrence of these features across the area of the two counties.

More generally, the interaction of humans with the natural environment in the two-county area has produced settings that reveal the complex relationship between natural and man-made features. For example, historic preservation is closely tied to the preservation of sensitive natural resources because many historic resources were originally located in part because of the proximity of some desirable natural resource, such as water or fertile lowland soil. In an agricultural landscape, the natural resources comprise the framework that gives the landscape its structure. And in many cases, development occurred in borough/village and urban settings due to access to natural transportation features such as waterways or due to geographic constraints.

Many aspects of natural resource protection are based upon state and federal laws and programs, such as the National Flood Insurance Program and the Pennsylvania Department of Environmental Protection wetlands regulations. The desire for protection of natural resources at a two-county and local level led to many of the recommendations in the two counties' *Open Space, Greenways & Outdoor Recreation Master Plan*.

The Environmental Protection element is organized under two main subjects of discussion, Water Resources and Land Resources. Several subheadings are germane to each of these two main subject areas.

Water Resources

Protection of Wetlands

When wetlands are lost or degraded by land development, the benefits of wetlands must often be replaced by costly water treatment and flood control infrastructure. Given the many environmental benefits wetlands provide, wetland conservation and restoration should be an integral part of a comprehensive local watershed management strategy.

According to the Federal Environmental Protection Agency (EPA), wetlands are defined as “generally, lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal life living in the soil and on its surface.” Under the jurisdiction of the U.S. Army Corps of Engineers and the Pennsylvania Department of Environmental Protection, there is at the present time a steadily evolving regulatory framework concerning wetlands in Pennsylvania, mandating wetland surveys by developers of land and controlling the degree and type of wetland disturbance permitted.

Lackawanna and Luzerne Counties and their constituent municipalities can provide long-term wetlands protection by directing development away from these areas, by encouraging clustered construction on higher ground surrounding wetlands, and by purchasing wetlands important to protecting local floodplains or ecological systems. The Land Use Plan incorporates a variety of natural resource areas within the Conservation Areas designation.

Protection of Stream Corridors

One of the chief ways in which stream course water quality may be affirmed or improved is through the maintenance of riparian buffers. A riparian buffer is a corridor of varying width adjacent and generally parallel to a stream or similar water course, extending for some distance back from the stream bank. Ideally, the buffer is wooded, shading and cooling the water, trapping nutrients and sediment runoff, stabilizing stream banks, and providing food and cover for aquatic and terrestrial wildlife.

The frequent combination of floodplains, stream courses, and environmentally-sensitive areas (such as wetlands, steep slopes and woodlands) can define a specific width for a riparian buffer. Many municipalities have adopted riparian buffer provisions into their zoning ordinances, limiting the development of lands within a certain distance of a stream bank, and taking into account whether floodplains, wetlands, steeply-sloped terrain, and woodlands are present.

Applying the concept of riparian buffers to critical source water resources, and not only to stream courses, is another way to protect water quality. The appropriate type and size of buffer would depend on the type of resource and the geography that is present.

Aquifer Recharge and Well-Head Areas

Groundwater is the source of many residents' drinking water in the two-county area. It is therefore essential that zoning and other land development regulations be employed to protect well-heads and aquifer recharge areas. Well-head protection zones should extend at least 1/4 mile from each major water supply well, prohibiting within the zone commercial, industrial, or other facilities that might pollute the well. Protection of each well's aquifer should be ensured by limiting the type of development permitted throughout the recharge area.

For the residents and businesses in each county that obtain their drinking water through reservoirs, source water supply watershed protection should be enacted. Aquifers underlie areas of the two counties and feed springs that supply area streams and creeks. Efforts to protect water at its sources should be undertaken at the local and county levels, in addition to state regulations.

The Land Use Plan reveals a generous proportion of the two-county area intended for Conservation Areas (agriculture, permanent open space, and recreation) that can act as an extensive aquifer recharge area and assure a permanent framework for source water recharge, even as development may proceed into the future. Lackawanna and Luzerne Counties should employ this framework for source water recharge and protection of source water quality. A key technique is adoption of appropriate land use regulations, including those that would accomplish the following:

- Maintain Conservation Areas as an area exclusively for agriculture and forestry, permanent open space and recreation;
- Provide incentives for clustered residential development in Infill Areas;
- Conserve woodlands; and
- Encourage the use of infiltration technology as part of sewage treatment, such as spray irrigation, when appropriate.

Further discussion on Aquifer Recharge and Well-Head Areas can be found in the Utilities Plan, which follows this section.

Acid Mine Drainage

According to the National Water-Quality Assessment program, efforts to remediate the effects of mining activities will significantly improve water quality. Each county will support the efforts of state agencies and nonprofits who are working to reclaim and remediate abandoned mine lands to minimize the impacts of acid mine drainage.

Stormwater Management

The two-county area should prepare and promote the adoption of model ordinances and design guidelines for the retention of stormwater from new development and for temporary and permanent sedimentation and erosion control. Stormwater management areas should be located and designed to be extensions of permanent natural open space areas, rather than conventional retention basins, with appropriate native vegetation and wildlife habitat.

In the case of Luzerne County, which has decision-making responsibility for Subdivision and Land Development applications for many municipalities, the County's Stormwater Management Plan/Ordinance should be adopted by those municipalities not under its direct jurisdiction. Further discussion on Stormwater Management can be found in the Utilities Plan which follows this section.

Land Resources

Resource Conservation Ordinances

Each county should prepare a comprehensive model Natural Features and Resources Conservation Ordinance and should promote its adoption by the municipalities and the county. This ordinance should compile all zoning and subdivision and land development provisions related to the conservation of natural features and resources. It would include provisions regulating land disturbance and the removal and management of vegetation. Some of the most prominent features to be protected are found in the Highlands, Natural Areas, and Agrarian Lands identified in the 2004 *Open Space, Greenways & Outdoor Recreation Master Plan*.

Highlands are found mostly along ridges and undeveloped mountainous areas in the two-county area. Many of these areas contain well-known mountain ridges and forested areas that contribute to the scenic quality of the area. Development along ridges has led to increased awareness and desire for protection. Highlands characteristically have steep slopes and also present opportunities for improved habitat migration across the two-county area.

Natural areas contain unique ecological communities or critical watersheds and are found throughout the study area. Many areas identified as natural also have extensive forest cover, one or more streams or tributaries and floodplains and wetlands that aid in filtering pollutants from surface water. These areas are viewed as important for protecting water quality and providing habitat.

Agrarian lands are associated with prime farmland in the two-county area. It is strongly recommended that conservation efforts continue in areas identified as significant for agriculture.

Cluster Subdivision/Conservation Design

Development in Low Density Infill Areas is recommended to be highly clustered over the planning period, using a development strategy commonly referred to as "conservation development" that concentrates the location for development and limits the disturbance of land for dwelling construction. This method of development includes a high percentage of permanent open space and natural resource protection that occurs in conjunction with land development. While some opportunities for cluster subdivision have been available over the last few years in Lackawanna and Luzerne Counties, additional incentives may be desirable to preserve and enhance the natural resource amenities of properties that are being developed and redeveloped.

Cluster subdivision opportunities must be attractive to potential developers and all low-density residential zoning districts should offer clear opportunities for cluster subdivision.

One way to achieve increased set-asides of permanent open space is to combine cluster subdivision options in the regulations of a zoning ordinance with opportunities that permit developers of land flexibility in the selection of housing types to be constructed. Density limits based on gross density ("units per acre") classifications, rather than specific housing types and individual lot-size requirements ("no less than 80,000 square-foot lots") will be more likely to achieve the desired level of permanent open space set-aside of tracts undergoing development.

2.9 Utilities and Energy Conservation Plan

Goal

The goal of the Utilities and Energy Conservation Plan is to ensure water, energy, communications, sewage, and stormwater service systems are adequate, well-maintained, affordable, and secure.

Objectives

The objectives of the Utilities and Energy Conservation Plan are as follows:

A.) Protect and enhance the quality and quantity of water resources;

B.) Support planning and funding for utility extensions and improvements that are consistent with the Land Use Plan;

C.) Support regionalization and the shared use of utility assets;

D.) Explore more sustainable solutions to future utility demands.

The Land Use Plan envisions new development and targeted redevelopment in *Priority Areas*, *Mixed Density Infill Areas*, and proposed *Transit Village Priority Areas*. Infill development is appropriate for *Low Density Infill Areas* primarily in and around existing boroughs, villages, and urban places. Virtually no urbanizing growth will be associated with *Conservation Areas*.

Central municipal water supply systems may have to increase their capacity to serve the increased residential and business populations that are part of existing communities. Corresponding increases in wastewater treatment capacity will also be needed. Residential and commercial areas adjacent to or near existing centers where water supplies lack adequate yield or quality may need to have water supply service extended to them, adding to the requirements for increased centralized capacity. Similarly, nearby areas where individual on-site septic tank wastewater treatment systems are inadequate may need to be connected to the central sewer systems.

The utilities element includes provisions for municipal solid waste disposal in accordance with Act 101, requiring each county to prepare a solid waste management plan to ensure disposal capacity for at least the next ten years.

Water Services

Consideration should be given to zoning, subdivision and land development regulations, and other approaches for protecting groundwater and surface water sources of potable water supplies, particularly for growing communities and planned new centers. Well head protection zones and source water supply zones should be enacted to protect the water supply.

Contamination of water supplies is a major problem throughout Pennsylvania and the entire country. Frequently, the problem can be traced to leaking underground storage tanks (most often old tanks under gasoline stations), former dumps, or spills of industrial chemicals. An even larger threat for the two-county area is acid mine drainage. The Eastern Pennsylvania Coalition for Abandoned Mine Reclamation (EPCAMR) organization is an extensive network of volunteers, non-profits and supporting agencies at the county, state, local, and federal levels versed in reclaiming abandoned mine lands (AML) and restoring watersheds impacted by abandoned mine drainage (AMD).

Protection of Well-Head and Aquifer Recharge Areas

Well-head protection zones should be established around each major water supply well, extending at least ¼ mile from the well. The area should include the "zone of influence," and the siting within that zone of commercial, industrial, or other facilities which might pollute the well should generally be prohibited. (While existing industrial or commercial facilities within ¼ mile of existing wells cannot be forced to move, nor all commercial or industrial activities within ¼ mile of existing wells be prohibited, consideration can be given to measures such as double-wall tanks, dikes and catch basins to prevent the potential of leaking tanks polluting wells.) Furthermore, protection of the entire aquifer from which the wells draw their groundwater should be considered: Limitations on development of potentially polluting facilities or activities throughout the "zone of contribution" or "recharge" area for the well (the area on which rainwater falls and percolates through the earth to supply water to the aquifer) should be enacted by all municipalities.

The United States Environmental Protection Agency (EPA) has published a document providing guidelines to local communities to address some of these contamination problems. Tools outlined include specific zoning regulations, environmental protection or sensitive area easements, and design controls on commercial, industrial, and multi-family residential development. These tools are primarily useful for protecting the immediate area around a well-head. The problem of protecting a broad area contributing to the recharge of an entire aquifer is more difficult, since many square miles of land are often involved. However, Lackawanna and Luzerne Counties are particularly well-suited for instituting such controls since large areas are currently in agriculture or forest, open space, wetlands and flood plains, or have scenic vistas. In the process of protecting such areas, aquifer protection can be either a by-product or a direct result of protective zoning, easements, or other types of controls.

As further discussed in *Section 4.9*, a large portion of county residents receive their water from public water supply reservoirs. These source water supply watersheds are in need of protection as well.

Stormwater Management

The EPA has recently published regulations regarding stormwater discharges, in order to prevent problems from erosion, sedimentation, flooding, pollution, and other results of improper consideration of stormwater control and management.[1] Although the federal regulations do not require any formal action on the part of Lackawanna and Luzerne Counties, they do raise the issue as to whether adequate consideration of stormwater has taken place throughout the counties and their municipalities.

The Commonwealth of Pennsylvania, through its Act 167, the Stormwater Management Act, requires the preparation of stormwater management plans for all watersheds. Both counties have completed Act 167 plans.

Several other counties in Pennsylvania are taking action to study the adequacy of stormwater control and management measures and structures on specific creeks streams and rivers. The consequences of severe flooding from major storms can be so devastating that regular evaluation of the adequacy of stormwater management and control is a prudent step in implementing any comprehensive plan. As development continues, stormwater runoff patterns and amounts can change so that previously adequate structures may no longer handle the flow volume and rate of discharge. Also, the structures themselves may erode, corrode, and wear out over the course of time.

It is recommended that all two-county area municipalities identify stormwater management and control structures that may need repair or replacement, as well as stream segments that may need clearing, riprap, bank improvements or other measures to handle anticipated stormwater flows that may occur over the course of the next 10 to 20 years. Part of the stormwater management planning process was the identification of problem areas. Some of this work was done for the Bi-County Hazard Mitigation Plan.

Water Conservation

Each gallon per day saved in the two-county area is one less gallon that must be provided by the local water authority or on-site well. This saving also means that one less gallon is required for wastewater treatment in central municipal systems. Furthermore, if less hot water is used in the home, office, or industrial facility, significant energy savings can be achieved. All of these savings can add up to appreciable cost savings to individual residents as well as to municipalities.

A number of water conservation measures are widely advertised and widely available, from low-flow shower heads to low-flush toilets. Numerous municipalities throughout the country have enacted ordinances or local plumbing codes requiring such devices or measures in new construction. It is a recommendation of this Plan that each municipality in both counties consider enacting such ordinances, codes, or other measures to achieve further reductions in water use.

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[1] U.S. Environmental Protection Agency, "National Pollutant Discharge Elimination System - Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges" (*Federal Register*, Volume 64, Number 235, pages 68722-68852), December 8, 1999.

Capital Improvements Funding

There are numerous funding mechanisms that the two-county area may look to for funding of Capital Improvement Projects. The current budget crisis has limited the amount of funding available through many of these programs. In general, however, funding may include the following sources:

Pennsylvania Infrastructure Investment Authority (PennVest):
Pennsylvania Infrastructure Investment Authority (PennVest), an independent agency of the Commonwealth of Pennsylvania, was formed in 1988 to assist with improving substandard and deteriorated water supply and sewage disposal systems.

The formation of PennVest provides for the funding of infrastructure improvements for water system and sewer system operators via low-interest loans and in some cases disbursement of grant allocations. Eligible project costs are those associated with the acquisition, construction, improvement, expansion, extension, repair or rehabilitation of all or any part of any facility or system, whether publicly or privately owned. Financing priorities are based on the project's benefits to public health and safety, environmental impact, economic development impact, and improving adequacy and efficiency.

Rural Utility Service (RUS) Programs:
RUS provides loans, guaranteed loans, and grants for water facilities in rural areas and towns of up to 10,000 people. Recipients must be public entities and can include municipalities, counties, special purpose districts, Indian tribes, and corporations not operated for profit, including cooperatives. A new entity may be formed to provide the needed service if an appropriate one does not already exist. Grants may be provided when necessary to reduce user costs to a reasonable level. They can cover up to 75 percent of eligible facility development costs.

Emergency Community Water Assistance Grants:
Emergency Community Water Assistance Grants may be available to rural areas when disaster strikes. Congress may appropriate funds for the program after a flood, earthquake, or other disaster if Federal assistance is warranted. Applicants must demonstrate that a significant decline in quantity or quality of water occurred within two years of the date the application was filed with RUS. Public bodies and nonprofit corporations serving rural areas, including cities or towns whose population does not exceed 10,000 people may be eligible.

Technical Assistance and Training Grants:
Technical Assistance and Training Grants are made available from at least one percent and not more than three percent of the funds appropriated for Water and Waste Disposal Grants. Private nonprofit organizations may receive grants. Applicants must have the proven ability, background, experience, legal authority, and actual capacity to provide technical assistance and/or training to associations. Technical Assistance and Training Grants may be used achieve the following actions:

- Identify and evaluate solutions to water-related problems of associations in rural areas;
- Assist entities with preparation of applications for Water and Waste Disposal loans and grants;
- Provide training to association personnel in order to improve the management, operation and maintenance of water and/or waste disposal facilities; and
- Pay expenses related to providing the technical assistance and/or training.

Commercial Sources:
Tax Exempt Bank Loan - Local financial institutions may be used to provide loans for project development, interim financing, or long-term financing. Fixed interest rates may be limited to less than three years. The retention of financial advisors, including Bond Counsel is required.

Public Bond Issue - This has been a traditional method for long-term financing of municipal water supply projects. It provides long term fixed rates, with a 30- to 35-year term. Bond underwriters, financial advisors, and Bond Counsel are required.

Bond Pools - Bonds issued by other Authorities in the state, with proceeds available to lend to qualified borrowers. Fixed and variable rates are available with short-term and long-term borrowing considered. Financial advisors and Bond Counsel are required. Participation in the governmental programs (specifically PennVest) is often the most desirable funding source for infrastructure construction and/or improvements. In all cases, adequate funding must be available for a municipality to plan and construct an affordable project with confidence, using one of the governmental funding programs.

Small Water Systems Regionalization Grant Program:
Since 1992, DEP has been providing grant funding to study the feasibility of consolidating small community water systems. These studies have identified many projects where the consolidation of two or more systems would allow suppliers to provide safe and reliable water service at a reasonable cost. The purpose of the Small Water Systems Consolidation Construction Grant Program is to provide funding to implement these and other consolidation projects.

Eligible projects include construction of water lines to interconnect systems, and repair of existing small systems to meet the standards or conditions of the acquiring system. Eligible costs associated with these projects include design, permits, layout, materials, labor, construction management and project administration.

Sewage Service

Throughout the two-county area, a longstanding issue of concern is that there are environmental problems with some sewage treatment practices. There are instances where dwellings and businesses are hooked up to public sewer lines but the lines then discharge untreated sewage. This practice occurs where sanitary sewer and storm sewers are collected together in combined sewer. The discharge from this practice is referred to as Combined Sewer Overflows (CSOs).

Recent legislation mandates the separation of flow. Where combined systems occur in the counties, the systems should be separated in order to comply with legislative requirements and to have more economical and environmental sewer service systems.

The Counties' Stormwater Management Plans include recommendation and Best Management Practices (BMPs), such as not directing rain spouts into sewers. These kinds of measures are consistent with mandates to separate stormwater and sewage flows.

Studies are needed to assess the capacity of existing systems as well as address environmental issues. These studies should also address prospective new development, since the Land Use Plan clearly implies that increases in capacities and improvements to existing sewer systems will need to occur to accommodate growth in and around existing centers during the planning period. These studies should be handled by sewage/sanitary authorities in the area.

Utility Regionalization

As a way of alleviating capacity and other service problems associated with municipal water and sewer systems, municipal authorities and other service providers will be strongly encouraged to explore the potential for regionalizing services. Regionalization has great potential to reduce the costs of providing services through increased operational efficiencies and could mean fewer fees to subscribers.

Solid Waste Services

For managing the solid waste for the two-county area, the quantity of refuse to be disposed can be greatly reduced through recycling (See Figure 4.9.3). The counties should vigorously promote recycling. In addition to reducing the amount of solid waste, there are important economies possible through recycling. Savings are significant, both in terms of avoided tipping fees at processing or disposal facilities and a reduction in the need for additional processing or disposal capacity.

Telecommunications Planning

The Telecommunications Act of 1996 provided major changes in laws affecting cable TV, telecommunications, and the Internet. The law's main purpose was to encourage the rapid development and growth of new telecommunications technology such as wireless telephones and digital television. As a need for these services continues to expand in the marketplace, the two-county area should continue to look for opportunities to include telecommunications equipment such as cellular towers and high-speed cable lines as part of new land developments and as part of revitalization projects in existing communities.

Providing appropriate design standards and development controls for locating wireless communication antennas and similar devices will remain important during the planning period. These devices should be located so as to minimize visual effects on adjacent and neighboring properties, public rights-of-way, and parks and public open space and they should be placed where existing topography, vegetation, buildings, or other structures can provide effective visual screening.

Alternative Energy Sources

There are a number of public and private ventures currently taking place in Lackawanna and Luzerne Counties to harness alternative energy sources. These include wind power, cogeneration facilities to use mine spoils as a power source, and the use of methane from landfills as fuel.

Wind Power

Wind energy uses the energy in the wind for practical purposes such as generating electricity, charging batteries, and pumping water. Wind turbines convert the kinetic energy of the wind into other forms of energy. Large, modern wind turbines operate together in wind farms to produce electricity for utilities. Small turbines are used by individual homeowners and small village clusters to help meet more local energy needs.

The Pennsylvania Department of Environmental Protection recently sponsored the development of the Pennsylvania Wind Map that identifies appropriate locations for siting wind turbines. There are a number of locations along the mountain ranges in both counties, particularly in the northern tier, that have the potential to generate sufficient wind power for energy uses. Opportunities to harness wind power in the two-county area and generate energy jobs should be encouraged.

Several townships in the two-county area have taken the initiative to devise and adopt ordinances that regulate the height, placement, and operating characteristics of wind turbines, and their experiences should be useful to other municipalities in the two-county area as they seek to respond appropriately to the prospect of wind turbines in their jurisdictions.

Natural Gas Extraction

The recent discovery of extensive natural gas energy sources in the Marcellus Shale formation (or ‘play’) has created many new resource development opportunities and challenges for the region. The new resource discovery has generated instant wealth for land owners strategically located in the region and a significant energy source for the Commonwealth. However, the extraction and distribution of the gas reserves has triggered overnight development, and the drilling activity, has caused land disturbance, road building, and concerns about the impacts on water quality and other natural resources.

Natural gas extraction has been regulated by state and river basin commission authorities alone, and municipal governments have had no power to regulate gas well siting, wastewater disposal, or other aspects of natural gas development. These circumstance are evolving, and in the future, municipal governments may have the authority to do more than to bond companies to repair damage to roads caused by natural gas-associated vehicular traffic.

The Regional Plan must recognize that energy resource extraction and development are part of the area's economic development future; however, adequate controls must be put in place to assure that this resource extraction is planned for and that any negative consequences are managed to the degree possible through zoning and land development regulation. Lycoming County is about to adopt model zoning provisions relative to natural gas exploration and well operations. Actions by state, county, and local governments on this issue, as well as by drillers and operators, should be closely monitored by both Lackawanna and Luzerne Counties and by municipalities likely to be affected by the 'rush' to lease rights for natural gas exploration in the Marcellus Shale and follow-through activities.

2.10 Resource Extraction Plan

Goal

The Goal of the Resource Extraction Plan is to maximize the opportunity for reuse and redevelopment of environmental contaminated lands, abandoned industrial areas, strip-mined areas and vacant or underutilized commercial areas of the region.

Objectives

The objectives of the Resource Extraction Plan are as follows:

A.) Develop a structured mine reclamation program that balances environmental, economic and community goals;

B.) Investigate sources of funding and innovative approaches to mine reclamation.

Lackawanna and Luzerne Counties have many abandoned mine land features from past mining, including dangerous pits, shafts and cropfalls, which pose serious public safety and environmental hazards. Abandoned mine lands also collect and direct good water into old underground mines, turning it into acid mine drainage that pollutes local waters.

Mine subsidence, another major concern, can be defined as movement of the ground surface due to collapse or failure of underground mine workings. Surface subsidence features usually take the form of either sinkholes or troughs. Areas that have been disturbed by mining activities have been summarized in Chapter 4, Section 8.

Abandoned Mine Reclamation and Subsidence

According to the National Water-Quality Assessment program, efforts to remediate the effects of mining activities will significantly improve water quality. Each county will support the efforts of state agencies, nonprofits and companies, such as Earth Conservancy and Butler Enterprises, who are working to reclaim and remediate abandoned mine lands to minimize the impacts of acid mine drainage.

Any plan for the future of the two-county area must address the prospects for these prominent mine features. The Regional Plan emphasizes the reclamation of mine spoils for development areas for future industrial, commercial, residential, and open space uses. The focus of the plan on revitalizing areas in and around existing communities and creating Priority Areas represents a course of action that, among other benefits, tries to harness new development and redevelopment as means to reclaim mine spoils areas. At the same time, directing new development to these concentrated mixed use areas promotes the Plan's goal to control sprawl and to conserve the natural resources of the region.

Reclamation Plan

Over time, mine spoils reclamation has been proceeding in various areas of the anthracite regions of the two-county area, generally responding to two sets of circumstances and opportunities. The first is industrial and commercial development. The second is the exploitation of existing culm piles as a fuel source by cogeneration facilities, which use the culm to produce steam and supply commercial enterprises with power. Projecting into the future, this is seen as a steady, positive program that will, over many years, gradually consume the culm piles in the counties, effectively reclaiming sites for potential future industrial, commercial, institutional, residential, and open space uses.

The process of mine spoils reclamation in Lackawanna and Luzerne Counties concurrent with new industrial, commercial, or residential development has occurred, although perhaps not as extensively or rapidly as some would wish. Spoils reclamation represents an up-front development cost in addition to the usual expenses of site acquisition, conventional clearance, access, servicing, approvals, and construction. Where additional development costs can be avoided, entrepreneurs and investors usually do so. This factor tends to limit the likelihood that marketplace factors alone will lead toward substantial reclamation of the region's extensive disturbed mining areas.

Priority and Infill Areas, as discussed in the Land Use Plan section of this chapter, in some cases coincide with locations that have been disturbed by mining activities. These places are clearly appropriate for a designation as highest priority for reclamation.

Funding Sources

There is, at the present time, a Pennsylvania Department of Environmental Protection (DEP) program for mined area reclamation, but funding is limited and priorities are focused on major safety problems statewide. There is also a DEP Growing Greener Grant Program that is available to address water quality impaired watersheds in the state that are polluted by nonpoint sources of pollution, including abandoned mine drainage. Projects that put forth innovative approaches to clean-up are favored.

At the federal level, funds may be available to address issues related to watershed clean-up through the Environmental Protection Agency's (EPA) Section 319 Nonpoint Source Implementation Grants. In addition, EPA Brownfields funding could be available for mine reclamation projects through that agency's collaboration with the Department of the Interior's Office of Surface Mining. These two agencies have been working together to revise the Brownfields program to fit watersheds affected by the presence of coal mines and coal mining activities.

Additionally, many state-sponsored Keystone Opportunity Zones and Keystone Opportunity Expansion Zones are located in areas of the county with disturbed mining areas. These zones are defined parcel-specific areas with tax-free or tax-abated provisions for property owners, residents, and businesses. The combination of incentives offered to investors in these areas may provide the impetus for new businesses to undertake reclamation efforts and locate industrial activity in these zones.

Even for highest priority areas, and almost certainly for the mid- and low- priority mine spoils reclamation areas, investment may not flow in the absence of a reclamation assistance package that can be presented to prospective developers by the county and local municipalities.

LACKAWANNA-LUZERNE
COME, SHAPE THE FUTURE

CHAPTER 3

IMPLEMENTATION STRATEGY

Introduction

The *Lackawanna-Luzerne Regional Plan* is a blueprint for the future of the two counties, showing how development and redevelopment may be directed to provide new economic opportunities, revitalize existing communities, preserve natural features, conserve open space, and protect historic and cultural resources throughout the 1,375-square-mile two-county area.

The *Lackawanna-Luzerne Regional Plan* is a call to action. This chapter describes the Regional Plan implementation strategy. It includes a specific sequence of steps for the two counties, municipalities, local agencies, the state, and others to create a positive future for the two counties.

Benefits of the Plan

The *Lackawanna-Luzerne Regional Plan* offers significant benefits to everyone. The Regional Plan benefits the two counties in the following ways:

- Sets the vision and direction for the coming decades;
- Provides a framework for decision-making;
- Identifies new opportunities for residential, commercial, industrial, institutional, cultural, and recreational activity;
- Provides implementation strategies for a more vigorous approach to land development and economic initiatives and to conservation;
- Assists in developing partnerships with residents, business operators, property owners, investors, public officials, local organizations, and public and private agency personnel for Plan implementation;
- Guides the counties' capital budget process to focus financial resources.

The Regional Plan benefits municipalities in the following ways:

- Summarizes the issues facing municipalities;
- Contains usable data, including mapping, to support a variety of local initiatives;
- Identifies areas for targeted development, consolidation and stabilization, and conservation;
- Outlines a framework for intergovernmental cooperation and action to achieve goals;
- Provides tools, models, and best practices;
- Sets the stage and strengthens opportunities for applications for government grants, loans, and permits (a proposed local action or initiative that is consistent with the Regional Plan will be more likely to gain a favorable review).

The Regional Plan benefits private developers in the following ways:

- Explains the counties' policies and strategies on growth, development, redevelopment, and conservation;
- Highlights development opportunities;
- Contains usable data, including mapping, to support development initiatives;

- Sets the stage and strengthens opportunities for applications for government grants, loans, and permits;
- Markets the area generally and specific locations for development and redevelopment.

The Regional Plan benefits local nonprofit and civic organizations in the following ways:

- Offers a cohesive vision for enhancing quality of life in the two counties;
- Provides direction as to where and how organizations can focus their efforts.

The benefits of guided growth and community revitalization may be realized only if the two counties are joined in action by local municipalities, public agencies, private organizations, developers, investors, and others. Timely, coordinated planning efforts to direct development, investment, and activity to specific areas are needed to ensure that initiatives occur in ways that will benefit residents and be sustainable over the long term. Deliberate, cooperative steps to implement the Regional Plan's goals, objectives, and policies are required in order to create a bright future for the two counties.

The Counties' Role

Each county will mobilize its resources and bring them to bear on the issues and opportunities raised by the *Lackawanna-Luzerne Regional Plan*. The Implementation Strategy outlined in this chapter calls for a higher county profile in planning over the coming years. The Implementation Strategy also calls for a higher profile for local planning as well, with municipalities looking to the counties for assistance to help them fulfill that role. County governments will be the lead agencies in the implementation of the Regional Plan.

Municipalities need to be able to receive county assistance in preparing local plans and ordinances. Other technical planning assistance may be required. The counties will need to develop a formal planning assistance program with local governments and other planning partners. The program will include the delivery of specialized professional planning services to local governments under contractual terms and/or the distribution of small grants to municipalities to assist them in engaging their own professional planning expertise.

There is plenty of work to be done to implement the Regional Plan. Actions are required by all those influencing the future direction of the two counties, but the respective County Commissioners and planning staffs will begin the process.

County Commitment and Leadership

Following adoption, the *Lackawanna-Luzerne Regional Plan* becomes the day-to-day policy document of each county regarding development and redevelopment. The decisions of the two counties and their agencies and authorities need to be consistent with the Regional Plan, including capital budget expenditures. Capital improvements need to be consistent with the policies of the Plan. Unequivocal support from county-

level public officials will make it easier to persuade local officials, developers, and others to take the Regional Plan seriously.

Similarly, all departments within the two counties should integrate the Regional Plan into their day-to-day work. Staff support of the Regional Plan should be a basic obligation of employment, as should the dissemination of the Regional Plan's policies.

County Planning Resources

Each county must strengthen and mobilize its resources in order to be able to make use of the Regional Plan. When the Plan is put into effect, outreach to municipalities will commence immediately upon Plan adoption and be sustained for the foreseeable future. Substantive planning issues raised by the Regional Plan will need to be followed up with further studies, research, model ordinance preparation, and other professional planning activities. Plan amendments and updates will be ongoing to ensure that the Regional Plan remains timely.

Plan implementation depends upon a much more prominent county planning role in the coming years. Each county will need a planning staff that is comparable in size and capabilities to other counties in Pennsylvania that are populous, diverse, and committed to planning as a means to achieve economic growth and a high quality of life. Within a year of adoption of the Regional Plan, there should be in place at each county a substantial planning staff, of professional planners with an adequate budget to cover the work program. Within five years of Plan adoption, each county should have a staff of at least ten planning professionals, with a corresponding commitment to an adequate budget in payroll support.

County Outreach to Municipalities

The centerpiece of the *Lackawanna-Luzerne Regional Plan* is its Priority Areas, which are the focus of the implementation program for the Plan. This message will be conveyed in discussions with municipalities and others that are the counties' partners in Regional Plan implementation. The discussion below describes how each county will work with municipalities and other planning partners. Examining existing and proposed local land use policies, regulations, and other initiatives to ensure consistency with the Plan will be a common element of each partnership.

Each county will publicize the Regional Plan and provide information to its public and private planning partners so they can take actions necessary to support Plan implementation. The single most important group targeted for education and outreach is the two counties' municipalities. Each county will also work closely with its other partners, which will include federal, state, county, and local agencies, authorities, institutions, and the private sector, to ensure their awareness and participation.

Each county will be looking to its constituent municipalities to take actions in support of the Regional Plan's policies. Actions include adopting local comprehensive plans and ordinances that are generally consistent with the Plan and providing planning and design support for the development of designated Priority Areas in the Plan. It is critical that the

counties achieve a high degree of cooperation from local municipalities, especially their acceptance of the basic principles of the Plan.

Cooperation, cross-acceptance, and consistency are the key guidelines toward establishing a solid relationship between municipalities and the Lackawanna-Luzerne Regional Plan. There are two major challenges, however, which are as follows:

- Each county has a large number of municipalities. Outreach, interaction, and agreement can be slowed to an ineffective pace when the number of jurisdictions is so great.

- Many local elected and appointed officials are volunteers and may not have had the opportunity to become well versed in the latest planning concepts and tools. The two counties will need to help local officials obtain a working knowledge of the Plan. Doing so will show the many advantages and opportunities that working with the counties and neighboring municipalities can provide. It will also allow discussions about planning resources, tools and programs to occur from a common basis of knowledge.

There are some possible methods that can be used to help overcome these shortcomings. Each county should identify groupings of municipalities that could function as a set for planning outreach, communication, and education and organize certain Plan implementation activities around those groupings.

Cooperation

Each county will work within each planning group of municipalities to provide initial outreach and education about the Regional Plan to local municipalities. County staff will provide planning outreach, communication, and education germane to each planning group, promote the policies of the Plan, work with local municipalities on achieving consistency with the Plan, and facilitate the establishment of an Intercounty Priority Areas Task Force, and targeted Priority Area Task Forces (See **Table 3.1**).

As Plan implementation proceeds, each county will customize its messages about planning for each planning group. Many of the Priority Areas identified in the Regional Plan cross municipal boundaries. Among other things, the outreach provided to planning groups can help to promote the cooperation of local municipalities with the county and with one another in order to make Priority Areas achieve their potential. Each county will work to promote and support inter-municipal planning, cooperative zoning, and area master planning and design guidelines consistent with the Priority Areas defined in the Regional Plan.

Cross-Acceptance and Consistency

Outreach and education is vital to help municipalities understand the potential that is expressed in the Regional Plan and to explain local roles in Plan implementation. Advancing the policies of the Regional Plan will require that local comprehensive plans

and ordinances be generally consistent with the Plan, and support the creation of new and revitalization of existing Priority Areas as directed in the Plan.

A first step will be to prepare the groundwork for a formal review of current (in general, those not more than ten years old) local plans and ordinances for their consistency with the Regional Plan. “Cross-acceptance” will be established in the form of a memorandum of understanding (MOU), in which municipalities agree to work with their county to implement the Plan. The MOU will outline the municipality’s agreement in regard to the following points:

- Municipal support for the implementation of the Regional Plan;
- Willingness to work with the county and municipal partners to implement the Regional Plan;
- Authorization for consistency reviews that will identify the manner in which local plans can be made generally consistent with the Regional Plan.

In addition to a formal letter prepared by county technical staff, consistency reviews will include roundtable discussions among local and county representatives. The letter will summarize potential inconsistencies and/or shortcomings of current plans and ordinances, outline steps that municipalities can use to achieve consistency, and identify appropriate resources.

If the comprehensive plan and implementing ordinances of a municipality are found to be generally consistent with the Regional Plan, the letter will summarize the points of consistency, and outline steps that the county and municipality may take to further support and implement the Plan.

Outreach to Other Groups

While the municipalities will be critical to the Plan’s ultimate implementation, there are many other groups that will be equally important partners in Plan implementation. The counties will provide outreach and education about the Regional Plan to key groups for all levels of government and other institutions that have an interest in the Plan, and/or are important for implementation. How each county would like to work with a group or institution to implement the Regional Plan will be central to the message. Follow up information and strategy sessions will be arranged with these groups and institutions to review the Plan and discuss how best to work together in the future.

The private sector can be a key partner and key beneficiary in the effort to address municipal planning. Creation of an Economic Alliance and Region Governmental Partnership could strengthen the working relationship between private sector leaders and public sector leaders in the two-county region. Enlisting the support of corporations and business leaders in addressing, as appropriate, those recommendations of the Plan for which the business community could provide meaningful support is essential.

Yearly Activities and Plan Updates

The chief mechanism for updating the *Lackawanna-Luzerne Regional Plan* will be the Annual Review. County planning staff will prepare an annual report to their respective County Commissioners summarizing development activities in the county and progress on Plan implementation. If there are any amendments to the Plan to be considered for adoption, county planning staff will prepare these for consideration as part of the annual report.

The Annual Review will, as an annual agenda item, include an Annual Plan, which outlines cross-acceptance agreements to be obtained, consistency reviews to be completed, studies to be undertaken, and other initiatives to be made over the coming year. The Annual Plan will also contain a two-, three-, and five-year Action Plan.

Capital Budget Review

The approved Annual Plan will be completed in time to be considered in the preparation of the county capital budget. Proposed capital budget items will be reviewed by county staff for consistency with the Plan. Inconsistencies may indicate either the need for a change in the focus of expenditures, or an update to the *Lackawanna-Luzerne Regional Plan*.

Potential Tools for Implementation

The major planning recommendations of the Regional Plan are summarized in Chapter 2 – *The Vision*. There are a wide variety of potential tools available to help implement these recommendations, some directly applicable to Land Use recommendations, and others more relevant to the other elements, such as Transportation, Housing, Community Facilities, Agricultural Resources, Utilities, Environmental Protection, Resources Extraction, Energy Conservation, Historic and Cultural Resources, and Parks, Recreation, Open Space, and Greenways.

To help understand which potential tools may be most applicable to which areas of the region, the tools are presented beginning on page 3-8 under headings for the Regional Plan's elements, with color-coded boxes in the left-hand margin indicating to which of the Land Use Plan major future land use designations (*Priority Areas*, *Mixed Density Infill Areas*, *Low Density Infill Areas*, and *Conservation Areas*) these tools apply. (Note that for the purpose of this section the four Conservation Area categories from the Land Use Plan have been consolidated into one color.)

Priority Areas:

- **City Centers**, such as downtown Scranton and Wilkes-Barre;
- **Selected Borough and Township Centers**, such as Kingston, Archbald or Clarks Summit; and
- **Transit Villages**, including the vicinity of the Viewmont Mall in Dickson City Borough and Scranton, or Shavertown Station in Kingston Township.

Infill Areas:

Mixed Density Infill Areas are located along the valleys of the Susquehanna and Lackawanna River basins between Newport Township and City of Carbondale, as well as in adjacent lands outside of the valleys surrounding Priority Areas.

Low Density Infill Areas include existing residential development in many townships as well as smaller boroughs outside of proposed rapid transit service areas. Such areas may also abut Mixed Density Infill Areas such as in the case of Lehman or Fell Townships.

Conservation Areas:

Public Parks and Conserved Lands identifies all State and County Parks as well as public and private conservation areas.

Game Lands, including all hunting and fishing areas under the Pennsylvania State Game Commission's jurisdiction.

2004 Open Space Plan Conservation Areas, determined based on conservation area attributes and the project's ability to create a connected network of open spaces and greenways as recommended in the 2004 Open Space, Greenways & Outdoor Recreation Master Plan for Lackawanna and Luzerne Counties.

Additional Conservation Areas include agricultural and wooded areas where development is generally discouraged, coupled with incentives to develop within areas designated for urban and suburban activity.

1. Potential Tools for Land Use Implementation

The Regional Plan promotes a more sustainable development pattern by encouraging infill development and redevelopment in areas with existing infrastructure and by endorsing compact, center-based development to strengthen local communities and reduce sprawl. Local governments can lead the way to a more sustainable future by ensuring their ordinances promote compact, center-based, mixed-use development. Although each community is unique, certain tools, including zoning, can help municipalities address many land use and development issues.

Brownfields Redevelopment involves the remediation and redevelopment of former industrial or contaminated sites. Such projects can revitalize urban areas and improve the quality of the environment.

Business Improvement Districts (and similar tools such as Special Improvement Districts and Neighborhood Improvement Districts) allow the coordination of business improvement activities, usually by levying a special tax on businesses in the area that will be applied directly back into the district. These activities often include maintenance agreements, façade and streetscape improvements, and security provision.

Compatible Residential Infill Ordinances or Infill Design Guidelines can guide the process of integrating new development carefully into the existing neighborhood fabric with respect to block patterns, scale, building features, landscaping, and other characteristics of the neighborhood.

Conservation Area Protection Plans take the natural resources documented in a Natural Resources Inventory and/or Open Space Plan and identify more specific plans and policies for protection and enhancement.

Conservation Design Ordinances preserve open space on a parcel by concentrating housing units on those portions of the parcel most appropriate for development. The practice arranges homes on a site in a manner such that 50 percent or more of a parcel's total land area can be set aside as common open space. This technique, also commonly known as "clustering," should be employed so that lands of the highest environmental value are preserved and connected with adjacent open spaces to reduce fragmentation. Conservation design ordinances permanently preserve natural areas, farmland, and scenic views, and result in lower environmental impacts and infrastructure requirements.

Conservation Easements are legal documents by which landowners maintain ownership but sell or donate the right to develop their property in order to conserve natural resources, viewsheds, habitat, or farmland. The organization to which the land is eased, whether a private land trust or government agency, is responsible for monitoring deed restriction compliance with current and future property owners.

Dedicated Open Space Funding programs can be set up by local governments through voter-approved ballot referendums. These programs are validated by direct voter support and raise funds through local real estate taxes, income taxes, and bonding for the express purpose of land preservation. These funds can be used to leverage other funds from county, state, or federal sources. Dedicated local funding programs are a proven method for driving successful land preservation efforts at the municipal level.

Enterprise Zones are intended to be in areas that are economically disadvantaged, and involve the receipt of state grants to undertake business development activities. Businesses located in a designated Enterprise Zone may receive tax credits, loans, or other incentives. In Pennsylvania, Keystone Opportunity Zones serve a similar function.

Fee-Simple Acquisition is the purchase of land in order to take ownership of it. A government or land preservation nonprofit may purchase undeveloped land for conservation, recreation, and/or redevelopment purposes.

Form-Based Zoning has become popular due to perceived shortcomings of traditional zoning, and is a way to regulate development to achieve specific physical design standards instead of relying solely on use and bulk standards. They allow a community to establish upfront what type and form of development they want rather than waiting to react to development proposals.

Greyfields Redevelopment involves the redevelopment of abandoned or underutilized shopping centers or strip malls. This redevelopment can often take the form of mixed-use centers and can provide the opportunity to create town centers in communities formerly lacking them.

Growth Areas can be designated by municipalities through the provision of necessary infrastructure and by zoning for higher densities. Promoting and incentivizing compact development within growth areas reduces development pressure on surrounding rural lands.

Higher density development – more people less land – can effectively protect water resources if it occurs within the framework of a more encompassing watershed strategy that considers other factors, such as the location of old and new development, preservation of critical natural lands and the use of site-specific stormwater management practices. Low Density Development when used alone consumes more land and generates more stormwater runoff than the same number of homes accommodated under a higher density scenario in a given watershed. In other words, when measured by the house, higher densities produce less stormwater runoff. When runoff is measured by the acre, limiting density does minimize water quality impacts compared to higher-density scenarios. However, when measured by the house, higher densities produce less stormwater runoff.

Incentive Zoning encourages developers to provide amenities, such as open space, recreational areas, or affordable housing, in exchange for allowing a higher density of development.

Land Value Taxation (also called two-tier or two rate taxation) increases taxes on the value of land, while reducing taxes on the value of buildings and improvements. This can encourage reinvestment in urban areas by lowering the relative cost of improving a property and raising the relative cost of allowing it to remain vacant.

Live/Work Zoning allows for structures that combine a significant amount of floor space for both residential and business use.

Main Street Programs help communities revitalize their downtowns by organizing redevelopment activities, improving design standards, and through promoting or marketing efforts.

Official Maps are ordinances, in map form, that designate existing and proposed areas for public use, such as streets, schools, parks, trails, and greenways. By identifying these areas on an official map, the municipality is announcing its intentions for these areas. When a subdivision or land development is proposed, the municipality has the option, for up to one year after final plan approval, to negotiate various ways to acquire the designated land for the intended use. Unless otherwise agreed upon, the law specifically states that the property owner is entitled to full market compensation.

Overlay Zones provide additional regulations or guidelines via a zoning ordiance on land use within their coverage areas. Overlay zones do not replace existing zones and are often used to protect natural resources, historic areas, and control access along major highways, and offer additional development opportunities.

Performance Zoning regulates development based on the specific impacts of the development on the site instead of on the specific types of uses. For example, performance zoning for an industrial development might consider vehicle traffic, air pollution, noise, and lot coverage, but not regulate what types of industry could locate in the development. Performance zoning provides municipalities with more control over the impacts of development, while giving developers more flexibility in types of permitted uses.

Retail Caps protect the economic vitality of the downtown in many communities by limiting the size of superstores. These limits may apply to the overall square footage of the store, or just to the “footprint,” which would require the store to build up rather than out.

Revitalization Element or Plan contains specific recommendations for brownfield, infill, and redevelopment sites. A targeted Priority Area Plan would be a good example (see Table 3.1).

Tax Increment Financing (TIF) allows public improvement projects to be financed by future tax revenues within a designated area. These future tax revenues are derived from the anticipated increase in land value that these improvements will create.

Traditional Neighborhood Development applies historic development patterns to new development, encouraging compact, center-based development with a mix of uses in a pedestrian-friendly, village-type setting. Important features of traditional neighborhood development include a connected street grid, the use of back alleys to access garages, shallow setbacks, and front porches.

Transfer of Development Rights (TDRs), direct growth into designated areas called “receiving areas,” and direct growth away from rural areas targeted for preservation, called “sending areas.” TDRs accomplish this by setting up a market for development rights, which can be bought and sold. Rural landowners can profit by selling their right to develop their land in the future, while still maintaining ownership of their land. Landowners who purchase development rights can develop their properties in the receiving area at higher densities than would otherwise be allowed. TDRs enable municipalities to create center-based, compact development that is more efficient to service and maintain.

Transit-Oriented Development (TOD) encourages compact, mixed-use development near transit stations. TOD is pedestrian friendly and encourages the use of public transit. These areas may become or reinforce existing town centers. TOD zoning districts are often adopted as overlay zones; they do not replace the original zoning. In Pennsylvania, a municipality may also adopt a Transit Revitalization Investment District (TRID), which enables communities to designate a TRID district and set up “value capture” provisions, whereby increases in land values generated by new public investment in the district are then “captured” in a manner similar to TIF to pay for that investment or other public improvements in the district.

Water Supply Planning – The Municipalities Planning Code (MPC) was amended in 2000 to require the inclusion of a plan for the reliable supply of water in the preparation of local comprehensive plans. Planning for adequate supplies of clean water is just as important as planning for roads, businesses, and schools.

2. Potential Tools for Transportation Implementation

Compact development patterns, particularly transit-oriented and mixed-use development, increase accessibility between origins and destinations. Providing facilities such as sidewalks, bike lanes, and multiuse trails, as well as improving transit service, can help to encourage the use of these more sustainable modes. Widening crosswalks, retiming traffic signals, and providing wider sidewalks, benches, and lighting will benefit residents of all ages.

Access Management provisions improve safety and efficiency on roadways by limiting and controlling access points. By linking land use and transportation planning strategies, access management can reduce congestion and accidents without major capital improvements. Access management tools may involve shared driveways for local businesses, improved signage, parallel access roads, or similar techniques. Access management can often be accomplished in conjunction with the state department of transportation's Highway Occupancy Permit process. County and local governments can issue Highway Occupancy Permits as well.

Complete Streets design standards make roads safer and more user friendly for bicyclists, pedestrians, the disabled, the elderly, and drivers by including wide sidewalks, bicycle lanes, raised crosswalks and medians, audible traffic signals, bus pullouts, and other design elements that support safe, alternative transportation.

Context-Sensitive Design/ Context-Sensitive Solutions recognize that roadway improvements should not incorporate a one-size-fits-all approach, but should instead reflect their surrounding land use. Depending on whether the roadway is in an urban, suburban, or rural area affects the roadway width, presence of parking, and appropriate speed limit.

Green Fleet and Commute programs call for the purchase of fuel-efficient and alternative fuel vehicles and encourage employees to use public transportation or carpool to work.

(Parking) Pricing or Metering Strategies in locations where the amount of available parking is scarce and/or parking turnover is encouraged.

(Parking) Dedicated and/or Preferred Parking for bicycles, vanpools, carpools, car-sharing, and low-emitting and fuel-efficient vehicles.

(Parking) Alternative Parking Standards include flexible parking provisions such as Shared Parking, Reserve Parking, and Fee-in-Lieu of Parking.

(Parking) Sustainable Practices in Parking Design include the use of recycled concrete and asphalt, pervious paving, stormwater best practices, and heat island preventing treatments.

(Parking) Revisit Minimum Parking Standards to ensure that required parking supply does not exceed demand and is sensitive to the local context. In some cases, such as in TODs or historic villages, Parking Maximums may be appropriate.

Roundabouts are circular intersections with specific design and traffic control features. Key features include yield control of entering traffic, channelized approaches, and appropriate geometric curvature to slow speeds. Roundabouts provide substantially better operational and safety characteristics than older traffic circles and rotaries and are safer than comparable signalized intersections.

Sidewalk Standards in a municipal subdivision and land development ordinance require sidewalks be included on all subdivision and site development plans.

Traffic Calming techniques can reduce traffic speeds by incorporating physical elements, such as speed humps, narrow lanes, wide sidewalks, diagonal or parallel street parking, and central medians with landscaping, into roadway design to modify driver behavior.

Traffic Signal Systems use timing and signal coordination to manage the flow of traffic volumes along a corridor. In municipalities where congestion is a serious concern, the possibility of implementing closed-loop traffic signal systems should be explored in coordination with the state department of transportation.

The transportation plan that is required to implement the combined two-county vision requires an investment plan that is focused on asset management and multimodal improvement. The projects listed in the tables below focus on the primary program areas of asset management.

The plan focuses on education and involvement to allow the transportation system stakeholders to understand and craft a program of projects.

- Closer linkage between the TIP and the Long Range Transportation Plan(LRTP)
- Implementation of current statewide priorities such as the accelerated bridge program and focus on asset management
- Focus on critical asset and performance measurement
- Better focus on existing plans and tools and making sure they are used to feed all planning efforts (GIS tools, CMS studies, bridge risk assessment)
- Identifying projects that may be able to serve/address multiple issues/ modes
- Prioritize projects that support the plan goals
- Prioritize projects that have private and local funding
- Develop strategies for assisting communities with roadway rehabilitation to make urban areas more attractive for investment and residential living
- Enhanced communication and coordination among state, county, and local municipalities regarding highway/bridge needs and funding assistance.

Project Listing

The complete list of highway, bridge and transit projects prioritized for implementation of this long range plan has been included in the Appendices at the end of this document and has been provided to the two counties and to PennDOT in a program development manual for their continuous use and adjustment. The projects were prioritized using the process described in Chapter 4 of this document and have been fiscally constrained using the analysis described in Chapter 4. The list includes all projects currently on the TIP and long range plan. ***Figure 3.1*** illustrates these projects and allows the reader to see the spatial relation of the types of projects being proposed in the plan.

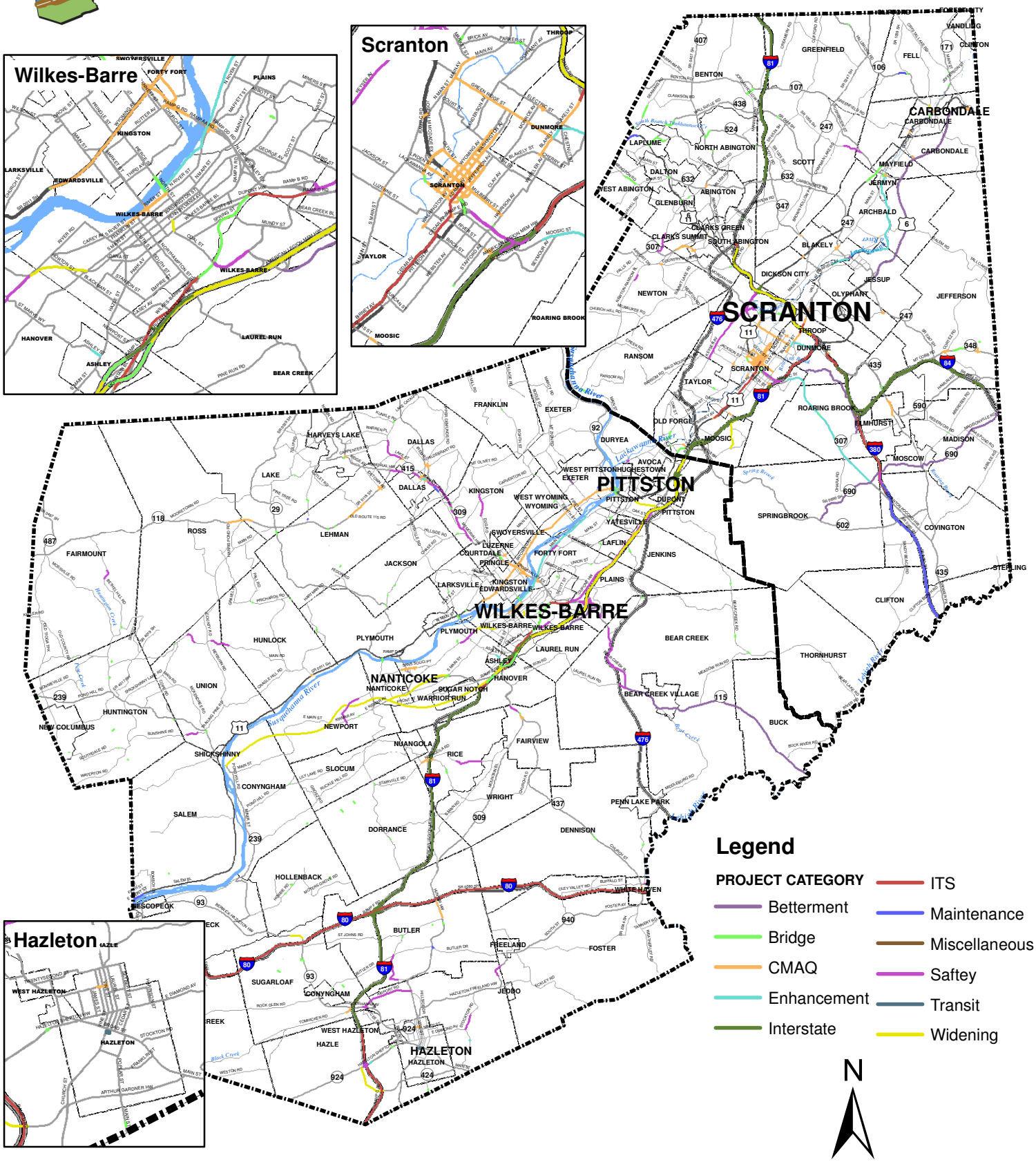
Performance Measures

The key to making this plan successful and a starting point for the future and future compliance with the direction of the transportation system at the federal level will be measuring system performance. With the development of this plan, evaluation of system performance is a challenge without the travel demand modeling tool. Therefore, the first step for the region may be the development of a travel demand model tool that can be used for future updates and monitoring. Outside of this recommendation, this plan has identified several performance indicators that can be tracked every four years to give the stakeholders a better idea of if the plan is working or not. These metrics should be revisited every four years and prioritization criteria adjusted to assure the region is growing in a manner that is consistent with the goals and objectives of the comprehensive plan and the long range transportation plan.

Several key transportation measures have been identified in Chapter 4 and should be used as a baseline in assessing the plan four years from now. The reader is encouraged to study those measures and the prioritization criteria to help focus the plan's energy in the future. Using the data and analysis in Chapter 4 as a baseline and the goals and objectives established in the plan as the tools for implementation will allow the two county region to measure the performance of the transportation system in four years. This plan has included a detailed analysis methodology that can be maintained and duplicated in future efforts. This information is a key to measuring how well the transportation system is improving be it transit level of service or number of structurally deficient bridges.

LONG-RANGE TRANSPORTATION PLAN PROJECTS

Figure 3.1



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

3. Potential Tools for Housing Implementation

Flexible housing types, sizes, and designs can provide housing opportunities for families and individuals with a range of incomes, help the region be less energy dependent, and provide housing choices. To help seniors, municipalities can adopt policies to support aging in place. Local codes that allow increased densities and integrated land uses, for example, can help improve access services.

Housing Maintenance and Rehabilitation Programs targeted to elderly or low-income homeowners can help preserve the existing housing stock, and modification programs that make units more accessible can help seniors stay in their homes longer.

Housing Units above Commercial and Retail Spaces can provide affordable housing opportunities and enhance the vitality of centers.

Inclusionary Zoning ordinances require either a mandatory or a voluntary (opt-in) percent of affordable units to be built in a development in exchange for nonmonetary entitlements from the municipality, such as density bonuses, fee waivers, or relaxed parking regulations.

Universal Design Standards are guidelines for the built environment and products that emphasize ease of use, accessibility, and attractiveness for people of all abilities.

4. Potential Tools for Community Facilities Implementation

Planned improvements/expansions in community facilities will allow residents' needs to be met over the course of the planning period. Facility demands range from health and public safety, to recreation, to education and workforce development. Benefits from investing in community facilities include diversifying employment opportunities and increasing entrepreneurial and workforce capacity.

The Bi-County Hazard Mitigation Plan for Lackawanna and Luzerne Counties recommends that public facilities not be located in unsafe areas, such as floodplains, steep slopes, etc.

Smart Location of Public Facilities situates universities, community colleges, high schools, libraries, senior centers, community centers, post offices, State and federal offices, municipal offices, and similar facilities in areas that are accessible by a variety of modes, and it integrates them into the fabric of the existing community. This increases the vibrancy of existing centers and developed areas and better serves the public.

5. Potential Tools for Parks, Recreation, Open Space and Greenways Implementation

Green infrastructure investments ensure the continual creation and maintenance of networks of greenspace and access to parklands.

Greening Vacant Lots transforms otherwise derelict parcels from sources of blight into valuable pieces of community green infrastructure.

Neighborhood Parks provide much-needed natural vegetation and trees in urban settings and provide all the environmental and aesthetic benefits inherent in community green infrastructure.

Parkland Dedications require developers to provide public open space within their developments, or to contribute a fee-in-lieu of dedicated land, to be used toward land preservation projects elsewhere.

Trails are a type of linear park that can be integrated into developed communities, thereby creating a linear green feature and providing alternative transportation.

6. Potential Tools for Historic and Cultural Resources Implementation

Historic preservation includes the protection and maintenance of important places from the past, including buildings, neighborhoods, sites, and landscapes. By protecting, preserving, and encouraging the use and reuse of their historic resources, municipalities can maximize efficient use of their existing infrastructure, curb sprawling development patterns, and enhance local identity and community character.

Certified Local Governments are designated by federal or state preservation agencies and are then eligible for various forms of technical assistance, training, and participation in statewide preservation programs.

Demolition Ordinances require that structures be examined for historical significance before their demolition is permitted.

Historic Overlay Zones provide additional regulations for the development of land and modification of buildings in the area that they cover. Historic overlay zones are often applied to historic town centers to protect their unique architecture and character.

Historic Preservation Planning allows municipalities to identify goals, inventory historic resources, and formulate and implement strategies for historic preservation.

Historic Resources Design Standards help to ensure that the visual characteristics that make a historic district unique are preserved. They can be useful tools if adopted as part of a historic overlay zone or in a local historic district.

Historical Commissions/Societies, or historic architectural review boards, are local government bodies that societies oversee historic preservation planning and decision making in their community. Establishing historical commissions is often necessary to implement other local historic preservation efforts.

Local Historic Districts can be created by municipalities to preserve significant historic areas. Local historic district ordinances can preserve community character by regulating the erection, alteration, restoration, and demolition of buildings within the district.

The National Register of Historic Places is the official list of the nation's cultural resources worthy of preservation. The list recognizes properties of national, state, or local significance, gives added consideration in the planning for federally assisted projects, and makes properties eligible for certain tax benefits and grant programs. Listing in the National Register does not prevent properties from being altered or demolished.

Village Preservation Ordinances can serve to protect historic villages by ensuring that future development, as well as modifications to existing structures, is consistent with the historic context and form of the village.

7. Potential Tools for Agricultural Resources Implementation

Protecting farmland is necessary to maintain the viability of agriculture, to protect the cultural and physical fabric of rural areas, and to encourage sustainable growing practices while conserving natural resources.

Agricultural Conservation Easements are the most effective measures for preventing the development of farmland. They are legally binding instruments which go with the deed and prevent development forever.

Agricultural Zoning allows municipalities to protect rural and agricultural areas by encouraging agriculture as a primary use.

Comprehensive Plans and Zoning Ordinances can set municipal policy and implementation to encourage more local food production and distribution through goal and vision statements, effective agricultural zoning, right-to-farm provisions, on-farm direct marketing provisions, provisions for healthy food retail, including farmers' markets and community gardens, urban/suburban livestock ordinances, and innovative agricultural districts.

No-Till Farming is a farming practice introduced in the 1980s and is growing in popularity with environmentally savvy farmers. No-till farming cuts down on the amount of fertilizer and soil washed away in rainstorms and also reduces carbon dioxide released into the atmosphere by eliminating the entire plowing system commonly used by farmers. Lackawanna County's Conservation District provides a four row no-till corn planter and a no-till drill for rent. The equipment available for rent is part of Lackawanna County's no-till farming program. Luzerne County's Conservation District provides information on no-till farming to area farmers, and some farmers do use no-till farming in their operations.

Procurement Policy Preference for Local Food Businesses can be established by local governments to support local farmers, processors, and food businesses, circulating money within the local economy. Municipalities can also sponsor farmers' markets and CSA (Community Supported Agriculture) pick-up sites, buy local food on an ad-hoc basis for special events, and make public land available for community gardens.

Right-to-Farm Provisions protect farmers from nuisance complaints of odor, noise, and traffic, as long as the farm is in keeping with good management practices. These are protected by Agricultural Security Areas and Agricultural Communities and Rural Environment (ACRE) legislation in Pennsylvania.

Sliding Scale Zoning is a type of agricultural preservation zoning that regulates the amount of nonfarm development by the size of an agricultural parcel. A greater density of development is permitted on small parcels with less potential for major agricultural uses, while such density is proportionally limited on large parcels that contain major active or commercial farms.

8. Potential Tools for Environmental Protection Implementation

The protection of natural resources is fundamental to protecting water quality, air quality, soil health, biodiversity, and wildlife habitat, and for providing opportunities for outdoor recreation and environmental education.

Buffer Zones require trees and vegetation between different uses, such as residential and commercial, or between roads and buildings.

Environmental Resource Inventories (ERIs), that may include Natural Resource Inventory and/or Open Space Plans, are compilations of factual narrative and mapped information about the natural characteristics of a municipality. They identify critical natural resources and provide a policy basis for the establishment of resource protection ordinances.

Floodplain Management Ordinances control the amount and type of development in the 100-year floodplain or designated flood hazard area to prevent property damage and loss of life from flooding.

Impaired Waters are waterbodies that do not meet their designated uses – including aquatic life, recreation, and drinking water - and are identified on the Pennsylvania Integrated Water Quality Monitoring and Assessment Report. DEP and the EPA work in conjunction with other organizations to develop a Total Maximum Daily Load (TMDL) for each impaired waterbody. A TMDL defines the allowable pollutant loads a waterbody can receive from point and nonpoint sources and still be able to maintain its designated water quality standards.

Landscape Ordinances promote site-appropriate native plants and set minimum thresholds for the use of naturalized landscaping in parking lots and other forms of new commercial and residential development.

Source Water Protection is important because the Upper/Middle Susquehanna and Delaware Regions supply several large communities with drinking water. Groundwater, rivers, and lakes in the region face potential contamination from a number of sources, such as development, agriculture, old septic systems, waste disposal sites, and abandoned mines. Pennsylvania state agencies are working with organizations in the region to help assess the health of surface water and groundwater, identify point and nonpoint sources of pollution, prevent contamination, restore degraded waters, preserve pristine waters, increase public awareness of existing problems and help the public utilize best management practices.

Special Protection Waters are water bodies designated special protection to prevent activities that could degrade water quality and therefore prevent these waters from meeting their uses. These special designations include federal or state Scenic/Recreational Rivers, High Quality and Exceptional Value Waters and Class A Wild Trout Streams.

Specimen and Special Tree Protections require developers to protect trees of a certain size, species, or other community value.

Stream Corridor Protection Ordinances require development to be set back from stream banks, floodplains, and wetlands, and require the maintenance of natural vegetation within the corridor. Buffer widths typically range from 25 to 300 feet, depending on the type and size of the stream and the community's goals.

Street Tree Ordinances identify municipal responsibilities for planting, maintaining, and removing trees, and establishes a tree commission with authority to guide the management of public street and park trees.

A Tree Inventory provides specific data on street and park tree location, species, condition, and maintenance needs to manage budgeting, staffing, and maintenance of trees.

A Tree Management Plan for street and park trees addresses species diversity, planting needs, hazardous trees, insect and disease problems, and delivery of regular care, such as pruning and watering.

Tree Planting and Care Standards requiring trees to be shown on subdivision and site development plans should be included in subdivision and land development ordinances. Requirements should contain strict design standards that require the protection of trees during the development process, replacement or mitigation, and maintenance after development.

Wetlands Management Ordinances protect environmentally sensitive wetland areas by prohibiting any disturbance of delineated wetlands from residential, commercial, or industrial development. Like stream corridor protection ordinances, wetlands management ordinances can require maintenance of vegetated riparian buffers around wetlands.

Woodland Protection/Percent Tree Cover requires a certain percentage of tree cover to be preserved, sometimes on a sliding scale, depending on the type of development and steepness of slope.

9. Potential Tools for Utilities & Energy Conservation Implementation

Implementing measures to reduce energy costs will lower local governments' operating costs, while creating a demand for workers and providers of energy efficiency and renewable energy products and services. Energy-efficiency improvements also present opportunities to improve air quality and modernize aging infrastructure. Cost-saving measures to reduce energy and greenhouse gas emissions have proven successful for local government operational sectors, and include buildings, fleets, outdoor lighting, and wastewater treatment facilities.

Alternative Energy Ordinances ensure that alternative energy – wind, solar, geothermal, and biofuel – production is cost effective and compatible with existing land uses in a community.

Baseline Energy Analysis of Municipal Operations enables local governments to determine the areas in which they are consuming the greatest amounts of energy at the greatest cost. By conducting a simple evaluation of operational sectors and individual buildings with easy-to-use tools, local governments can focus energy reduction efforts.

Bioswales are long, naturally vegetated, shallow depressions designed to intercept sheet flow (runoff that flows over the ground as a thin, even layer rather than concentrating in a channel) from surrounding land.

Community green infrastructure is a network of different types of greenspace and green features that provide natural ecosystem functions and enhance the livability of developed communities. For example, community green infrastructure in the form of trees and green streets can boost property values, support retail activity, improve health, protect water quality, reduce stormwater runoff, clean air, store and sequester carbon, provide wildlife habitat, and increase roadway safety.

Energy Audits assess how much energy a building consumes, identify measures that can make a building more efficient, and provide information about potential energy cost savings. Even a simple no-cost audit of a building's plug load, which can account for over 20% of a building's electric energy usage, can identify low- or no-cost energy saving measures.

Energy-Efficient Purchasing, standards, and specifications can ensure that appliances, information technology equipment, lighting, and control equipment have the greatest efficiency for their use; while reducing utility bills and lowering operation and maintenance costs.

Energy-Efficient Traffic Signals and Streetlights are an opportunity for municipalities to reduce energy use and greenhouse gas emissions with new lighting technologies, such as high pressure sodium, LED, or induction fluorescent.

Energy Performance Contracting (EPC) allows local governments to audit and retrofit several buildings and facilities for energy efficiency. The benefits of an energy performance contract may include limited upfront capital expenditures, and do lead to long-term energy cost savings. The EPC can be financed through a tax-exempt "municipal lease," which is considered a non-balance sheet debt and can be paid back through savings in the operating budget.

Green Building and Energy-Efficient Design Standards for public and private buildings can be integrated into building and zoning codes as a way to demonstrate environmental leadership and reduce energy use in buildings. These practices can be encouraged in local communities through public sector leadership or through incentives. Incentives can take a variety of forms, either financial (such as tax rebates, fee waivers, or cash payments) or nonfinancial (such as development bonuses in terms of increased floor area ratio, building height, density, expedited permit processing, or fast track review).

Green Roofs utilize plant vegetation in the place of typical rooftop covers (shingles, tiles, membrane, tar, etc.). A green roof consists of several layers below the plants, including soil, drainage layer, a root inhibitor, and up to several layers of thick, waterproof materials making up the base of the surface. Green roofs provide cooling benefits to the building and help to counteract the urban heat island effect. Installation costs are competitive with traditional roofs and often require less maintenance.

Green Streets involve a range of techniques within and adjacent to the street right-of-way that serve to integrate stormwater runoff. Examples include tree trenches, naturalized retention basins, and rain gardens.

Naturalized Retention Basins create a natural flow channel for rainwater and use dense tree, shrub, wildflower, and tall meadow grass vegetation to slow down and filter runoff. Naturalized retention basins add aesthetic beauty, which increases property values, while recharging water tables, reducing erosion, and improving water quality.

Rain Gardens are small bioretention areas – shallow depressions made up of a mixture of sand and soils planted with native vegetation – that serve to filter stormwater runoff from their immediate surroundings.

Stormwater Ordinances set standards for the amount of impermeable pavement, peak flow runoff, and required landscaping for developments. Steep Slope Ordinances limit development on steep and moderate slopes to reduce erosion and prevent slope collapse.

10. Potential Tools for Resources Extraction Implementation

Opportunities for exploration of alternative energy sources and raw materials may continue to include resource extraction. It is becoming increasingly important that these future practices should include stricter safety measures, processes with fewer impacts, and reductions in carbon emissions. Protection of the natural ecosystem promotes safe drinking water and air quality.

Carbon Emission Rights Trading can allow extraction operators to participate in emission reduction practices at market value through technology/product standards, production tax credits for non-fossil energy production, and tax credits for alternative energy use.

Marcellus Shale Gas Extraction should be controlled to the degree possible, through zoning and land development regulations.

Mine Area Reclamation should include a prioritization strategy based on the Regional Plan's Land Use Plan, beginning with Priority and Infill Areas located in areas that have been disturbed by mining activities.

An Implementation Strategy for the Regional Plan – Objectives, Actions, Responsible Parties, Timing & Costs

While there are many potential tools for implementing the Regional Plan (see above), there are a more limited number of essential actions that are required in order to advance the objectives of the Plan. These are listed in ***Table 3.1***, along with the responsible parties for these actions, the timing of them, and the kinds of costs that may be associated with them.

An Action Plan for Implementation

Table 3.2 describes initial and subsequent critical actions needed to implement the Plan, including internal and external county coordination. Also included is enlisting the services of public and private agencies and organizations at all levels in order to coordinate policies and leverage available technical and financial resources.

Adoption of the Regional Plan implies a commitment to follow through with the establishment or revitalization of Priority Areas, as designated in the Plan. Through the Regional Plan, the counties have identified specific locations for investment, activity, development, and redevelopment. The establishment of an Inter-county Priority Areas Task Force to determine four Priority Areas that should be targeted in the short term for development and for which focused master/urban design plans need to be prepared, and the establishment of Targeted Priority Area Task Forces for each targeted Priority Area, to oversee the preparation of focused master/urban design plans, are two critical early-action items for the implementation of the Regional Plan.

Table 3.1
Implementation Strategy for the *Lackawanna-Luzerne Regional Plan*

Land Use

Objectives	Actions	Responsible Parties	Timing	Costs
A. Promote municipal consistency with the Lackawanna-Luzerne Regional Plan.	1. Plan together, with intermunicipal consultation, cooperation, and consensus-building, and with the involvement of the counties, State, and other planning partners, as appropriate.	• Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • DCED • Other State Agencies • Other Planning Partners • Developers/Major Land Owners	Now	Agency staff time, for the most part.
	2. Establish an Intercounty Priority Areas Task Force to determine the 4 Priority Areas that should be targeted in the short term for development and for which focused master/urban design plans need to be prepared.	• Lackawanna County Planning • Luzerne County Planning • Other County Agencies • Chambers of Commerce • Industrial Dvlpmnt. Agencies	Now + 1 yr.	Agency staff time, for the most part.
	3. Establish Targeted Priority Area Task Forces for each Targeted Priority Area, to oversee the preparation of focused master/urban design plans.	• Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • Other County Agencies • Chambers of Commerce • Industrial Dvlpmnt. Agencies	Short-Term (1-2 years).	Agency staff time, for the most part.
	4. Limit the amount, extent, and intensity of new development outside designated Priority Areas.	• Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • DCED, PennDOT, DEP • Other State Agencies	Now	Agency staff time, for the most part.

Land Use (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
	5. Enact new county zoning and Subdivision and Land Development (SALDO) regulations (Luzerne County).	• Luzerne County Planning • Economic Development Partners		Agency staff time, for the most part.
B. Direct development and redevelopment to Priority Areas as identified in the Land Use Plan.	1. Devise focused master/urban design plans and new zoning district regulations for Targeted Priority Areas in the short term and other Priority Areas in the medium and long term.	• Lackawanna County Planning • Luzerne County Planning • Targeted Priority Areas Task Forces • Local Governing Bodies • Other County Agencies • DCED • Other State Agencies • Economic Development Partners	Targeted Priority Areas – Short-Term (1-2 years).	Consultant fees to prepare Priority Area plans and Priority Area regulations.
	2. Produce and distribute marketing brochures to solicit private partners to participate in the development/ redevelopment of Priority Areas.	• Lackawanna County Planning • Luzerne County Planning • Intercounty Priority Area Task Force • Targeted Priority Area Task Forces • Local Governing Bodies • Other County Agencies	When master/urban design plans are in final draft form.	Consultant fees to prepare brochures.

Land Use (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
	3. Review and approve land development plans for Priority Areas.	• Targeted Priority Area Task Forces • Local Planning Commissions • Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning • PennDOT, DEP, other State Agencies	When final land development plans are ready.	Some review costs may be passed on to developers.
	4. Construct land developments in Priority Areas.	• Developers • Local Municipalities • PennDOT • Permit Agencies	When final land development plans are approved.	Developers, possibly PennDOT and/or others.
C. Establish Priority Areas as compact, intensive mixed-use centers for living, working, and playing	1. Formulate master/urban design plans that incorporate mixed-use buildings, civic space, community facilities, and 'complete' streets, including sidewalks, crosswalks, landscaping, pedestrian-oriented lighting, transit stops, bicycle lanes, and on-street parking.	• Targeted Priority Area Task Forces • Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • Chambers of Commerce • Economic Development Agencies	Targeted Priority Areas – Short-Term (1-2 years). Other Priority Areas – as set by schedule for Priority Areas development.	Consultant fees to prepare Priority Area plans and Priority Area regulations.

Land Use (continued)

Objectives	Actions	• Responsible Parties	Timing	Costs
	2. Adopt new development regulations for each Priority Area to achieve a mixing of uses and use tools such as form-based zoning and design controls to gain pedestrian-scaled settings and land development plans that follow through on the guidelines of the master/urban design plans.	• Targeted Priority Area Task Forces • Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning • Chambers of Commerce • Economic Development Agencies	When master/urban design plans are in final draft form.	Consultant fees to prepare Priority Area regulations.

Transportation

Objectives	Actions	Responsible Parties	Timing	Costs
A. Continue to promote an asset management focus and redevelopment of critical assets to promote beneficial land use densities.	1. Monitor the status of existing assets via data and information provided in the plan. Specifically track structurally deficient bridges and roadway International Roughness Index.	• MPO • PennDOT	Now	Agency staff time, for the most part.
	2. Provide new and/or upgraded transit service for Priority Areas, including internal circulation and connections to external destinations.	• Transit Providers • TMAs • Lackawanna County Planning • Luzerne County Planning • PennDOT • Destination Partners	In time for first new occupants and thereafter.	Developer or corporate entity may pay for internal service.
	3. Implement the recently-completed Route Analyses recommendations and promote the transit agencies' consolidation efforts.	• Transit Providers • TMAs • Lackawanna County Planning • Luzerne County Planning • PennDOT • Destination Partners	Now	Agency staff time, for the most part.
B. Consider new multimodal capacity that supports priority areas identified in the Plan as funds become available.	1. Utilize project prioritization criteria to prioritize projects for consideration on the next TIP update	• MPO	Within two years	

Transportation (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
C. Adjust criteria for project prioritization as warranted, based on changing regulations and funding availability	1. Revise and modify the project prioritization criteria for use in the next Regional Plan.	• MPO • PennDOT • Stakeholders • Chambers of Commerce • Industrial Development Agencies	Now	
D. Promote the use of new GIS analysis tools developed as part of this Plan.	2. Encourage the use of GIS to complete new project screening forms.	• PennDOT District 4-0 • PennDOT Central Office • Lackawanna County • Luzerne County	Within four years	
E. Promote a more performance based measurement and analysis of the transportation system.	1. Develop a travel demand model for the two county region that would allow better evaluation and tracking of transportation system performance.	• PennDOT District 4-0 • PennDOT Central Office • Lackawanna County • Luzerne County	Within four years	

Housing

Objectives	Actions	Responsible Parties	Timing	Costs
A. Support a variety of housing opportunities, including affordable housing, in the Priority Areas identified in the Land Use Plan.	1. Encourage municipalities to develop provisions in their zoning ordinances and SALDOS to achieve a mixing of uses and the inclusion of multi-family, live-work, and accessible and visitable units.	• Targeted Priority Area Task Forces • Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning • Institute for Public Policy	When master/urban design plans are in final draft form.	Consultant fees to prepare Priority Area regulations.
	2. Except as noted below (Housing Objective B), direct all funding for new housing and supporting infrastructure to Priority Areas.	• Lackawanna County Planning • Luzerne County Planning • Other County Agencies • Local Governing Bodies • DCED • Other State Agencies	Now and thru planning period	Agency staff time, for the most part.
B. Encourage infill housing and improve the quality of the existing housing stock in established communities in Priority and Mixed Density Infill Areas.	1. Complete studies of vacant and abandoned properties in Priority and Mixed Density Infill Areas.	• Lackawanna County Planning • Luzerne County Planning	Now	Agency staff time and/or consultant fees to conduct study.
	2. Direct strategic rehabilitation of housing units to stabilize and revitalize established communities in Priority Areas and Mixed Density Infill Areas.	• Lackawanna County Planning • Luzerne County Planning • Other County Agencies • Local Governing Bodies • DCED • Other State Agencies • Institute for Public Policy	Now and thru planning period	Agency staff time, for the most part.

Housing (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
C. Promote the use of green building techniques and energy efficient housing design.	1. Provide information on county and municipal websites to encourage housing developers to use the LEED or a similar certification process.	• Lackawanna County Planning • Luzerne County Planning • Other County Agencies • Local Governing Bodies	Now and thru planning period	Agency staff time, for the most part.
	2. Adopt building Code and/or SALDO regulations and guidelines that provide incentives for green building techniques and energy efficient housing design.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning	Short-Term (1-2 years).	Possible consultant fees to prepare regulations and guidelines.

Community Facilities

Objectives	Actions	Responsible Parties	Timing	Costs
A. Provide new and expanded public and private facilities close to transportation hubs to maximize accessibility for patrons by a variety of modes.	1. Construct new and upgraded facilities such as universities, community colleges, high schools, libraries, senior centers, community centers, post offices, State and federal offices, and municipal offices in concert with Priority Areas development.	• Targeted Priority Area Task Forces • Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • Other County Agencies • School Districts • Community Colleges • Other Educational Institutions • State Agencies • Federal Agencies • Developers	Targeted Priority Areas – Short-Term Other Priority Areas – as set by schedule for Priority Areas development.	Agency staff time. Consultant fees. Developer may pay for facilities as part of Plan approvals.
	2. Develop public and private adult day care centers, senior centers, licensed personal care facilities, and any other age-related facilities to care for the counties' aging population in concert with Priority Areas development	• Lackawanna County Human Services Department • Luzerne County Human Services Division • Public and private providers	Start now, especially for Targeted Priority Areas.	Agency staff time. Developer may pay for facilities as part of Plan approvals.
B. Encourage inter-municipal cooperation in the provision of local services.	Provide workshops for local municipalities on regional servicing.	• Lackawanna County Planning • Luzerne County Planning • PA Local Government Academy • PSATS • DCED	Now	Agency staff time, for the most part. Possible consultant fees.

Parks, Recreation, Open Space, and Greenways

Objectives	Actions	Responsible Parties	Timing	Costs
A. Conserve open space.	1. Set conservation priorities from Conservation Area identified in the Land Use Plan and the 2004 Open Space, Greenways, & Outdoor Recreation Master Plan.	• Lackawanna County Planning • Luzerne County Planning • Lackawanna County Parks & Recreation • Local Governing Bodies • Land Trusts & Conservancies • DCNR, DEP	Now	Agency staff time, for the most part.
	2. Provide a variety of incentives, regulations, and guidelines to ensure that development occurs in a manner that also results in open space being permanently protected.	• Local Governing Bodies • Luzerne County Planning	Short-Term (1-2 years).	Possible consultant fees to prepare incentives, regulations, & guidelines.
B. Establish trails & greenways that provide connections between people, recreational facilities, and cultural facilities and other significant public areas	1. Identify the trail and greenway network that will connect Priority Areas to one another.	• Lackawanna County Planning • Luzerne County Planning • Lackawanna County Parks & Recreation • Local Governing Bodies • Land Trusts & Conservancies • Lackawanna Heritage Valley Authority	Short-Term (1-2 years).	Agency staff time and possible consultant fees.

Parks, Recreation, Open Space, and Greenways (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
	2. Encourage the construction of the trail and greenway network.	• Lackawanna County Parks & Recreation • Local Governing Bodies • Land Trusts & Conservancies • Foundations • DCNR, DEP • Developers • Lackawanna Heritage Valley Authority	Thru the planning period	Mixture of public & private funding for land and/or easement acquisitions and physical construction.
	3. Facilitate public access to and along riverfronts.	• Lackawanna County Planning • Luzerne County Planning • Lackawanna County Parks & Recreation • Local Governing Bodies • Land Trusts & Conservancies • Foundations • DCNR, DEP • Developers • Lackawanna Heritage Valley Authority • Lackawanna River Corridor Association • Luzerne County Flood Protection Authority	Thru planning period	Mixture of public & private funding for land and/or easement acquisitions and physical construction.

Parks, Recreation, Open Space, and Greenways (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
C. Expand the parks system to serve existing and future populations, particularly in Priority Areas	Establish new local parks, including civic squares near transportation hubs, tot lots, and small green spaces in Priority Areas and Mixed Density Infill Areas, and larger parks toward the edge of Infill Areas.	• Lackawanna County Planning • Luzerne County Planning • Lackawanna County Parks & Recreation • Local Governing Bodies and Park & Recreation Depts. • Land Trusts & Conservancies • Foundations • DCNR, DEP • Developers	Thru planning period	Mixture of public & private funding for acquisition, construction, and operations.
D. Raise public awareness of the benefits of greenways and open space	Assist local environmental groups, chambers of commerce, and tourism promotion agencies in conducting marketing programs.	• Lackawanna County Planning • Luzerne County Planning • Lackawanna County Parks & Recreation • Local Governing Bodies and Park & Recreation Depts. • Land Trusts & Conservancies • Foundations • DCNR, DEP	Now and thru planning period	Agency staff time, for the most part.

Historic & Cultural Resources

Objectives	Actions	Responsible Parties	Timing	Costs
A. Identify and promote historic and cultural resources.	1. Conduct a comprehensive survey of resources in all municipalities and prepare a searchable regional database.	• Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • Local Historical Societies • Local Foundations • PHMC	Medium-Term (3-5 years)	PHMC grants, local volunteers, and agency staff time.
	2. Coordinate with the Pennsylvania Historical and Museum Commission (PHMC) yearly to receive updated electronic versions of the National and State Register listed and eligible resources.	• Lackawanna County Planning • Luzerne County Planning	Now and thru planning period.	Agency staff time, for the most part.
	3. Prepare brochures describing historic resources, historic tour opportunities, and counties' websites.	• Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • Local Historical Societies • Local Foundations • PHMC	Medium-Term (3-5 years)	$10,000 to $15,000 yearly
B. Protect historic and cultural resources.	1. Provide development incentives to preserve resources, including density bonuses, permitted uses relief, parking requirements relief, and tax abatements.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning • Other County Agencies	Targeted Priority Areas – Short-Term (1-2 years). Other areas – Med.-Term (3-5 years)	Dependent on the incentive
	2. Use historic overlay district zoning.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning	Now and as surveys are completed	Agency staff time, for the most part.

Historic & Cultural Resources (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
C. Utilize cultural resources as a tool to stimulate economic development.	1. Identify resources with characteristics likely to appeal to investors and tourism.	• Lackawanna County Planning • Luzerne County Planning • Other County Agencies • Business Organizations	Short-Term (1-2 years)	Agency staff time, for the most part.
	2. Market historic and cultural resources as a feature of Priority Areas.	• Lackawanna County Planning • Luzerne County Planning • Targeted Priority Areas Task Forces • Local Governing Bodies • Other County Agencies • Developers	Targeted Priority Areas – Short-Term (1-2 years). Other areas – Medium-Term (3-5 years)	Agency staff time, for the most part.
D. Protect historic landscapes including viewsheds and corridors.	Identify Scenic Highway and Heritage Park opportunities.	• Lackawanna County Planning • Luzerne County Planning	Short-Term (1-2 years)	Agency staff time, for the most part

Agriculture

Objectives	Actions	Responsible Parties	Timing	Costs
A. Conserve land for agriculture through Zoning ordinances and SALDOs.	1. Direct all new urbanizing uses (residential, commercial, industrial, and institutional) to Priority Areas and Infill Areas, unless such uses are directly related to the practice of agriculture, outdoor recreation, or forestry.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning • Other County Agencies • DCED, DEP • Other State Agencies	Now and thru planning period	Agency staff time, for the most part.
	2. Direct all new infrastructure to Priority Areas and Infill Areas, unless it is directly related to the practice of agriculture, outdoor recreation, or forestry.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning • Other County Agencies • DCED, PennDOT, DEP • Other State Agencies	Now and thru planning period	Agency staff time, for the most part.
B. Within Conservation Areas, support agriculture as a viable land use.	1. Enact effective agricultural zoning.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning	Short-Term (1-2 years).	Possible consultant fees to prepare regulations and guidelines.

Agriculture (continued)

	2. Acquire conservation easements.	• Lackawanna County Agricultural Land Preservation Program • Luzerne County Farmland Preservation Program • Land trusts & conservancies	Thru planning period	Mixture of public & private funding.
C. Promote sustainable agricultural practices.	Provide links on county and municipal websites to organizations and agencies active in these efforts.	• Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • Lackawanna County Agricultural Land Preservation Program • Luzerne County Farmland Preservation Program • Luzerne Conservation District • Natural Resource Conservation System • Land trusts & conservancies • Farm Services Agency	Now and thru planning period	Agency staff time, for the most part.

Environmental Resources

Objectives	Actions	Responsible Parties	Timing	Costs
A. Meet federal, state, and local air quality standards.	1. Direct development and redevelopment to Priority Areas as identified in the Land Use Plan.	• Lackawanna County Planning • Luzerne County Planning • Targeted Priority Areas Task Forces • Local Governing Bodies • DCED • Other State Agencies	Now and thru planning period.	Agency staff time, for the most part.
	2. Provide incentives for commuting by public transit.	• Transit Providers • TMAs • Lackawanna County Planning • Luzerne County Planning • PennDOT • Local Governing Bodies • Local Businesses • MPO	Now and thru planning period.	Agency staff time, for the most part.
	3. Develop programs and/or incentives to promote and attract green renewable power.	• Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • Local Businesses • PADEP • USEPA	Now and thru planning period.	Agency staff time, for the most part.

Environmental Resources (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
B. Improve quality of surface water and ground water resources.	1. Protect and restore critical stream valleys, floodplains, and wetlands to preserve their functions for flood water storage, water supply, and ground water recharge.	• Local Governing Bodies • Watershed Organizations • Lackawanna County Planning • Luzerne County Planning • Luzerne Conservation District • PADEP • USEPA • Developers	Now and thru planning period.	Mixture of public & private funding.
	2. Enact riparian buffer ordinances.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning	Now	Agency staff time, for the most part.
	3. Enact green streets ordinances, including street tree, naturalized retention basins, and rain gardens provisions.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning	Now	Agency staff time, for the most part.
C. Protect and restore critical stream valleys, floodplains, and wetlands to preserve their functions for floodwater storage, water supply, and ground water recharge.	Enact new and updated local regulations.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning • Lackawanna County Conservation District • Luzerne Conservation District • PADEP	Now and thru planning period.	Agency staff time, for the most part.

Environmental Resources (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
D. Identify and protect ecologically sensitive areas such as wooded steep slopes, stream headwaters, woodlands, and wildlife corridors.	Set conservation priorities from Conservation Area identified in the Land Use Plan and Hydrologic Features, Steep Slopes, Forested Areas, and Composite Constraints mapping, as well as the 2004 Open Space, Greenways, and Outdoor Recreation Master Plan.	• Lackawanna County Planning • Luzerne County Planning • Land Conservancies • Pennsylvania Environmental Council • PADCNR	Now	Agency staff time, for the most part.
E. Minimize impacts to greenfields.	Direct development and redevelopment to Priority Areas as identified in the Land Use Plan and strongly limit such activities in the Conservation Area identified in the Land Use Plan.	• Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • DCED • Other State Agencies	Now and thru planning period.	Agency staff time, for the most part.
F. Mitigate negative impacts from resource extraction.	Set priorities for remediation, particularly those related to natural gas drilling and development associated with the Marcellus shale deposit and acid mine drainage in areas that have been mined (surface and deep) or quarried.	• PADEP • USDI-OSM • USEPA • Local Municipalities • Lackawanna County • Luzerne County • Other County Agencies	Now	Agency staff time, for the most part.

Utilities

Objectives	Actions	Responsible Parties	Timing	Costs
A. Coordinate the planning and funding for utility extensions and expansions so that they are consistent with the Land Use Plan.	1. Focus new, expanded, and upgraded infrastructure development on Priority Areas.	• Lackawanna County Planning • Luzerne County Planning • Targeted Priority Areas Task Forces • Local Governing Bodies • Local Authorities • DCED • Other State Agencies • Utilities	Targeted Priority Areas – Short-Term (1-2 years). .	Agency staff time, for the most part.
	2. Use Pennsylvania Sewage Facilities Planning Act (Act 537) planning process to anticipate and prepare for future development and to identify and address on-lot sewage disposal problems.	• Local Municipalities/Authorities • PADEP • Lackawanna County Health Department • Luzerne County Health Department • Utilities	Now and thru planning period.	Agency staff time, for the most part.
B. Support regionalization and shared use of utility assets.	Facilitate and coordinate the actions of agencies and governments regarding stormwater management, stream maintenance, and flood mitigation.	• Lackawanna County Planning • Luzerne County Planning • Luzerne County Flood Protection Authority • Local Municipalities • PADEP	Now and thru planning period.	Agency staff time, for the most part.
C. Protect and enhance the quality and quantity of water resources.	Utilize best management practices (BMPs) for new development through SALDOs.	• Local Municipalities • Lackawanna County Planning • Luzerne County Planning • Developers	Start now, especially for Targeted Priority Areas.	Agency staff time. Developer construction/ installation expenses.

Energy Conservation

Objectives	Actions	Responsible Parties	Timing	Costs
A. Establish compact mixed-use centers that provide a dense population of potential transit users, both for trips within and between centers	1. Lay out new neighborhoods and districts with a grid or modified grid circulation systems and small blocks.	• Priority Area Task Forces • Lackawanna County Planning • Luzerne County Planning • Local Governing Bodies • Developers	Targeted Priority Areas – Short-Term (1-2 years). Other Priority Areas – as set by schedule for Priority Areas development.	Consultant fees to prepare Priority Area plans.
	2. Encourage municipalities to provide zoning districts that provide the necessary densities and intermingling of uses to achieve compact, mixed-use centers as well as permit live-work structures.	• Priority Area Task Forces • Lackawanna County Planning • Luzerne County Planning • Local municipalities	When master/urban design plans are in final draft form.	Agency staff time. Potential consultant fees to prepare Priority Area regulations.
B. Make transportation corridors multi-modal, providing vehicular, transit, pedestrian and cycling options	Link new development to major educational, cultural, and recreational destinations via transit and trail connectors.	• Lackawanna County Planning • Luzerne County Planning • PennDOT • Transit Providers • Priority Area Task Forces • Local Governing Bodies • MPO	Now and thru planning period.	Mixture of federal, state, and local funding.

Energy Conservation (continued)

Objectives	Actions	Responsible Parties	Timing	Costs
C. Provide incentives to develop certified 'green' buildings and use alternative fuels.	Encourage municipalities to amend local development regulations.	• Lackawanna County Planning • Luzerne County Planning	Now	Agency staff time, for the most part.
D. Lower county and municipal energy consumption.	1. Continue to perform energy audits of county and municipal operations.	• Lackawanna County Planning • Luzerne County Planning • Other County Agencies • Local Governing Bodies	Now	Agency staff time and consultant fees.
	2. Engage in energy-efficient purchasing and operations.	• Other County Agencies • Local Governing Bodies • All County Agencies • Local Governing Bodies	Now and thru planning period.	Varies

Resource Extraction

Objectives	Actions	Responsible Parties	Timing	Costs
A. Mitigate the negative effects of resources extraction	Set priorities for remediation, particularly those related to natural gas drilling and development associated with the Marcellus shale deposit and acid mine drainage in areas that have been mined (surface and deep) or quarried. Such activities may include remediation for roadways damaged as part of resource extraction.	• PADEP • USDI-OSM • USEPA • Local Governing Bodies • Lackawanna County • Luzerne County • Other County Agencies • Earth Conservancy	Now	Agency staff time, for the most part.
B. Identify areas of potential mine subsidence	Require mine subsidence information to be provided as part of any development approvals process.	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning • Other County Agencies • PADEP • Bureau of Mine Reclamation	Thru planning period	Developer approvals application expense. Also agency staff time for review.
C. Develop new or revised regulations regarding Marcellus Shale projects as allowed by PA Oil and Gas Act and related court decisions.	Develop and adopt controls through zoning and SALDO regulations	• Local Governing Bodies • Lackawanna County Planning • Luzerne County Planning	Now	Agency staff time, for the most part.

Table 3.2: Action Plan for Implementation

	Action	Timing
1.	Adopt the Regional Plan	Immediate
2.	Identify staffing required for plan implementation (coordination, consistency reviews, technical assistance) & increase planning staff as appropriate	Immediate
3.	Coordinate with all County departments regarding plan policies and implementation steps	Within 1 yr.
4.	Coordinate with all regional, state and federal agencies regarding their roles in supporting plan implementation	Within 1 yr.
5.	Coordinate with all major foundations, non-profit organizations, and private sector leaders regarding their roles in supporting plan implementation	Within 1 yr.
6.	Determine budgetary requirements and establish capital budget funding for plan implementation (staffing, programs)	Within 1.5 yr.
7.	Develop and start delivery of outreach program to municipalities	Within 1.5 yr.
8.	Adopt new county zoning ordinance and SALDO (Luzerne)	Within 1.5 yr.
9.	Conduct focused outreach to selected municipalities and gain agreements for initial set of consistency reviews	Within 1.5 yr.
10.	Establish the Intercounty Priority Areas Task Force to determine the 4 targeted Priority Areas	Within 1.5 yr.
11.	Identify the 4 targeted Priority Areas	Within 2.5 yrs.
12.	Establish Targeted Priority Area Task Forces for each of the 4 targeted Priority Areas	Within 2 .5 yrs.
13.	Prepare master/urban design plans for each of the 4 targeted Priority Areas	Within 3.5 yrs.
14.	Conduct consistency reviews to identify planning and regulatory needs as well as infrastructure requirements for each of the 4 targeted Priority Areas	Within 3.5 yrs.
15.	Reach development agreements among public agencies and with private developers for the development/redevelopment of each of the 4 targeted Priority Areas	Within 4.5 yrs.
16.	Gain memorandums of understanding and perform consistency reviews for 20% of municipalities	Within 2.5 yrs.
17.	Gain memorandums of understanding and perform consistency reviews for 40% of municipalities	Within 4 yrs.
18.	Gain memorandums of understanding and perform consistency reviews for 60% of municipalities	Within 5 .5 yrs.
19.	Gain memorandums of understanding and perform consistency reviews for 80% of municipalities	Within 6.5 yrs.
20.	Gain memorandums of understanding and perform consistency reviews for 100% of municipalities	Within 7.5 yrs.

Other Initiatives

The counties' role in securing the commitment of each county administration to the principles and implementation timetable of the Regional Plan is paramount. County leadership in gaining cross-acceptance and consistency with the Regional Plan from local municipalities and cooperation from public and private sector planning partners is no less vital. The work to achieve what is set out in the Action Plan for Implementation, preceding, will be demanding. Nonetheless, there are some other initiatives that can complement the implementation of the core ingredients of the Regional Plan and offer support to its direction and vision. Some of these initiatives are described below.

Municipal Partnerships for Public Works and Public Safety Services

It has long been recognized that there is much potential to save taxpayers money by coordinating the delivery of public services among municipalities. Municipal governments are more likely to follow through in the pursuit of such prospects if the right kinds of incentives are made available. The counties will encourage partnerships among municipalities, first focusing on emergency response initiatives. Municipal policing partnerships, in particular, can address public safety issues well. The counties will pursue with the state more incentives for municipal partnerships, especially involving the major urban centers and surrounding communities and encourage and support legislation to enable municipalities and regions to enter cooperative ventures more easily.

State Funding for Implementation of Regional and Local Plans

Planning is often viewed as ineffective because state funding of projects tends to follow other agendas rather than regional and local plan recommendations. Legislators need to be educated on the value of adhering to plans and that greater efficiency in the allocation of resources and greater economic prosperity for constituents is linked to following through on plans. Funding and permitting of projects need to be tied to plans and such projects should get priority, since they have been endorsed in principle by county and municipal officials. The counties will press their case for plan-backed funding for implementation with legislators and state agencies.

Additional Opportunities for Homeownership in Urban Centers

Neighborhood stabilization and socioeconomic balance and basic municipal fiscal viability depend on middle income families and individuals being attracted to urban centers. The counties will make urban neighborhoods a top priority and look at a variety of different strategies to address housing needs, including providing more homeownership opportunities and more housing stock choices. Such strategies should include streamlining the site acquisition and housing production process, marketing housing to potential home buyers through employer incentives, and tax abatements for the construction and improvements of residential units.

Greater School Choices

Providing additional education options for families and continuing to strengthen urban schools is perhaps the most important element in addressing fiscal disparities between communities. Good schools are a key attribute in attracting middle income families and can help remove a significant obstacle to having newcomers to the county and longstanding residents locate in cities. The counties will make the case to the state and to other potential partners, such as employers and foundations, to direct funding to make up for shortfalls in settings where low tax revenues are hindering the efforts of urban school districts.

CHAPTER 4

CONDITIONS IN THE REGION

Introduction

This chapter provides a general review of current conditions and recent trends in Lackawanna and Luzerne Counties. This information provides an inventory and a baseline for the Plan.

4.1 Land Use Profile

It is useful to examine the pattern and intensity of land use in order to evaluate the compatibility of existing uses, determine the extent of land consumption, and assess changes in land use over time. The direction that future development may take can be also determined by examining the extent and location of land potentially available for future development.

The existing land use inventory may be considered as the starting point. Generally, land use categories include single-family and multi-family residential, commercial, institutional, recreational, industrial, and utilities in addition to non-urban uses such as agriculture and woodlands. This information was highly useful in preparing for discussions on the future of both counties. Data was compiled by planning staff of the two counties.

Current land uses and intensities in Lackawanna and Luzerne Counties' comprise a broad range. Highly urbanized lands are present throughout the Lackawanna and Wyoming Valleys and include the cities of Scranton, Wilkes-Barre, and Carbondale, as well as the Hazleton Area in southern Luzerne County. Opposite on the spectrum are agricultural-based communities such as Hollenback, Franklin, Jefferson and Benton Townships, located across the northern and southern thirds of both counties. ***Figure 4.1.1*** illustrates the full range of land uses in Lackawanna and Luzerne counties and **Table 4.1.1** shows the total acreage for each land use category.

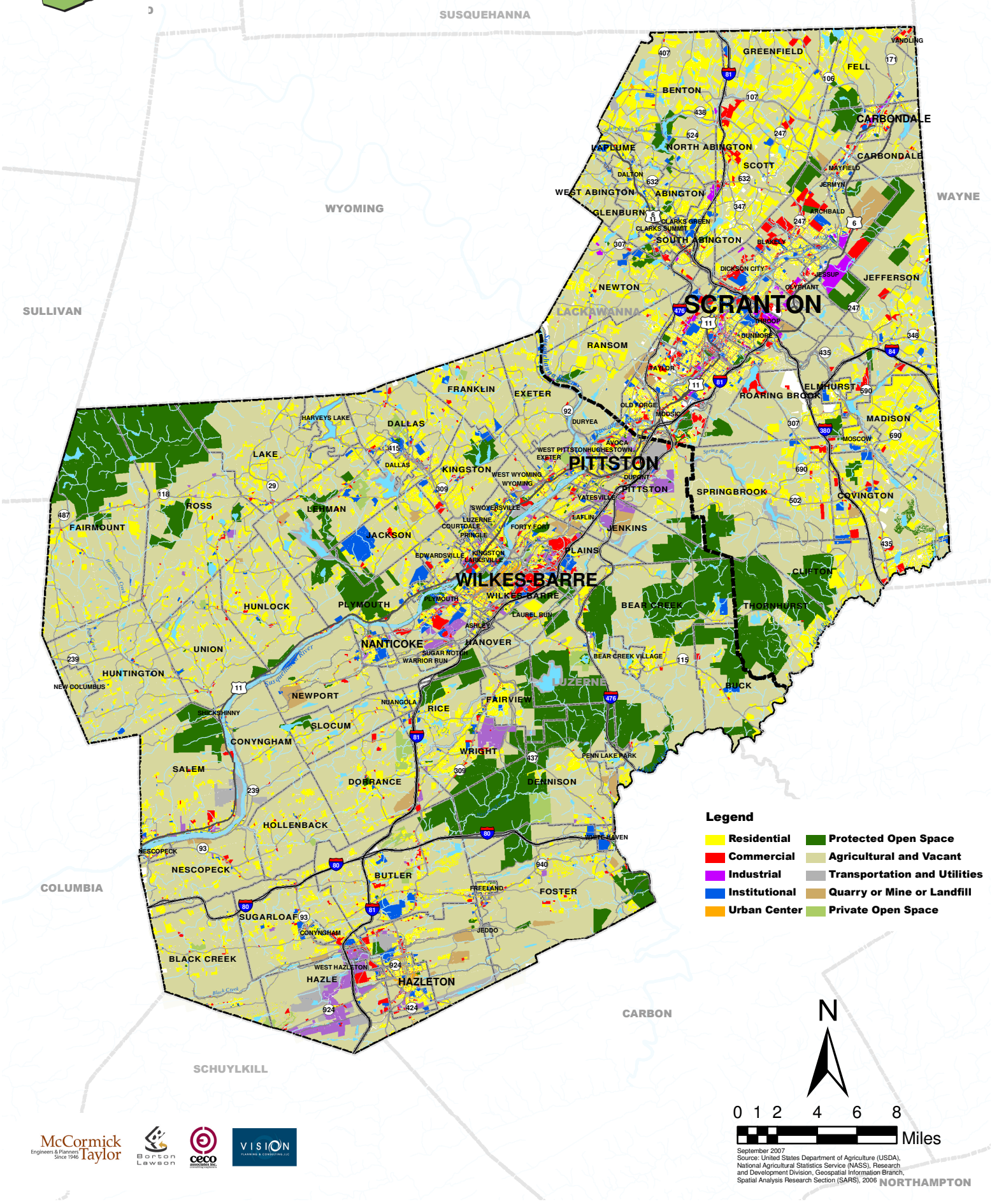
Table 4.1.1 Existing Land Use in Lackawanna and Luzerne

Luzerne County Existing Land Use			Lackawanna County Existing Land Use	
Land Use	**Acres**		**Land Use**	**Acres**
Agricultural and Vacant	357,320.08		Agricultural and Vacant	164,254.93
Commercial	10,122.03		Commercial	10,059.12
Industrial	9,179.84		Industrial	2,551.22
Institutional	10,852.93		Institutional	6,220.39
Open Space	91,951.90		Open Space	29,072.33
Quarry or Mine or Landfill	4,443.32		Quarry or Mine or Landfill	2,615.59
Residential	71,111.18		Residential	63,224.51
Transportation and Utilities	11,327.86		Transportation and Utilities	1,740.96
Urban Center	897.15		Urban Center	176.68
Total	**567,206.28**		**Total**	**279,915.74**

LACKAWANNA-LUZERNE
COME, SHAPE THE FUTURE

EXISTING LAND USE

Figure 4.1.1



September 2007
Source: United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS), Research and Development Division, Geospatial Information Branch, Spatial Analysis Research Section (SARS), 2006

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Residential Use

Next to Agricultural and Vacant, Residential is the largest category of land use, with over fifteen percent of land coverage in the two counties. The more than 134,000 acres of residential land is divided into four subcategories; single-family detached dwellings, single-family attached dwellings (mostly row houses or “town houses”), multifamily dwellings, and mobile home parks.

Approximately 95 percent of the land area devoted to residential use in Lackawanna County is single-family detached (60,000 acres), and this structural type is prevalent throughout the two counties. The lowest use, in terms of total land area, is single-family attached, and comprises about 0.25 percent (150 acres) of residential use. Combined with an additional 3.6 percent that is multi-family use (2,250 acres), most single-family attached housing is focused along the Lackawanna River Valley in the cities of Scranton and Carbondale, to the south and east of the Moosic Mountains along the I-380 and I-84 corridors, and in the Routes 6/11 corridor municipalities northwest of Scranton.

In Luzerne County, roughly 96 percent (68,600 acres) of all lands in residential use is in the single-family detached form. Single-family attached use is least prevalent, totaling 0.14 percent (100 acres) of residential use in the county. These dwelling units are primarily concentrated in the Cities of Hazleton, Wilkes-Barre, and Pittston.

Commercial Use

The Commercial category is comprised of retail and office uses. In both counties, retail use is the dominant sub-category, accounting for over 90 percent of commercial land use. Retail uses are concentrated in two types of areas; in the cores of existing communities, such as boroughs and cities, and along major transportation routes and interchanges. Major office use is focused in existing urban centers as well as at major roadway interchanges.

In Lackawanna County, approximately 10,000 acres or roughly 3.5 percent of land is in commercial use. Over 92 percent (9,000 acres) of this land is retail and nearly 8 percent (800 acres) is office. Prominent commercial business districts include the Cities of Scranton and Carbondale, as well as the Boroughs of Clarks Summit, Olyphant, and Dickson City. Regional commercial centers include the Viewmont Mall at the interchange of I-81 and Business Route 6, the Mall at Steamtown (Scranton), as well as the Shoppes at Montage (Moosic Borough). Commercial activity is also focused along the Route 6/11 corridor, as well as the Scranton-Carbondale Highway, with the highest concentrations near the interchange of the Northeast Extension of the Pennsylvania Turnpike (I-476) and I-81, near Clarks Summit. Along these corridors and scattered throughout Lackawanna County are smaller commercial plazas that include most of the national discount chains.

Commercial office use is focused in the county’s cities and large boroughs, as well as in large business parks such as those that follow:

- **Abington Executive Park** in South Abington is approximately 184 acres in size. All sites have easy access to interstates via PA Route 307 (Morgan Highway). Major tenants include Metropolitan Life Insurance, Allied Services, and Burkavage Design Associates.

- **Glenmaura Corporate Center** is a 353-acre office/commercial park located off of the Glenmaura National Boulevard in Moosic Borough and Scranton City on Montage Mountain. This joint venture between the Scranton Lackawanna Industrial Building Company (SLIBCO), Lackawanna County, and Hemingway Development Corporation contains Bank of America, Unitrin Direct, AEGON, Prudential, Metropolitan Life Insurance Company, Cinemark Theaters, CIGNA HealthCare, and Geisinger.

- **Jessup Small Business Center** is a 130-acre mixed-use business park located in Jessup Borough. The park is adjacent to US Route 6, a four-lane limited access highway, and within four miles of the convergence of Interstates 81, 84, and 380. The Center includes the Mericle Incubator building with a number of tenants and BAE Corporation.

- **Lackawanna Executive Park** is a small office park located on Main Street in Dickson City Borough, immediately off Exit 190 of Interstate 81.

- **Scott Technology Park** is a198-acre office park adjacent to Route 632 in Scott Township that was developed by SLIBCO. Sites are available for technology, pharmaceutical, office, and R&D related operations. The park's major tenants include Calvert Preclinical Services, Herff Jones, Inc., and Ease Diagnostics.

- **Stafford Avenue Business Park** is located on 64 acres adjacent to Interstate 81 in the City of Scranton. This privately owned park provides "flex space" for businesses. Tenants include MRI Imaging Center, Topp Business Solutions, the Mountain View Care Center, Xpedex, and Edwards Business Systems.

- **Valley View Business Park** is located in the Boroughs of Archbald and Jessup and is approximately 245 acres in size. Tenants include Tucker Rocky, McLane Corporation, and the Lackawanna County Department of Emergency Management.

- **W.W. Scranton Office Park**, a 124-acre office park in Scranton and Moosic Borough, is located at the base of the SnoCove Ski Resort immediately off Interstate 81 at Exit 182. Tenants include Prudential, JCPenney Catalog Customer Service Center, Diversified Information Technologies, WNEP-TV/16, Hampton Inn, Comfort Suites, and Marvelous Muggs Restaurant.

In Luzerne County, commercial business districts include the downtowns of Wilkes-Barre, Hazleton, Pittston, and Nanticoke Cities as well as the Boroughs of Kingston, Luzerne and Forty-Fort. Regional shopping centers within the county include the Laurel Mall (Hazle Township) in the Hazleton area, as well as the Wyoming Valley Mall (Wilkes-Barre Township) and surrounding shopping centers.

Smaller shopping plazas are also scattered throughout the county, with a number of national discount chain stores in close proximity to the interchanges of interstate highways, such as Highland Park Boulvard in Wilkes-Barre Township. Key commercial corridors in the county include US Route 11 from the vicinity of Plymouth Borough and north, South Mountain Boulevard in the Mountain Top area, as well as PA Routes 93 and 309 in the Hazleton area.

Major commercial office use outside of the Luzerne County's four cities is found in several prominent business parks in close proximity to Interstate highways, as follows:

- **CanDo Corporate Center**, to the immediate south of I-80 and PA-309 interchange in the Drums Valley, offers sites from 5 to 38 acres in size.

- **CenterPoint Commerce & Trade Park (North and West)** at the intersection of I-81 and I-476 near Pittston, PA, is over 340 acres in size.

- **The Corporate Center at East Mountain** at PA 115 near I-81 in Plains Township has available sites ranging from 3 to 24 acres. Current tenants include Merrill Lynch, the U.S. Social Security Administration, State Farm Insurance, Howell Benefit Services, and Geisinger Wyoming Valley Medical Center.

- **Hanover Crossings in Hanover Township** is a roughly 304-acre site near the Cross-Valley Expressway (PA-29). The business park supports a variety of back office operations, manufacturing companies, call centers, financial service companies, and corporate headquarters. Its largest tenant in 2009 was Caremark.

- **Hanover Industrial Estates** is a diverse business park with distribution centers, call centers, and financial and manufacturing operations. About 5,000 people are employed in the park.

- **Highland Park** is a mixed-use commercial center in Wilkes-Barre Township located on Highland Park Boulevard adjacent to the Mohegan Sun Arena, at Casey Plaza and I-81. The park is over 50 acres in size.

Industrial Use

Industrial land use in the two-county area totals nearly 12,000 acres, or 1.5 percent of total land use. Industrial lands are mainly concentrated in the I-81, PA Route 924, and US Route 6 (Casey Highway) corridors. The top three manufacturing companies in the two-county region are Pride Mobility Products Inc. (administrative offices in Exeter Borough; manufacturing in Duryea Borough), Cinram International Inc. (Olyphant), and Offset Paperback Inc. (Dallas Township). The top three distributors are Kane Warehousing (Scranton), Valley Distributing (Pittston & Scranton), and Sears Logistics Services (Hanover Township).

Roughly 2,500 acres of land in Lackawanna County (1 percent of the county's land use) is currently industrial. The Scranton Lackawanna Industrial Building Company (SLIBCO) is a key participant in the development of industrial-based employment across the county, and is responsible for the construction of over 13 business parks. SLIBCO is a wholly owned

subsidiary of the Greater Scranton Chamber of Commerce and is organized as a not-for-profit industrial development corporation under Pennsylvania law. The county's sixteen (16) prominent industrial parks along the Lackawanna River Valley and I-81 corridor include the following entities:

- **Benton Park** is a 232-acre industrial park located in Benton Township and is adjacent to I-81 via Exits 201 and 202. The park features an on-site sewage and water distribution system.

- **Business Park at Carbondale Yards** is located in the City of Carbondale and Fell Township. The 88-acre business park is served by an active Lackawanna County Rail Authority freight line. The Park is also in proximity to the Governor Robert P. Casey Memorial Highway (Route 6). Tenants include Wells Cargo, Dyvex and the Carbondale Technology Transfer Center.

- **CLIDCO Industrial Park** is a fully-occupied 50-acre park near Downtown Carbondale. The anchor tenant is Hendrick Manufacturing Co.

- **Covington Industrial Park** is located on Route 435 in Covington Township near Interstate 380. The industrial park consists of 860 acres that have been developed for the construction of customized "big box" warehouse/distribution centers. The business park's tenants include Maytag and Caterpillar Logistics.

- **Dickson City Industrial Park** is a 50-acre industrial park is located in Dickson City Borough just off Boulevard Avenue. Among the small businesses located here is Richard Mellow Company. The business park also contains a maintenance facility for Lackawanna County.

- **Ivy Industrial Park** is located in Scott and South Abington Townships. This 132-acre industrial park includes sites with frontage on I-81. Tenants include Metso Paper, Sandvik Material Technologies, PEXCO, Flowserve, RA Manufacturing, and Atlas Copco.

- **Keyser Valley Industrial Park** is an 118-acre industrial park is located entirely in Scranton along North-South Road. The park offers quick access to the Interstate system via Keyser Avenue. Major tenants include Quadrant, the County of Lackawanna Transportation System (COLTS), Compression Polymers, Gress Poultry, Standard Iron Works, Simplex Industries, and Arley Wholesale, a large distributor of construction finishing products from the Midwest through New England and the South.

- **Keystone Industrial Park** is a fully-occupied industrial park situated within the Boroughs of Dunmore and Throop adjacent to Interstate 81. The total size of the park is 320 acres. The Park tenants include Menlo Worldwide, HarperCollins Publishers, Gertrude Hawk Chocolates, Nivert Metal Company, National Book Company, Ocean Logistics, and Maid-Rite Steak Company.

- **Marvine Properties** is the City of Scranton's newest industrial park. The 82-acre site is also located off of Interstate 81 via Boulevard Avenue near the Lackawanna County Recycling Center.

- **MEYA Park** is a new 77-acre industrial park in Jessup Borough adjacent to Mid Valley Industrial Park, near US Route 6. Major tenants include Material Technology & Logistics and Mar-Paul Company.

- **Mid Valley Industrial Park** is a 498-acre in the Lackawanna County Boroughs of Throop, Olyphant, and Jessup, in proximity to US Route 6 (Governor Robert P. Casey Memorial Highway). Tenants include Cinram Manufacturing, Cintas, Fastenal, Dempsey Textiles and Dynamic Molding, Inc.

- **Old Forge Industrial Park**, located on Moosic Road in Old Forge Borough, houses Mariotti Lumber Company's warehouse and headquarters facility. Approximately 30 acres have been prepared for build-to-suit projects, with the master plan calling for three additional buildings. The Park is close to I-81 and the Wilkes-Barre/ Scranton International Airport.

- **PEI Power Park** is a 275-acre industrial park is located in Archbald Borough. PEI Power Corporation's Archbald Cogeneration Plant is located in the park. The park's other major tenants are Laminations, Inc. and Flexible Foam Products.

- **Rocky Glen/Moosic Industrial Park** is located just outside of the City of Scranton in Moosic Borough. Rocky Glen/ Moosic Industrial Park covers 62 acres. Major tenants include Albright Pfeiffer, Preferred Meal Systems, and Mia Products.

- **South Scranton Industrial Park** is on I-81 in the City of Scranton and is fully occupied. Major tenants include Compression Polymers Group, MACtac, and McKinney Products.

- **Stauffer Industrial Park** is located along the Scranton/Taylor Borough boundary. This 390-acre industrial park holds 17 tenants, including Kane Warehousing, Inc., United Parcel Service, Art Print Co., Sun Building Systems, B.C. Bundt, Inc., Arlington Industries, Taylor Chemical, Department of Labor & Industry, and Schiff's Restaurant Services, Inc.

In Luzerne County, over 9,000 acres of land (approximately 1.5 percent of total land area) is in industrial use. Industrial economic development by public concerns is led by the Greater Wilkes-Barre Chamber of Business and Industry, as well as the Greater Pittston Chamber of Commerce in the northern half of the county and the Greater Hazleton CANDO in the southern half. Based on data from 2009, a total of 25 industrial parks are located in Luzerne County. These industrial parks are clustered along the Susquehanna Valley as well as along the PA Route 924 corridor and include the following entities:

- **CenterPoint Commerce & Trade Park (East section in Jenkins Township; South section in design phase)** is part of a 118-acre industrial park adjacent to the I-81 and I-476 interchange near PA Route 315. This site can accommodate manufacturing as well as light manufacturing and distribution buildings in excess of one million square feet. Rail is available for the south campus and is possible for east campus.

- **Crestwood Industrial Park** is located in Wright Township and includes 1,100 acres of occupied space.
- **Duryea KOZ Industrial Park** is a 77-acre KOZ site under construction in Duryea Borough that is to include rail service.
- **Grimes Industrial Park** in Pittston Township has sites from 8 to 40 acres and includes rail service.
- **Hanover Crossings** in Hanover Township offers sites from 5 to 28 acres for light industrial and commercial office use.
- **Humboldt Industrial Parks** are a series of phased development along the Route 924 corridor in Hazle Township that total over 3,000 acres of industrial and commercial mixed use. Freight rail service is provided to these sites.
- **O'Hara Industrial Park** is located in Pittston Township adjacent to the US-11/ Pittston Bypass. Roughly 200-acres in size, the park's tenants include Lineco Equipment Leasing Inc.
- **Valmont Industrial Park** is a 550-acre park in Hazle Township and West Hazleton Borough along the Route 924 corridor. Containing 40 buildings, the site also includes rail service.
- **York Avenue Industrial Park** in Duryea Borough is a fully-occupied site, with occupants including Schott Glass Technologies and Pride Mobility Systems.

Institutional Use

Institutional use in the two-county area includes over 2 percent of land use (17,000 acres). These government and community facilities are clustered near city centers such as Scranton, Wilkes-Barre, and Hazleton and along major roadway arteries like Route 309 or Route 6/11. Types of usage include educational, governmental, public safety and healthcare facilities. Private uses include religious facilities, private schools, and cemeteries (See also *Section 4.4*).

Lackawanna County includes 12 public school districts, one public charter school, one secondary career tech school and 24 private schools, along with seven colleges and universities. The county also supports ten libraries.

Luzerne County has 12 public school districts, six colleges and universities, and 16 libraries. Both counties are home to a number of hospitals and rehabilitation facilities.

Transportation and Utilities

Land use for transportation and utilities in the two counties totals over 13,000 acres (approximately 1.5% of total land use), with the majority (over 11,000 acres) found in Luzerne County. All across the two-county area, a network of highways, roads, and freight rail lines provide access to the region, state and nation. These include principal arterials such as the Northeast Extension of the Pennsylvania Turnpike and Interstate 81, as well as minor arterials and major collector roads including PA 307 or PA 29. In addition, this land use category includes rail infrastructure. (See *Section 4.2*)

This category also includes water supply, wastewater disposal, and power generation facilities. (See *Section 4.9*)

Quarry, Mining, or Landfill

This category accounts for over 7,000 acres in the two counties, a little under 1 percent of the total land use. There are more than 40 mining and quarrying locations in the two-county area, representing roughly six percent of land use. The majority exist in Lackawanna County between Scranton and Carbondale, along the abutting mountains of the Lackawanna River Valley. The majority of quarry and mining lands in Luzerne County are generally to the south of the Susquehanna River in the Penobscot and Wilkes-Barre Mountains (near Nanticoke and Wilkes-Barre Cities), as well as Buck Mountain farther south near the City of Hazleton.

Open Space

Open space totals approximately 120,000 acres in the two counties, approximately 14% of the total land use. Recreational land uses includes state, county, and municipal parks, as well as golf courses and State Game Lands. Open space includes both public- and privately-owned land not currently developed or in agricultural use. Combined, this land use category is comprised of approximately five percent of land in the two-county area. Additional information on this use is further discussed in *Section 4.5*.

Agricultural and Vacant Lands

As the largest land use category, agricultural and vacant lands total over 60 percent of land in the two-county region, at approximately 521,000 acres. The greatest amount of agricultural use in Lackawanna County includes land to the northwest of Bald and Bell Mountains and east of the Moosic Mountain Range. In Luzerne County, many agricultural and vacant lands are located along its western third closest to Columbia County as well as in Franklin, Dallas, and Jackson Townships, and in the Wyoming Valley along the Susquehanna River. Residential single-family detached uses in both counties have a significant presence in and around many of these agricultural lands especially across the northern half of the two-county area (See also *Section 4.6*).

Urban Centers

Urban Centers is a term that describes the relatively-dense, tightly-mixed land use found in the two-county area's most urban locations. The mix of uses is predominantly retail commercial, office commercial, residential, institutional, and industrial in a tightly-woven fabric of streets and blocks. Since the weave of uses is so tight, it makes little sense to try and pull the individual uses apart in the context of regional land use planning. Hence, the uses are agglomerated and summarized under the term "urban centers."

4.2 Transportation Profile

Transportation History

Both Lackawanna and Luzerne Counties have a rich transportation history that dates back to the region's nineteenth century roots in mining. The area contained one of the most productive anthracite coal deposits in the world, but successful mining depended on the reliable and effective movement of anthracite coal from the region's mines to markets in the Northeast and even beyond. Similarly, products of and materials for the iron industry, other commercial and retail goods, and people needed to get to cities in the Northeast and elsewhere. Turnpikes, canals, railroads, and roads succeeded one another as the primary transportation system. The following section describes the transportation history of the two-county area from beginnings with canals and railroads to the modern day highway system.

Canals

By the 1830s, three canals were helping to serve the transportation needs of the region. The Lehigh Canal, from its northern limit at White Haven, extended southeast following the Lehigh River to Easton, where it was able to serve markets in the Lehigh Valley, and with connections, all along the Delaware River. The North Branch Canal, as its name suggests, followed the North Branch of the Susquehanna south to Sunbury, where connections were made to the canals along the main stem and West Branch of the Susquehanna to reach markets in southern and central Pennsylvania, or north to New York State where connections there would permit travel to the famous Erie Canal and ultimately the Great Lakes. Finally, the Delaware and Hudson Canal from the wharves in nearby Honesdale, found its way to the Hudson River at Kingston, New York, upstream from New York City.

The Delaware and Hudson Canal was connected to the counties by means of two gravity railroads. Both were elaborate systems where short trains would be hauled uphill by a series of inclined planes powered by stationary steam engines and then allowed to coast downhill to the next plane. One, the Delaware and Hudson Gravity, built as an extension of the canal, connected Carbondale to Honesdale. The other built by the Pennsylvania Coal Company ran 47 miles from Pittston to the canal at Hawley.

The Lehigh Canal from White Haven extended to Wilkes-Barre on the affiliated Lehigh and Susquehanna Railroad, which was completed in 1841. As an early railroad, the route was more traditional than the gravity systems, with cars being pulled by early steam locomotives. The route did, however, include the Ashley Planes, where cars were pulled uphill by stationary steam engines for a portion of their journey. Portions of this railroad's route are still in use today between Mountain Top and White Haven.

The railroads improvements in efficiency and geographic reach, combined with other factors such as damage from flooding, resulted in the canals in this area being phased out in the decade or so after the Civil War.

Railroads

At their peak, seven Class 1 freight railroads extended to Luzerne and Lackawanna Counties from all directions, creating a web of mainlines and branches to access the many coal mines and other industries across the counties. These railroads included the following operations:

- Erie Railroad
- Delaware Lackawanna and Western Railroad
- Pennsylvania Railroad
- Delaware and Hudson Railroad
- Lehigh Valley Railroad
- Central Railroad of New Jersey
- New York, Ontario and Western Railroad

The collapse in demand for anthracite in the years after World War II and the loss of this once lucrative business for the railroads, combined with competition from ever-improving highways and truck transportation, led to rail company abandonments, mergers, and bankruptcies, to the point where none of these original companies still exist and the mileage of track is well off its peak. Railroads continued to struggle through the latter decades of the twentieth century, with only two Class 1 railroads presently providing service to the two-county region. Today, most lines serve specific industries and businesses that depend upon the transportation of heavy commodities.

Passenger rail service from Scranton to the Poconos was a part of life in the region until Hurricane Diane in 1955. Diane brought floods that suspended service and the lost revenue ended up ultimately costing Pennsylvanians the ability to travel by rail from one place to another in this region as the operator, Delaware, Lackawanna and Western Railroad (DL&W), was forced through financial reversals to merge with Erie Railroad in 1960.

Horse Cars, Trolleys, and Electric Railroads

Passenger transportation within Lackawanna and Luzerne County first moved beyond simple horses and wagons with the introduction of horse cars, which were nothing much more than small coaches running on tracks laid in the streets and pulled by one or two horses. Horse cars made their first appearances in Wilkes-Barre in 1859 and Scranton in 1865 and moderately-sized systems developed in urban areas and formed the basis for the succeeding electric trolley systems.

Trolley systems were launched in November 1886, when the first electric trolley in revenue service in the United States began regular runs between Scranton's downtown and the Green Ridge section of the city. Ironically, this particular route was the last one to be closed out in the twentieth century period of decline for trolley service in Scranton and the rest of the two counties. In the 1890s, however, through expansion, mergers, and acquisitions, the Scranton Traction Company and its successors expanded to all parts of the city and also reached other communities, including Pittston, Carbondale, Forest City, and Moosic Lake. Competition with automobiles and buses precipitated a decline for trolley systems beginning in the 1920s, culminating with their total abandonment in 1954.

The Scranton, Montrose and Binghamton Railway, more commonly referred to as the Northern Electric line, began operations in 1907. Although it never made it to Binghamton and barely made it to Montrose, it did serve the Abingtons and other rural centers to the north with passenger and freight service until September 1932.

Connecting Scranton and Wilkes-Barre was the Lackawanna and Wyoming Valley Railroad, which was better known as the Laurel Line. This electric, high speed route was just over 22 miles in length and was powered from a third rail like a subway instead of the more traditional overhead wire for most of its route. Service began in 1903 and terminated on New Year's Eve 1952.

In Wilkes-Barre, electric trolleys arrived in 1888. Expansion and acquisition led to a single system reaching Pittston, Duryea, Harvey's Lake, Ashley, Plymouth, Nanticoke, and Glen Lyon. The Wilkes-Barre Transit Corporation ended trolley service in October 1950. Some routes were replaced by electric buses or "trackless trolleys," beginning in 1939. This system was also shut down in the 1950s, holding on until 1958.

To connect to Hazleton, the Wilkes-Barre and Hazleton Railway was constructed over 30 miles of hilly terrain. Like the Laurel Line, with which it shared the Wilkes-Barre terminal, the Wilkes-Barre and Hazleton line was primarily powered by third rail. Operations commenced in 1903 and final abandonment was only 30 years later, in 1933. At Hazleton, surrounding communities of McAdoo and Freeland were all connected by the Lehigh Traction Company, which began service in 1893 and was terminated in 1932.

In actuality, the final trolleys to operate to Green Ridge in 1954 were not to be the end. In 1999, Lackawanna County opened the Electric City Trolley Station and Museum on the grounds of the Steamtown National Historical Site. In addition to static exhibits and displays, since 2001 an excursion is available via a trolley. The trolley vehicle, Red Arrow Car 76, once operated in the suburbs of Philadelphia and later for tourists at that city's Penn's Landing. The Steamtown trip now terminates adjacent to PNC Field, home of the area's AAA minor league baseball team. On selected dates every year, trips are made in conjunction with a baseball game.

Turnpikes and Highways

The Philadelphia-Great Bend Turnpike, built by Henry Drinker in 1819 (also known as the Drinker Turnpike), was once one of the most important routes in the region. The road generally followed a portion of the route of the present Penn-Can Highway, a short section of I-81 in Dunmore Borough. Until about 1960, the Drinker Turnpike was the connecting link between the Lackawanna Valley, the Poconos, and New York City.

The improvement of the first roads for use by automobiles progressed relatively slowly in northeastern Pennsylvania. By 1927, PA Route 2 (Lackawanna Trail) was improved from Philadelphia to Binghamton. For $1, the Commonwealth of Pennsylvania purchased 25 miles of the abandoned Lackawanna Railroad, north of Clarks Summit, and converted it to an asphalt highway that became part of Lackawanna Trail. Also in the 1920s, Roosevelt Highway (PA Route 7) merged with PA Route 19 at Indian Orchard and continued through Honesdale and Carbondale to Scranton. Some portions of the

early highways were linked and re-designated as parts of national cross county routes, primarily US Route 6 from Cape Cod to Long Beach, California and US Route 11 from the Thousand Islands to New Orleans.

Northeastern Pennsylvania was not linked to the limited access highway network until 1957, when the Northeast Extension of the Pennsylvania Turnpike was completed from Philadelphia through Allentown.

During the 1960s, construction of the interstate highway system with connections in northeastern Pennsylvania began to take shape. By the mid 1960s, I-81E (from Dunmore southeast to Stroudsburg, now called I-380) and I-84 (connecting Scranton with Port Jervis) were both in the planning stages, as was the East Scranton Expressway connecting I-81 with downtown Scranton and the Lackawanna Valley Parkway. The East Scranton Expressway was never constructed, but the North Scranton Expressway and the Central Scranton Expressway were built in 1961 and 1966, respectively.

By 1966, I-81 was completed from Scranton to Binghamton to the north and south to Wilkes-Barre. It was completed south through Hazleton in 1968. The section from Scranton to Harrisburg is known as the Anthracite Expressway. By 1966, the Keystone Shortway (I-80) was completed through Luzerne County and construction was continuing westward. The entire Shortway was opened in 1970. By 1974, all sections of the Pocono Expressway (I-380) were under construction, except the I-84 interchange. I-84 was completed in 1976. The last phase of the North Crossvalley Expressway was completed in November 1991 and connected with I-81. Overall, the North Crossvalley expressway was built in four sections over a 24-year period. The South Crossvalley Expressway (PA Route 29) connecting US Route 11 with I-81 was completed in the mid-1980s.

Today, northeastern Pennsylvania has a well-developed highway network of over 300 miles of turnpike and interstate routes. The Northeastern Extension of the Pennsylvania Turnpike (I-476) provides a direct link to Philadelphia. I-80 and I-84 provide east-west travel, while I-81 and I-380 provide a north-south link. This roadway network makes it possible to reach New York City or Philadelphia in about two hours, and Boston or Baltimore within five hours.

The Governor Casey Highway (US Route 6, formerly known as the Lackawanna Valley Industrial Highway), was completed in September of 1999. Extending from Scranton to Carbondale, the roadway further opened up access to the Lackawanna Valley and provided relief for traffic congestion on Business Route 6 and other local roadways.

In a related significant development, a land use and transportation plan for the Governor Casey Highway corridor was prepared for 12 valley municipalities, including the City of Carbondale; Archbald, Blakely, Dickson City, Dunmore, Jermyn, Jessup, Mayfield, Olyphant and Throop Boroughs; and Carbondale and Fell Townships. By the mid-1990s, 11 of the 12 municipalities had adopted the *Lackawanna Valley Corridor Plan* and accompanying zoning ordinance amendments. This plan was a required mitigation activity as part of the Governor Casey Highway construction, to reduce secondary development impacts.

In December 1999, the Greater Hazleton Chamber of Commerce Beltway (Route 424) was opened. The mile-long road connects PA Route 309 with I-81 at Interchange 141, located between Exit 138 in McAdoo and Exit 143 in Hazleton. The goal of the $10.25 million dollar project was to reduce regional truck traffic on local roads and provide direct access from I-81 to the Hazleton Commerce Center. The beltway also provides additional access to approximately 200 acres in Hazleton's Enterprise Zone for economic development.

The beltway project represents the fourth segment of a five-segment highway system proposed in the 1960s. The fifth and final segment would connect the beltway with Stockton Road. In addition, an extension of Route 424 at I-81 to the Humboldt Industrial Park is proposed to alleviate traffic congestion on Route 924.

The construction of Exit 168 off I-81 was completed in 1999. This interchange links to Highland Park Boulevard in Wilkes-Barre Township and provides access to the Mohegan Sun Arena. In August 2002, the Highland Park Boulevard and Mundy Street connecting road was opened to traffic.

Greenways and Trails

In February 1997, the Luzerne County Board of Commissioners and Luzerne County Community College hosted a public visioning session to review outdoor recreational opportunities emerging within the region. Numerous organizations attended the meeting, many of which were not aware of the work being done by other groups. As a result, a coalition was formed and on October 27, 1997, the Luzerne County Greenways and Open Space Advisory Committee was formed.

Today there are over 40 organizations involved in the Greenway Alliance. Since 1999, both the Lackawanna County and Luzerne County Planning Commissions have engaged in the development of a Bicycle and Pedestrian Plan for the MPO region. An inventory and mapping of all known non-motorized network facilities is now complete. Major route connections from each county into the state network were the focus of the initial studies. Current studies are evaluating future system expansion opportunities to develop connector routes and to identify future network improvements for inclusion on the Transportation Improvement Program.

Currently, the Greenway Alliance is working to support a number of new greenway and trail projects within the county, including the Susquehanna Warrior Trail, the Back Mountain Trail, the Delaware & Lehigh National Heritage Corridor/Black Diamond Trail, and the Pittston to Wilkes-Barre Rail with Trail.

Lackawanna County has two established trails and a number of proposed trails that comprise its trail system. The county's largest trail authority is the Lackawanna Heritage Valley Authority. Individual communities manage the Lackawanna River Heritage Trail and work with other non-profit groups throughout the county to develop trails. The Rail-Trail Council of Northeastern Pennsylvania also works within Lackawanna County and manages the D&H Rail Trail that follows the Delaware and Hudson rail bed from the northern portion of the county through Susquehanna County and into New York State.

Existing Transportation System

The existing transportation system in Lackawanna and Luzerne Counties includes all of the physical infrastructure, vehicles, control systems, and facilities that support the movement of people and goods. Highways, streets, railroads, and trails are most recognizable as the primary conduits of travel. Meanwhile, intersections, interchanges, bridges, signs, signals, transit vehicles, rolling stock, terminals, and maintenance facilities represent the integrated junctions and complex "moving parts" of the system. As a whole, the transportation system in existence today represents an investment and resource that must support the ever changing travel demands of individuals for personal livelihood and businesses for employment and economic vitality.

This section is organized into two separate parts:

- A profile of the transportation circulation system; and
- An assessment of the adequacy of this system.

Circulation Profile

Highway Infrastructure

Parallel with many other transportation corridors, the modern system of U.S. and Interstate Highways provide higher speed, regional mobility and connect Lackawanna and Luzerne Counties with neighboring regions and beyond to the cities of Pennsylvania, New Jersey, and New York. Within the counties, the Pennsylvania State roadway system and local streets collect and distribute traffic from the higher functional class highways to destinations and activity centers. The roadway and highway system currently supports most passenger travel and a major portion of freight transportation throughout the region.

Highways, Roadways, and Streets

Lackawanna and Luzerne Counties have a diverse network of highways, roadways, and streets. ***Figure 4.2.1*** illustrates the Federal Aid System in the two-county area, the system which is eligible for federal funding. The interstate highways were constructed as high-capacity, limited-access facilities and serve as the primary national and regional thoroughfares. In addition, certain interstate highways, including I-81 and I-476, serve multiple roles in the overall system, providing intra-regional commuter travel among Scranton, Wilkes-Barre, and Hazleton as well as interstate mobility on the same facility.

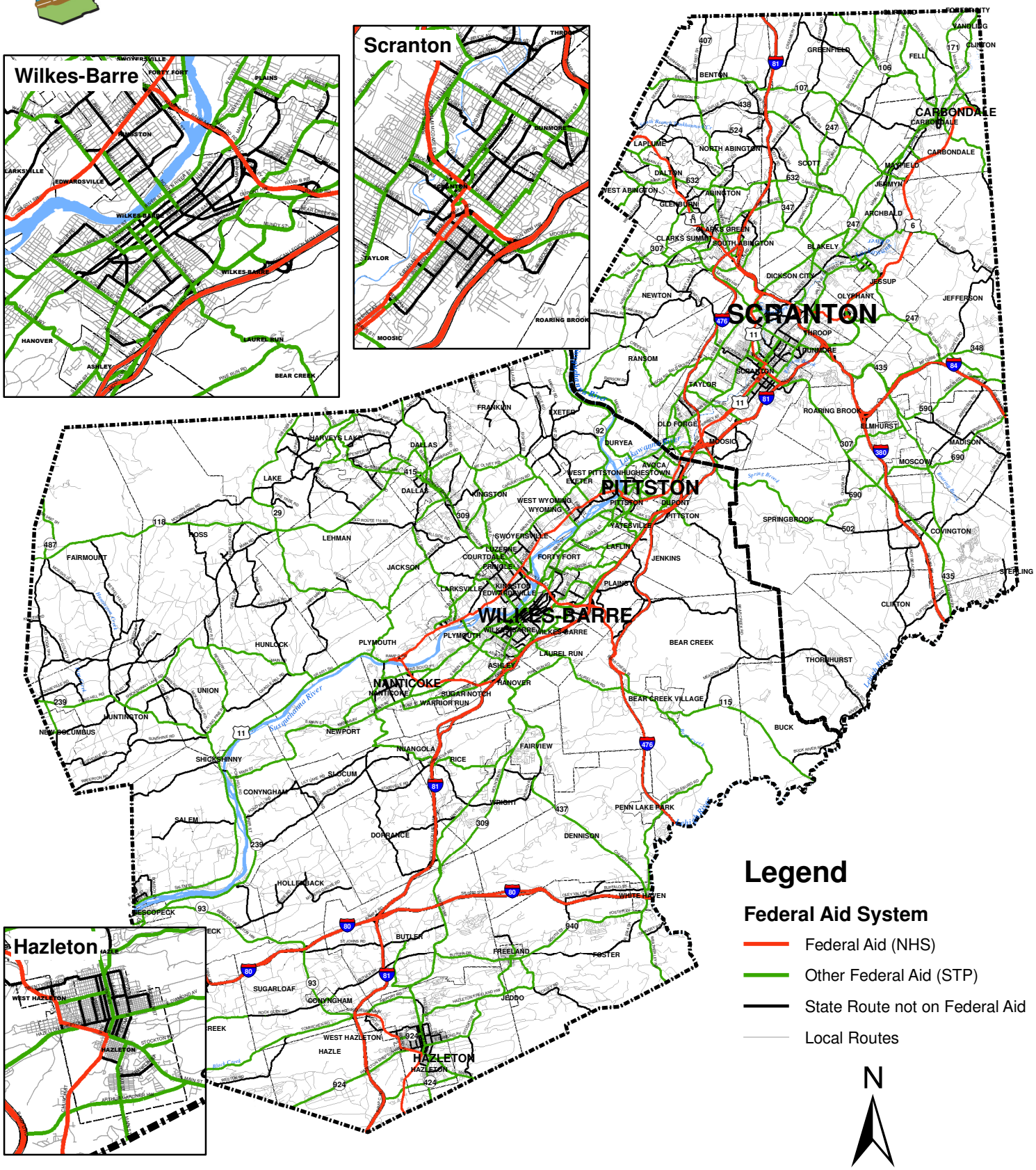
- I-80 runs east and west through Luzerne County, providing immediate access to New Jersey and the New York City Metropolitan Area in the east, and a direct highway route through Ohio and the western states via Chicago.

- I-81, in addition to supplying a key north-south route to New York and Canada in the north and the Gulf States in the south, provides intra-regional mobility within Lackawanna and Luzerne Counties.

- I-476, also known as the “Northeast Extension” of the Pennsylvania Turnpike, provides Lackawanna and Luzerne Counties with a direct link south to Allentown and Philadelphia.
- I-380 serves as a regional connector between I-80, to the east, and I-81 near Scranton.
- I-84 connects to I-380 within Lackawanna County and provides access east to New York and the New England states.

FEDERAL AID SYSTEM

Figure 4.2.1



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

The intra-regional expressway and arterial system supplies mobility among the urbanized areas within Lackawanna and Luzerne Counties and has grown in response to land development and travel demand. The following routes are primary elements of the intra-regional network:

- U.S. Route 11 is a north-south highway paralleling the Lackawanna and Susquehanna Rivers from Harrisburg to Scranton, continuing on to the U.S-Canada border. U.S. 11 provides local access to Wilkes-Barre and Scranton as well as several municipalities in the Wyoming Valley. It is known as the North Scranton Expressway just north of downtown Scranton.

- U.S. Route 6 runs east-west across the northern tier of Pennsylvania. From Factoryville to North Scranton, U.S. 11 and U.S. 6 run concurrently. To the east of Scranton, from the I-81/I-380 Interchange to Carbondale, U.S. 6 is known as the "Governor Casey Highway," providing a high-capacity alternative that bypasses the towns and boroughs along Business Route 6.

- The Central Scranton Expressway is southeast of downtown Scranton. It is a short freeway that runs from I-81 to U.S. 11 in Scranton.

- Pennsylvania Route 309 connects Philadelphia to Wilkes-Barre. PA 309 parallels the newer I-476 and runs concurrent with I-81 at times. Approximately five miles of PA 309 is known as the North Cross Valley Expressway near Wilkes-Barre.

- Pennsylvania Route 29 is also known as the South Cross Valley Expressway near Wilkes-Barre. The expressway begins at the I-81 Exit in Hanover Township and ends in Plymouth Township, near the City of Nanticoke.

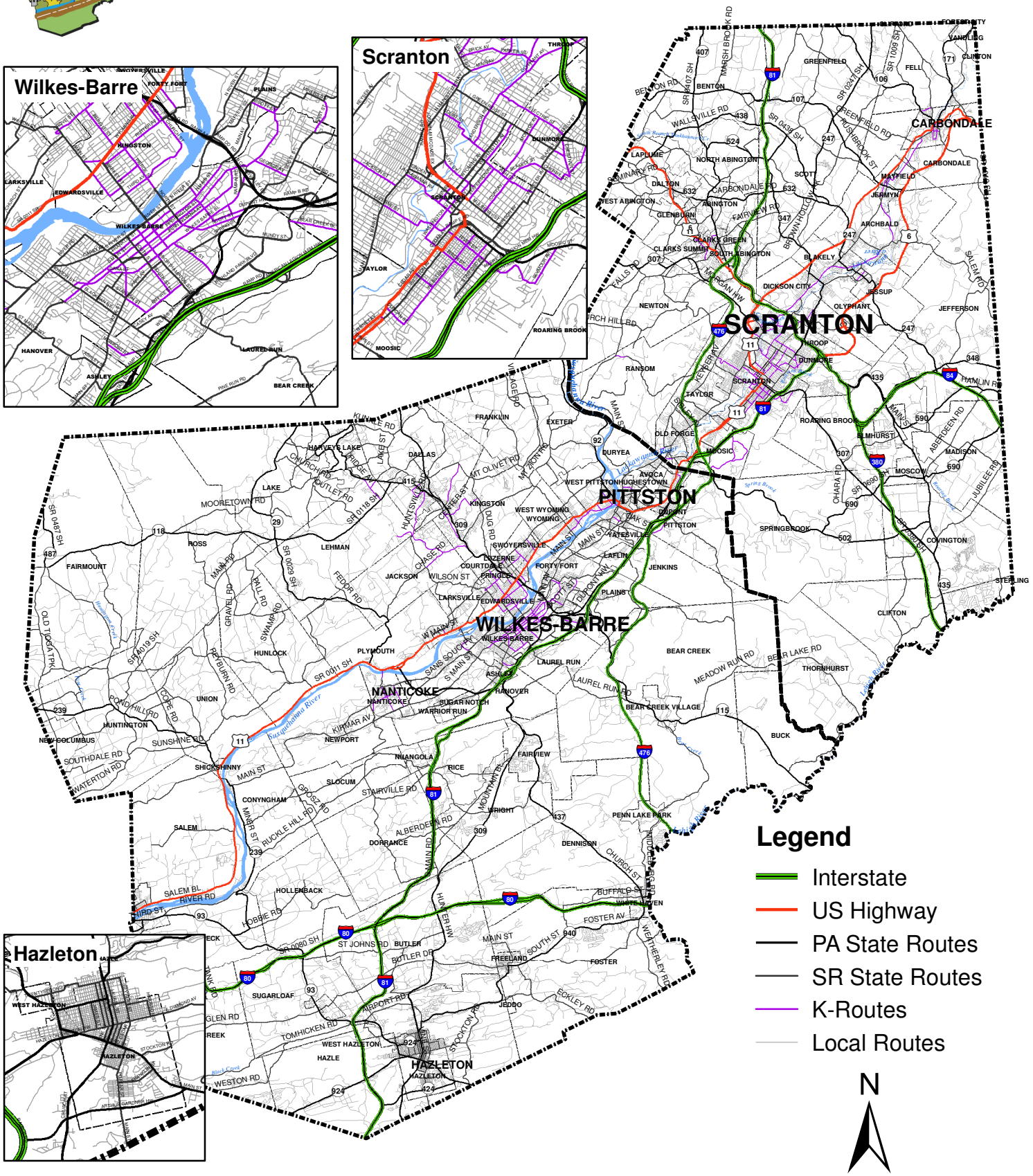
- Pennsylvania Route 93 is the main thoroughfare through Hazleton where it is labeled as West Broad Street. PA 93 provides direct access to I-80 and I-81 west of Hazleton.

The system of collector roadways and local streets network is extensive and consists mostly of low-volume, two-lane roadways. These elements of the network supply the highest degree of access to adjacent land development, such as homes, businesses, offices, and schools. ***Table 4.2.1*** shows lane miles by highway jurisdiction in the two counties. ***Figure 4.2.2*** illustrates the Jurisdictional Classification in the two-county area.

LACKAWANNA-LUZERNE
COME, SHAPE THE FUTURE

Figure 4.2.2

HIGHWAY JURISDICTION



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June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Table 4.2.1
Lane Mileage by Highway Jurisdiction

Highway Type	Lane Mileage
Interstate Highway	621.1
U.S. Highway	290.5
PA Highway	919.0
State Route (SR)	1,875.6
K Route	247.5
W Route	5.2
County Roads	93.1
Local Roads	1,286.0
Two-County Region Total	**5338**

***Source*: PennDOT District 4-0, 2008.**

Transportation Agencies

Figure 4.2.3 is used to illustrate the entire passenger transportation system. The following agencies are principally responsible for the highway infrastructure in Lackawanna and Luzerne Counties:

- Federal Highway Administration (FHWA), under the United State Department of Transportation (USDOT)
- Pennsylvania Department of Transportation (PennDOT)
- Pennsylvania Turnpike Commission
- Lackawanna & Luzerne Counties (some county-owned and maintained public roads)
- Cities, boroughs, townships

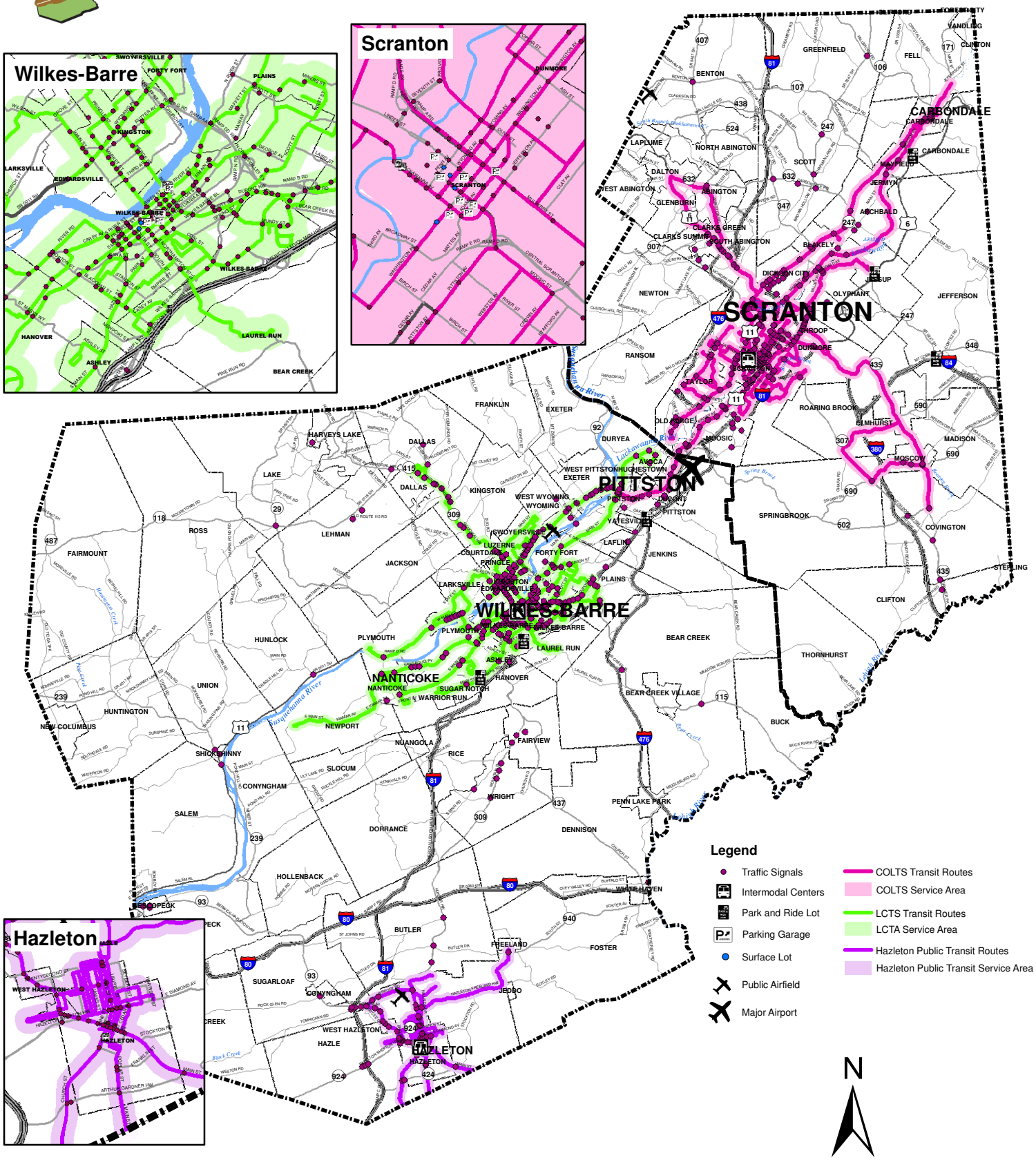
Infrastructure Elements

Along with the roadways themselves, the following infrastructure elements are essential for the operation of a safe and efficient roadway system:

- Right-of-Way
- Shoulder and Roadside Features (guiderail, delineators, drainage, etc.)
- Signs
- Signals – More than 680 traffic signals in Lackawanna and Luzerne Counties
- ITS Elements – 30 VMS signs in addition to mobile signs in Lackawanna and Luzerne Counties.
- Structures (bridges, tunnels, etc.)
- Parking Facilities
- Park-and-Ride Facilities

PASSENGER TRANSPORTATION NETWORK

Figure 4.2.3



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, County of Lackawanna Transit System (COLTS), Luzerne County Transportation Authority (LCTA), Hazelton Public Transit (HPT), McCormick Taylor, Inc.

Park-and-Ride Lots

These facilities are located in Lackawanna County:

- US Route 6 (Casey Highway) at Exit 3 (Jessup/Mt. Cobb). [31 spaces and two spaces for persons with disabilities]
- US Route 6 (Casey Highway) at Exit 6 (Meredith St.) [27 spaces and three spaces for persons with disabilities]
- Interstate 84 at Exit 8 (Mt. Cobb/Hamlin). Intersection of Routes 247 & 348. [86 spaces and four spaces for persons with disabilities]

These facilities are located in Luzerne County:

- Interstate 81 at Exit 175 (Dupont/Pittston). On Route 315. [148 spaces]
- Luzerne County. Interstate 81 at Exit 165 (Mountain Top/Wilkes-Barre). On Route 309. [71 spaces and four spaces for persons with disabilities]
- Luzerne County. Interstate 81 at Exit 164 (Nanticoke). Follow Route 29 to Exit 1 (SR 2010). [52 spaces and three spaces for persons with disabilities]
- Nuangola Park & Ride, Rice Township[1]
- Tomhicken Road Park & Ride, Sugarloaf Township[1]
- Butler Township Park & Ride, Butler Township[1]
- White Haven Park & Ride, White Haven Borough[1]

Public Transit

Several different public agencies provide “fixed-route,” “on-demand,” and/or “shared-ride” passenger transit service in Lackawanna and Luzerne Counties. Fixed-route systems provide transportation on a repetitive, fixed schedule along a specific route with vehicles stopping to pick-up and deliver passengers to specific locations. On-demand and shared-ride transit—also known as “para-transit” services—offer door-to-door transportation services at a subsidized rate for senior, low income, and special needs populations. Passengers must make trip requests in advance of the trip, and must be willing to share the vehicle with other passengers.

Public Transit Agencies

The following public transit agencies provide passenger transit services in Lackawanna and Luzerne Counties:

County of Lackawanna Transit System (COLTS)

COLTS has a fleet of 32 buses that run on 24 routes in Lackawanna County. COLTS was founded in 1972 and is currently the only public transit carrier in Lackawanna County. COLTS extends into Luzerne County to connect with the LCTA system. COLTS transit service is offered Monday through Saturday from 6:00 AM to 6:00 PM. No service is offered on Sundays or New Year’s Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Bus fares are

[1] On the Transportation Improvement Plan (TIP), not yet constructed.

$1.25 with $0.25 transfers. Discounted fares are available when purchasing a 31-Day Pass or a 10-ride ticket. Senior Citizens (65 year and older) with a Senior Citizen Card ride free, except during the morning peak (7:00 AM to 8:00 AM) and afternoon peak (4:30 PM to 5:30 PM). Disabled persons pay half fare, with the same restrictions as Senior Citizens.

The intermodal center for COLTS will be constructed in the city of Scranton on Lackawanna Avenue. Para-transit services for Lackawanna County are county-owned and operated but have no affiliation with COLTS.[2]

Luzerne County Transportation Authority (LCTA)

The LCTA owns a fleet of 43 buses that run on 21 routes serving 31 municipalities in Luzerne County, and service extends into Lackawanna county to connect to COLTS. The LCTA is the only public transit carrier in the Greater Wilkes-Barre area and one of two in Luzerne County. Bus fares range from $1.10 to $1.50 with $0.40 transfers. The intermodal center for the LCTA is located in the heart of Wilkes-Barre on South Washington Street. LCTA partners with the Luzerne-Wyoming County Transportation Department in providing the Special Transportation Efforts Program (STEP)—a para-transit service in the Wilkes-Barre area that is available to handicapped seniors living within ¾ mile of a LCTA bus route.[3]

Hazleton Public Transit (HPT)

The HPT has a fleet of seven buses that run on 12 routes (8 weekday, three weekend, one summer) in Luzerne County within the city of Hazleton. The HPT connects to both the LCTA system and the Schuylkill Transportation System (STS) in Schuylkill County. Fares are $1.25 with $0.50 transfers. HPT para-transit services are operated by Easton Coach and are available for handicapped seniors and all other persons with a Medicare card.

Lackawanna County Coordinated Transportation

LCCT provides cost efficient para-transit service, which addresses the recognized needs of the “transportation disadvantaged” population of Lackawanna County at the current level of service. Para-transit services are available for individuals over the age of 60. Individuals must already be in the system and must request service at least a week in advance of appointment.

LCCT’s goals are to:

- Continue the availability of weekly service (Monday-Friday- 6:00 A.M. to 6:00 P.M.)
- Continue to provide adequate service for daily “disabled” work trips.
- Continue upgrading vehicles through replacement of outdated vehicles.
- Continue to comply with mandates of Americans with Disabilities Act.
- Improve the utilization of computerized capabilities, especially in scheduling, financial operations and data analysis.

[2] 2006 National Transit Database, County of Lackawanna Transit System (COLTS), 2007.
[3] 2006 National Transit Database, Luzerne County Transportation Authority (LCTA), 2007.

- Continue and improve upon the current Preventative Maintenance Program in order to minimize vehicle breakdowns and reduce vehicle maintenance costs.
- Expand outreach so that more "transportation disadvantaged" residents of Lackawanna County will become aware of and utilize these services.
- Work closely with client groups to efficiently address transportation issues.

Luzerne-Wyoming County Transportation Department

The Luzerne-Wyoming County Transportation Department offers the following four para-transit programs and services:

1. Medical Assistance Transportation Program – MATP provides transportation to medical services for Medical Assistance consumers who do not have other transportation available to them. These transportation services are provided through county governments.

2. Lottery Program – The Lottery Program is available to all seniors of 65 and will provide shared-ride service throughout Luzerne and Wyoming Counties. The 2008 fares were $1.70 for trips less than five miles and $2.05 for trips greater than five miles. The Lottery Program is subsidized by the Pennsylvania Lottery.

3. Special Transportation Efforts Program (STEP) – STEP is a ride program available to handicapped seniors living within ¾ miles of a LCTA bus route. The program is offered in partnership with the Luzerne County Transportation Authority (LCTA).

4. Pennsylvanians with Disabilities (PWD) Program – PWD provides transportation services for those persons who live too far away from an LCTS bus route to qualify for STEP services.

Additional para-transit services are available in conjuncture with other agencies, including Children and Youth and Mental Health Retardation programs.

Private Transit Operators

Private transit operators also serve destinations in Lackawanna and Luzerne Counties through scheduled routes and charter operations. Two private bus transit systems—Greyhound and the Trailways Transportation System—offer intercity bus transportation. The Trailways Transportation System (a.k.a., Trailways) is a regionally-based ground transportation system that is comprised of multiple privately owned and operated companies. Different than the Greyhound bus network, which is centrally-owned and specializes in broad coast-to-coast passenger transportation, Trailways offers more locally-based transportation services via a network of smaller, independent operators. Greyhound and Trailways frequently operate in partnership, with Trailways operators providing complementary interline service to smaller towns and destinations. [4,5]

[4] Trailways Transportation System Webpage, http://www.trailways.com, 2008.
[5] Greyhound Webpage, http://www.greyhound.com, 2008.

Greyhound

Greyhound is the largest provider of intercity bus transportation in North America, serving more than 2,400 destinations with a volume of 25 million passengers per year. In Lackawanna and Luzerne Counties, Greyhound currently services 16 locations and has interline partnerships with Martz Trailways in Scranton and Wilkes-Barre and Capital Trailways in Hazleton. Greyhound also offers a national package/freight delivery service, called PackageXpress.[6]

Martz Trailways

Martz Trailways is based out of Wilkes-Barre and offers scheduled route service among destinations in Eastern Pennsylvania, New Jersey, New York City, and Atlantic City. As a Trailways provider, Martz offers inline connections with Greyhound and other Trailways operators in the Northeastern United States.

Within Lackawanna and Luzerne Counties, Martz Trailways operates intercity, express bus service between Scranton and Wilkes-Barre on weekdays and weekends. During weekdays, fourteen buses depart Scranton for Wilkes-Barre, and eight buses depart Wilkes-Barre for Scranton. During weekends, service is slightly less frequent, with six to eight buses departing Scranton or Wilkes-Barre during the day.[7]

Capitol Trailways

Capitol Trailways is based out of Harrisburg and offers scheduled weekday and weekend route service among destinations in Central Pennsylvania, Philadelphia, and New York City. As a Trailways operator, Capitol serves Hazleton via “pool service” and inline connections with Greyhound. Connections with other Trailways operators provide linked service through upstate New York to Toronto, Canada.[8]

Intermodal Center Projects

The following passenger intermodal center projects in Lackawanna and Luzerne Counties have recently opened or are currently underway:

Scranton Intermodal Transportation Center
The County of Lackawanna Transportation System (COLTS) is planning for a 6,500 square foot intermodal transportation center located in the city of Scranton along Lackawanna Avenue. The facility will serve as a hub for COLTS transit buses, commercial buses, taxis, and—if passenger rail service to New York is restored—commuter trains. COLTS has received a $1,000,000 earmark from the USDOT and $11 million from the Commonwealth of Pennsylvania to complete the Scranton Intermodal Transportation Center.

Wilkes-Barre Intermodal Transportation Center

[6] Greyhound Webpage, http://www.greyhound.com, 2008.
[7] Martz Trailways Webpage, http://www.martzgroup.com, 2008.
[8] Capitol Trailways Webpage, http://www.capitoltrailways.com, 2008.

In August 2010, the City of Wilkes-Barre opened a new intermodal transportation center, located on South Washington Street. The Wilkes-Barre Intermodal Transportation Center features a public and private bus terminal and a 752-car parking garage. Neighboring commercial establishments, including a 14-screen movie theater and a Barnes & Noble Bookstore, are either under construction or in final plan development. The city of Wilkes-Barre received a $6 million earmark from the USDOT for the Wilkes-Barre Intermodal Transportation Center.

Hazleton Intermodal Transportation Center – Church Street Station

In November 2009 an intermodal transportation center in Hazleton opened called Church Street Station. The center serves as a hub for the Hazleton Public Transit system, local and inter-city bus carriers, and taxi services. The city of Hazleton obtained $12.2 million for Church Street Station, with 80 percent coming from federal sources and 20 percent from state and county.

Railroads

Originally built to serve the region's mining industry, the existing network of railroads in Lackawanna and Luzerne counties is extensive, providing an active conduit for freight and goods movement in the Northeastern United States. In addition to the active rail lines, many abandoned and continuous rail corridors remain largely intact, with some receiving interest for new railroad and other transportation use. The region's railroads are currently used mostly by freight carriers, with notable but small recreational, excursion passenger services in operation.

Regional Railroad Authorities

Pennsylvania Northeast Railroad Authority

The Pennsylvania Northeast Regional Railroad Authority (PNRRA) was created in 2006 through a merger of the Lackawanna County Railroad Authority and the Monroe County Railroad Authority. PNRRA operates as both a rail transportation provider and an economic development agency in Lackawanna and Monroe Counties. The rail system under PNRRA's jurisdiction includes 100 miles of track, on which freight services are contracted through the Delaware-Lackawanna Railroad Company, Inc. For the purpose of economic development, PNRRA works cooperatively with private corporations to locate new rail-dependent industries on properties adjacent to the authority's trackage.

Luzerne County Rail Corporation

The Luzerne County Rail Corporation (LCRC) was founded in 1996 and operates 56 miles of freight-only track in Luzerne County.

Freight Rail

Two Class I and several other regional and short line railroads currently operate within Lackawanna and Luzerne Counties (see ***Figure 4.2.4***)

Class I Operators

- Canadian Pacific Railroad (CPR) – The CPR mainline is a continuous east-west corridor that connects many major cities in southern Canada, from Vancouver in western Canada through Montreal and Toronto in eastern Canada. The mainline enters the United States in upstate New York and runs in a north-south direction through Binghamton and the study area before ending in Sunbury. A major, intermodal yard facility exists in Taylor Borough, southwest of Scranton.

- Norfolk Southern Railway Company (NSRC) – While not a major railroad player in the study area, NSRC maintains branch line trackage near Hazleton for some customers and may utilize trackage rights on mainlines controlled by CPR and RBMN. Norfolk Southern connects to the Delaware-Lackawanna Railroad Company in Monroe County, as noted below.

Regional and Short Line Operators

- Reading, Blue Mountain and Northern Railroad (RBMN) – The RBMN railroad is a regional/short line railroad extending from Reading into Luzerne County at White Haven and then on to a yard facility in Pittston. Separate branch lines extend to Scranton and neighboring Wyoming County. The RBMN owned line ends at the Proctor and Gamble facility in Mehoopany. RBMN serves customers along their mainline and on branch lines near Hazleton, Mountain Top, Taylor, and Scranton.

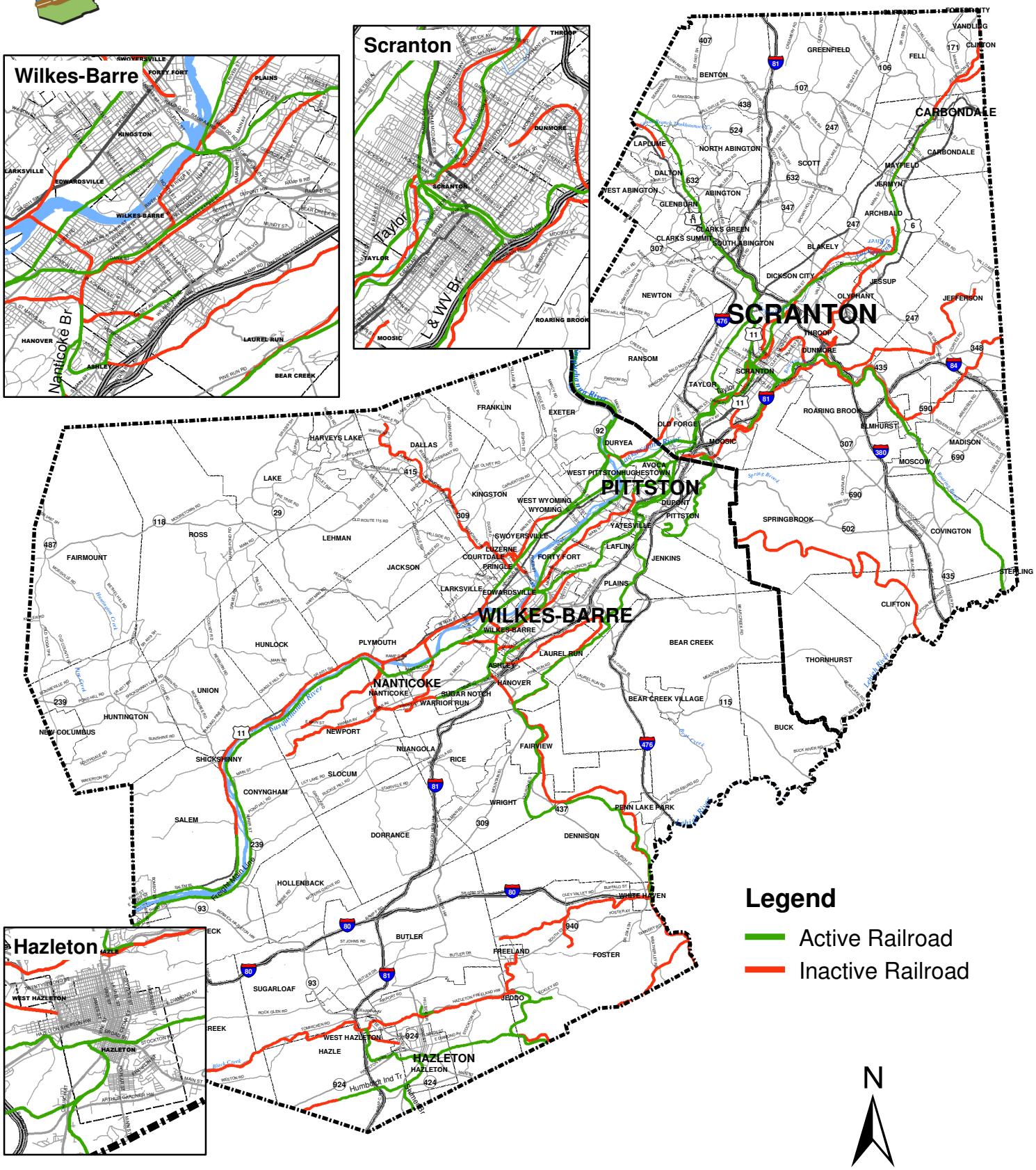
- Delaware-Lackawanna Railroad Company (DL) – DL is the designated operator of the trackage owned by the Pennsylvania Northeast Railroad Authority (PNRRA), which is comprised of the former Lackawanna and Monroe County railroad authorities. DL primarily operates three lines. The first serves several customers between Scranton and the Delaware Water Gap in Monroe County, where there is an interchange with Norfolk Southern. The second extends northeast to Carbondale and serves many industries. The third—the Minooka Line—primarily serves two industries. The first two also host excursions operated by the National Park Service out of the Steamtown National Historic Site. The Minooka Line hosts operations for the Lackawanna County Operated Tourist Trolley Ride.

- Luzerne and Susquehanna Railroad Company (LS) – LS is the designated operator of the trackage owned by the Luzerne County Railroad Authority.

- North Shore Railroad Company (NSRR) – NSRR operates a branch line service along the west shore of the Susquehanna River from Northumberland north into Luzerne County at Berwick and then on to the Susquehanna Steam Electric Station near Beach Haven. NSRR serves the power station as well as other industries along the line.

FREIGHT TRANSPORTATION NETWORK

Figure 4.2.4



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Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Passenger Rail

Commuter Passenger Rail

Currently, there are no commuter passenger rail services offered in Lackawanna or Luzerne Counties. Future passenger service between New York City and Scranton has been under development for a number of years. Most recently, in 2008, NJ Transit approved $36.6 million to extend its regional passenger rail service 7 miles from Port Morris, NJ to Andover, NJ. This will leave a 21-mile gap of abandoned rail right-of-way between Andover and the existing PNRRA track at the Delaware Water Gap.[9]

Excursion Passenger Rail

Several entities currently offer regularly scheduled excursion passenger service:

- The National Park Service operates short excursion rides out of the Steamtown National Historic Site. Longer excursions along the Lackawanna River, to the Delaware Water Gap, or to nearby Moscow Borough or Tobyhanna Township, are conducted by the National Park Service on selected dates during the summer and autumn seasons.[10]

- Lackawanna County and the Electric City Trolley Museum (which neighbors Steamtown) operate excursion rides out of the Steamtown National Historic Site. Excursions follow the Lackawanna & Wyoming Valley Railroad's "Laurel Line" right-of-way through the newly rehabilitated Crown Avenue Tunnel and on to the Lackawanna County Stadium on Montage Mountain.[11]

- Other entities, including the Reading, Blue Mountain and Northern Railroad, have offered special event excursions in Lackawanna and Luzerne Counties.

Airports and Aviation

The region contains multiple public-use airports as well as the Wilkes-Barre/Scranton International Airport, which supports longer distance passenger trips to domestic and international destinations.

Wilkes-Barre/Scranton International Airport (WBSIA)

The airport was founded in 1945 when Luzerne and Lackawanna Counties entered into an agreement to co-sponsor and operate the facility. The 900+ acre property is located near the Lackawanna-Luzerne County line among the municipalities of Avoca Borough, Dupont Borough, Pittston Township and Moosic Borough. Interstate 81 and the Pennsylvania Turnpike's Northeast Extension (I-476) surround the airport, with primary access to the terminal via PA 315 off of Interstate 81.

[9] "Efforts Continue on NYC Rail Link," The Times Tribune, Scranton, PA, August 20, 2006.
[10] Steamtown National Historic Site Webpage, National Park Service, http://www.nps.gov/stea/, 2008.
[11] Electric City Trolley Museum, http://www.ectma.org/museum.html, 2008.

Today, the WBSIA has five major airlines: American Eagle, Continental, Northwest, United, and US Airways. Inbound and outbound flights are routed through larger national hubs at Newark, Philadelphia, Atlanta, Detroit, Chicago, and Charlotte. Recently completed airport facilities include a new terminal building and parking garage. Airport projects currently in progress include construction of a new control tower, surface parking, an aircraft parking apron, and three new access loop roads. The airport also owns several parcels of vacant land zoned commercial/industrial and available for development.

Wilkes-Barre Wyoming Valley Airport (WWVA)

Founded in 1929, the WWVA is owned by Luzerne County and is operated by Wyoming Valley Aviation. The airport 135-acre property is located near Forty-Fort Borough and Wyoming Borough, located north of Kingston Borough along the west shore of the Susquehanna River. WWVA operates as a general aviation airport that provides two runways, ramp services, fueling, and maintenance to individual planes. No public airline services are currently available.

Hazleton Airport

The Hazleton Airport, located on Airport Beltway in Hazle Township, is owned by the City of Hazleton and is operated by Koro Aviation. The airport operates as a general aviation airport that provides one runway, storage hangers, refueling, and a terminal building available for use by privately-owned and company-owned planes. The airport conducted an obstruction study to analyze how trees and other long-term obstructions impact the slope on airplane approaches.

Seaman's Field

Seaman's Field is located northeast of Factoryville, near the Lackawanna-Wyoming County line in Benton Township. Seaman's Field has been in operation for over fifty years, and was officially activated as a privately-owned, public use airport in 1971. The airport has developed from a small grass strip to a 24-hour airfield with a 2,500-foot asphalt runway. Facilities and services offered at the airport include aircraft repair, hangar and aircraft rentals, tie-downs, and flight instruction.

Trails

Trails and pathways, including both formal and informal routes, create pedestrian and bicycle travel opportunities in many parts of the region. Within more urbanized areas, the "in-town" trail system follows sidewalks and multi-use trails, which generally provide everyday, functional transportation use as well as recreational use among communities, parks, public facilities, and other developed areas. Meanwhile, the trail system that extends outside of developed areas includes the hiking and mountain trails that generate mostly recreational travel use (see ***Figure 4.2.5***). In addition, the following special types of trails provide planned connections that protect important local features and take special advantage of convenient straight-line travel routes:

Greenways

Generally, a greenway is a corridor of open space that incorporates diverse natural, cultural and scenic features and may incorporate scenic trails and byways for non-motorized land and water-based modes. Greenways are planned to 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.

Rails-to-Trails

Officially called “multi-use” trails, these trails extend along former or active railroad lines, providing bikers and walkers with recreational and functional travel routes, particularly in urbanized places.

Water Trails

Like conventional trails, water trails are recreational corridors between specific locations. As established by the Pennsylvania Fish & Boat Commission, these boat routes are suitable for canoes, kayaks and small motorized watercraft. Water trails are comprised of access points, boat launches, day use sites, and -- in some cases -- overnight camping areas. Each water trail has its own regional sponsor(s) and is unique as a reflection of Pennsylvania's diverse geology, ecology and communities. In 2009, the Susquehanna River was named an official water trail by the Chesapeake Gateway Network and the PA Fish & Boat Commission.

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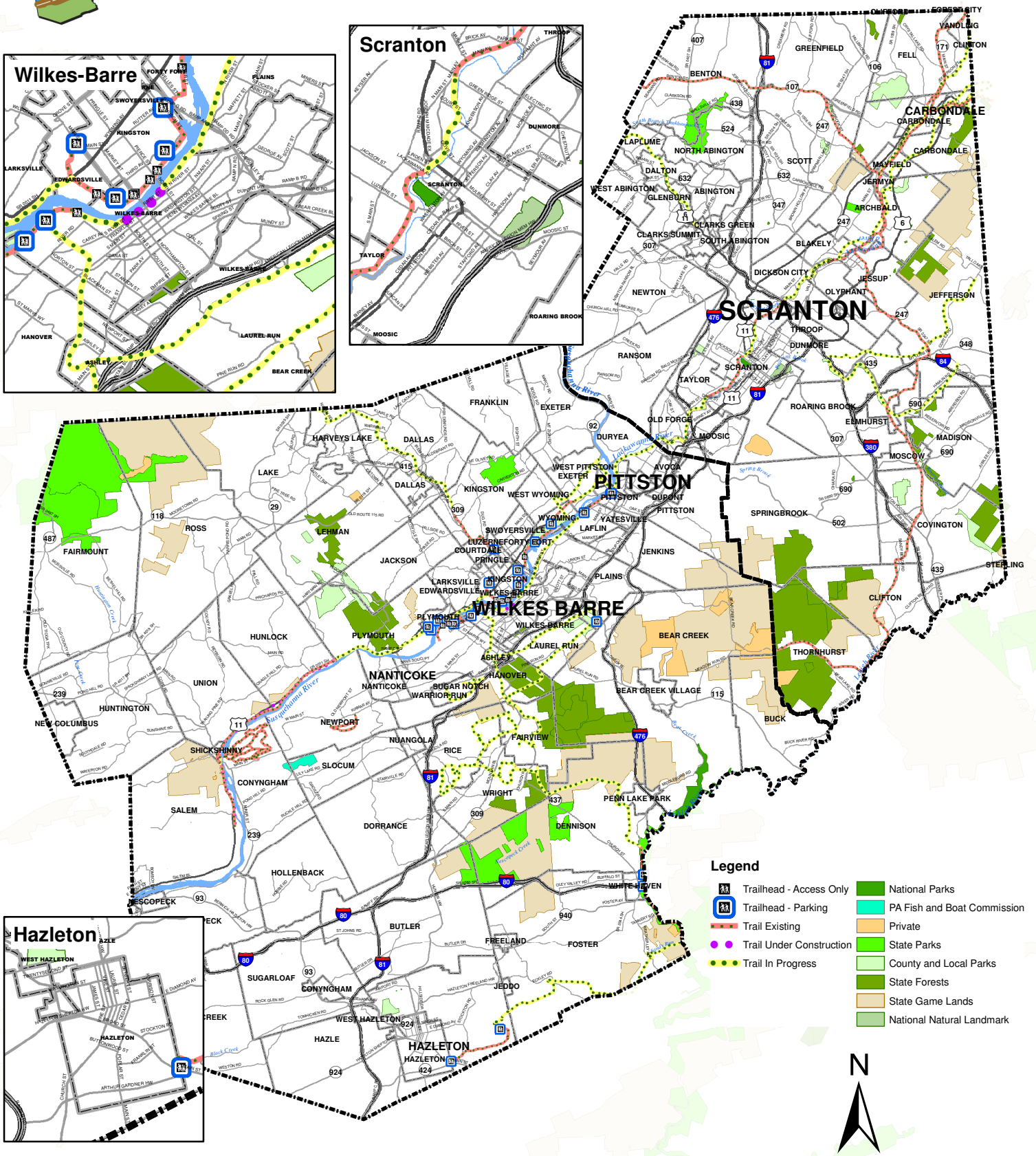
TRAILS & TRAILHEADS

Figure 4.2.5



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Source: Lackawanna & Luzerne Counties, McCormick Taylor, Inc.

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Responsible Agencies

Agencies and organizations at all levels of public government and at many different geographic scales have a hand in the development or promotion of the trails system. Trail planning is done by the individual organizations advocating the trail. The planning commissions for Lackawanna and Luzerne Counties have supported and assisted these groups as much as possible, mainly via facilitating the PENNDOT or FHWA TE and SRTS applications. Much of the master planning began with the development of the MPO's Bicycle and Pedestrian Plan begun in 1999. Assistance and guidance from the Commonwealth of Pennsylvania is provided through the Pennsylvania Department of Transportation (PennDOT), the Department of Conservation and Natural Resources (DCNR), and the Pennsylvania Fish & Boat Commission.

Beyond the larger public agencies, many different public and private advocacy groups, authorities, foundations, and charities take a highly focused interest in the trails system and champion the development of trails at the local level. Municipalities and cities, both on their own and through regional councils of government, have ordinances in place to require parkland contributions from developers and guide the development of parkland and the trails network. In addition, because of the link between disease and a lack of physical activity, many public health and wellness organizations have become participants in the funding of trail projects in the interest of increasing recreational access. Finally, a diverse group of environmental resource, conservation, and cultural/historical preservation groups has traditionally supported the development of trails and greenway systems as a method for raising awareness to valuable and vulnerable local resources.

The net result is a highly diverse conglomeration of trails and pathways that are knit together sometimes formally, by master plan, or sometimes informally, according to popular use and familiarity. ***Tables 4.2.2*** and ***4.2.3*** describe trails in Lackawanna and Luzerne counties, respectively. ***Table 4.2.4*** lists the water trails in the two-county area.

Table 4.2.2
Lackawanna County Trails

Trail	Description	Length
Lackawanna River Heritage Trail	Rail trail that runs along the Lackawanna River Mellow Park, Blakely Borough to Laurel Street in Archbald Borough 7th Avenue in Scranton to the Scranton/Taylor Borough line	5 miles
D&H Trail	Rail trail that runs from northern Lackawanna County to the New York state border	32 miles

Source: PA Department of Conservation and Natural Resources, 2008.

Table 4.2.3
Luzerne County Trails

Trail	Description	Length
Back Mountain Trail	Rail trail on the former Lehigh Valley line, which runs parallel to Toby's Creek.	5 miles
Greater Hazleton Rail Trail	Rail trail on the former DS&S Railroad line is open from the City of Hazleton to the Ashmore area.	4 miles
Lehigh Gorge Trail	Rail trail running south from the Borough of White Haven, along the Lehigh river. Trail is part of the Delaware & Lehigh National Heritage Corridor, as well as part of the Pennsylvania State Park System.	20 miles
Luzerne County Levee Trail System encompasses four "reaches":	System of trails located on top of the Susquehanna River Levee.	12 miles TOTAL
First Resident's Path (Forty Fort Reach)	Trail on the west side of the Susquehanna River, going through the towns of Forty Fort and Wyoming. Connected to the Kingston Reach of the Levee System and the West Side Trail system.	2.7 miles
Anthracite Heritage Walk (Kingston Reach)	Trail on the west side of the Susquehanna River, going through the towns of Kingston and Edwardsville. Connected to the Forty Fort Reach of the Levee System.	3.5 miles
Riverside Ramble (Wilkes-Barre and Hanover Reach)	Trail on the east side of the Susquehanna River, going through the City of Wilkes-Barre and Hanover Township. Connected to Kingston Reach and Plymouth Reach of the Levee System.	4.0 miles
Plymouth Passage (Plymouth Reach)	Trail on the west side of the Susquehanna River, going through the towns of Plymouth. Connected to the Wilkes-Barre and Hanover Reach of the Levee System.	1.8 miles
Luzerne County National Recreation Trail	Rail-side trail running from Pittston's Riverfront Park to Port Griffith.	1.8 miles
Mocanaqua Loop	Four interconnected hiking trails along the northern reach of Penobscot Mountain. Loops range from 2.5 miles to 8 miles in length.	15 miles
Penobscot Ridge Mountain Bike Trail	Mountain biking trail crossing reclaimed mining lands south of Wanamie along Penobscot Ridge.	2 miles
Susquehanna Warrior Trail	Rail trail along the old Delaware, Lehigh and Western Railroad beds from the PA Power & Light Riverlands Recreation area to Larksville Borough.	10 miles
West Side Trail	In-town trail system along existing sidewalks from the Swetland Homestead/Levee System access to Trayor Street in Exeter/.	1.5 miles

Source: Luzerne County, 2008.

Table 4.2.4
Lackawanna & Luzerne County Water Trails

Trail	Description	Length
North Branch Susquehanna River Water Trail	Runs from the New York state line to Sunbury, Pennsylvania	~ 180 miles
Lehigh River Water Trail	Entire Lehigh River from Francis Walter Dam to mouth	~ 75 miles
Total		~ 255 miles

Source: PA Fish and Boat Commission, 2009.

Circulation Assessment

This section provides an analysis of current trends and issues as well as projections of future conditions that may affect the transportation system and transportation needs. The ability of the plan to not only accommodate future needs but perhaps shape the future of the community depends on an accurate anticipation of the future context for the system and its users. Another critical component of this assessment is the quantification of the existing asset management needs of the transportation system of the region.

Travel Demand

Journey-to-Work Commuter Travel

Census 2000 Journey-to-Work data at the county level was examined to identify commuter travel patterns, particularly intra-county versus inter-county travel. ***Figure 4.2.6*** illustrates the counties in which residents of Lackawanna and Luzerne Counties work. ***Figure 4.2.6*** also shows the counties in which those employed in Lackawanna and Luzerne Counties live.

The following trends were noted:

- About 85 percent of Lackawanna County residents work in Lackawanna County and 7 percent work in Luzerne County.
- About 85 percent of Luzerne County residents work in Luzerne County and 6 percent work in Lackawanna County.
- More than 90 percent of residents who live in Lackawanna and Luzerne Counties work there also. An additional 6 percent of residents who live in Lackawanna and Luzerne Counties work in the adjacent counties, with Monroe, Wayne, and Wyoming Counties attracting the most workers.

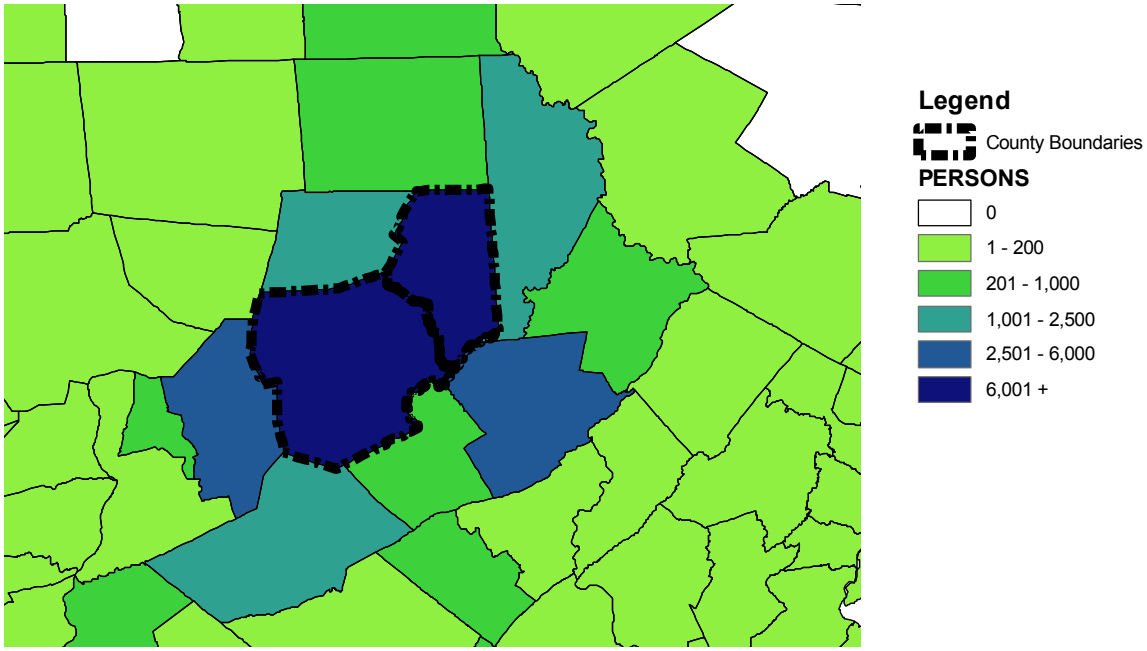
- About 89 percent of workers who work in Lackawanna and Luzerne Counties live there also. An additional 9 percent of workers who work in Lackawanna and Luzerne Counties live in the adjacent counties, with Wayne, Wyoming, and Susquehanna Counties supplying the most workers.

The trends indicate that the two-county area is mostly insular in regard to commuter travel flow. There is some interchange of workers and residents between Lackawanna and Luzerne Counties, but the vast majority of journey-to-work activity is contained within the county boundaries. The two-county area appears to import workers, considering that the total number of working residents of the two-county region is lower than the total workers in the two-county region.

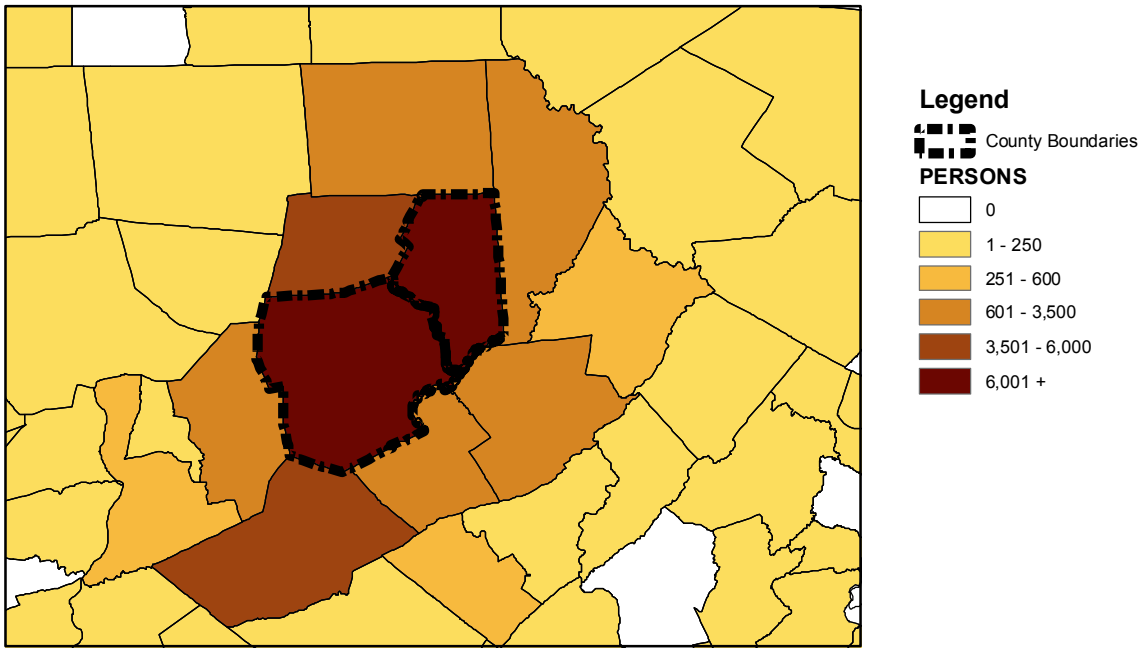
Figure 4.2.6

JOURNEY-TO-WORK COMMUTER TRAVEL

Where do residents of Lackawanna and Luzerne Counties work?



Where do workers in Lackawanna and Luzerne Counties live?



N

0 5 10 20 30 40 50 Miles

June 2010
Source: Lackawanna & Luzerne Counties, U.S. Census Bureau, McCormick Taylor, Inc.

Highway Passenger Travel

Almost all passenger travel within Lackawanna and Luzerne counties happens on the highway network, either via personal vehicles or transit vehicles. Airports carry passenger trips to and from destinations outside of the region. Passenger rail service, while in the planning and discussion stages, does not currently exist within the region.

Work-related commuting travel is the dominant component of passenger travel in the United States, and in Lackawanna and Luzerne counties, most of these commuting trips happen completely within the two-county region. An evaluation of the Census Bureau's journey-to-work data revealed the following information:

- More than 90 percent of Lackawanna and Luzerne residents work in Lackawanna and Luzerne Counties.
- More than 97 percent of Lackawanna and Luzerne residents work in the immediate 10 county area, including Lackawanna, Luzerne, Carbon, Columbia, Monroe, Schuylkill, Sullivan, Susquehanna, Wayne, and Wyoming counties.

Recent trends indicate that new, transplant residents from New York and New Jersey are continuing to work outside of Lackawanna and Luzerne counties. Still, the overwhelming demand for commuter passenger travel is made up of trips within the region.

Highway Freight Travel

Recent data indicate that highway freight travel accounts for more than 80 percent of all freight transported within Pennsylvania and more than 50 percent of all freight shipped to and/or from the Commonwealth.[12] Much of this freight travel in Lackawanna and Luzerne Counties occurs on the interstate system roadways, with Interstates 80, 81, and 84 carrying the highest volumes of freight bearing trucks. Interstates 476 and 380 and U.S. 11 and 6 (Governor Casey Highway) also carry significant truck volumes.

Highway Network Traffic Volumes

The total highway network travel demand is represented in ***Figure 4.2.7***, according to 2007 traffic volumes on interstate, U.S., and Pennsylvania State highways in Lackawanna and Luzerne counties. The traffic volumes are measured in terms of average annual daily traffic (AADT). The demand for highway network freight travel is represented in ***Figure 4.2.8***, according to 2007 average annual truck traffic (ADTT) volumes.

[12] U.S. Department of Transportation (USDOT), Office of Freight Management and Operations, Pennsylvania's Freight Analysis Framework, http://ops.fhwa.dot.gov/freight/freight_analysis/faf/state_info/faf2/pdfs/pa.pdf, 2002.

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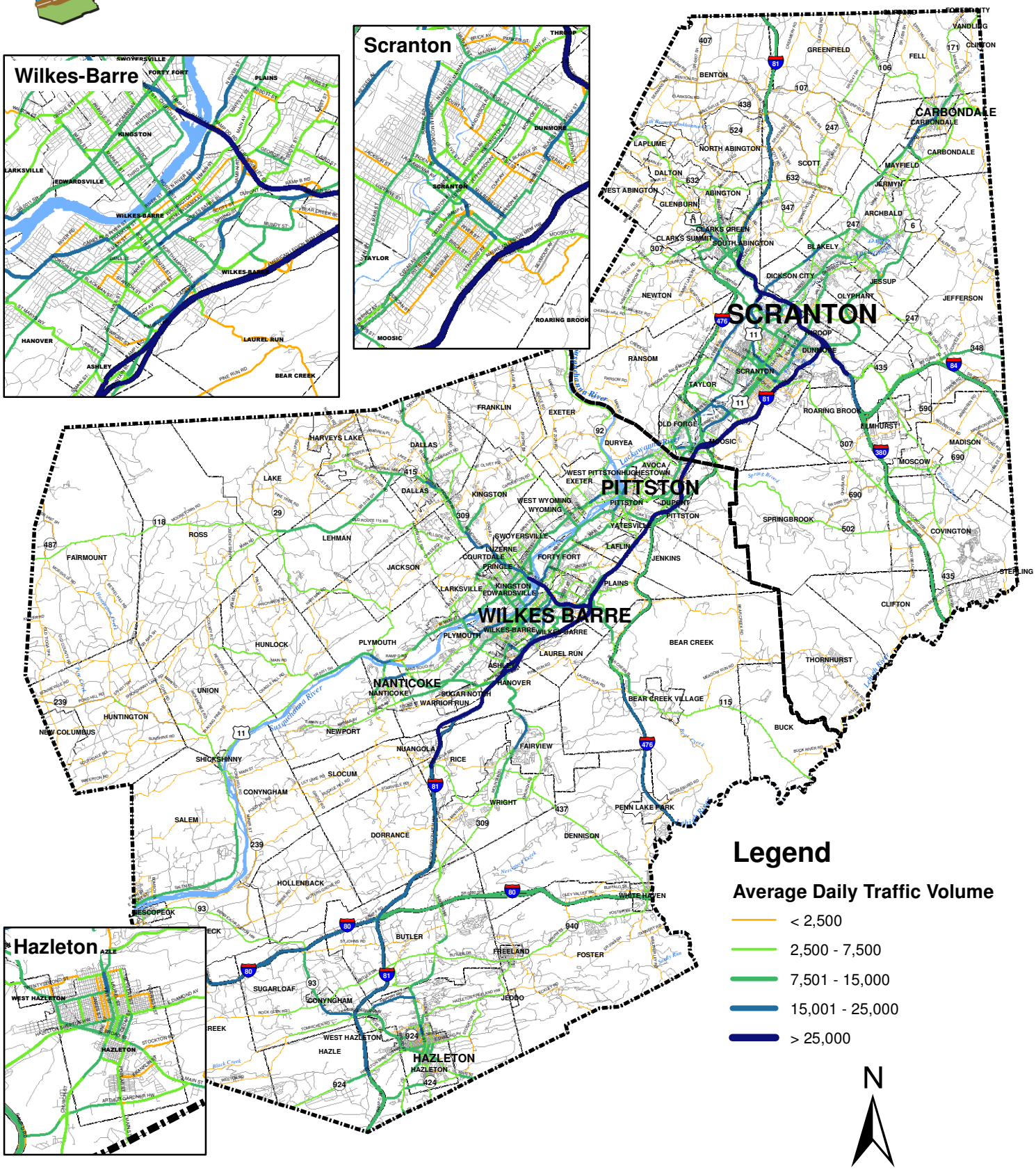
Figure 4.2.7

AVERAGE DAILY TRAFFIC VOLUME



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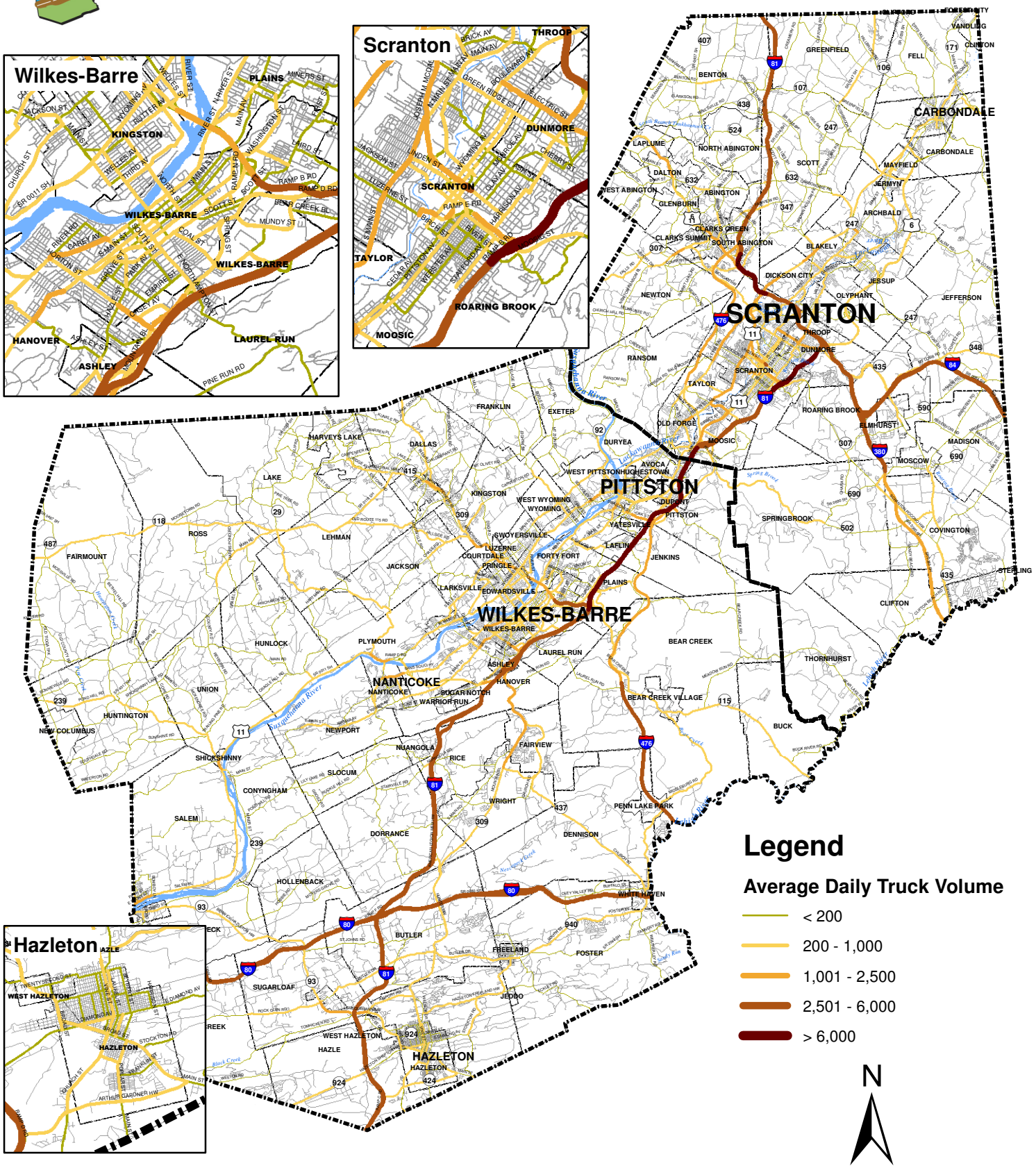
June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Figure 4.2.8

AVERAGE DAILY TRUCK VOLUME



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Transit Ridership

Consistent with trends in the United States, commuting trips on the highway network in the region are made largely in personal, motorized vehicles with public and private transit vehicles providing a small "mode-share" of the trips. The transit services provided by the County of Lackawanna Transit System (COLTS) and the Lackawanna County Transportation Authority (LCTA) served more than 16,000 unlinked passenger trips per weekday in 2007, which accounts for service to 6,000 to 8,000 individuals per weekday.

Infrastructure Condition

Highway Condition

International Roughness Index

The International Roughness Index, or IRI, is the current Federal Highway Administration standard for measuring highway pavement ride quality. The index measures roughness in terms of the number of inches per mile that a laser, mounted in a specialized van, jumps as it is driven over roadways—the lower the IRI number, the smoother the ride. Since the IRI provides an easy-to-collect measure of pavement surface condition that has nationwide consistency and comparability, it was chosen for use in FHWA's Highway Performance Monitoring System.[13]

Figure *4.2.9* illustrates the IRI for state-owned roadways in Lackawanna and Luzerne Counties. ***Table 4.2.5*** summarizes how IRI varies across roadway functional classes.

[13] Federal Highway Administration, Highway Performance Monitoring System (HPMS) Field Manual, Appendix E: Measuring Pavement Roughness, http://www.fhwa.dot.gov/ohim/hpmsmanl/appe.cfm, 2008.

Table 4.2.5
Miles of Roadway by Functional Class and International Roughness Index

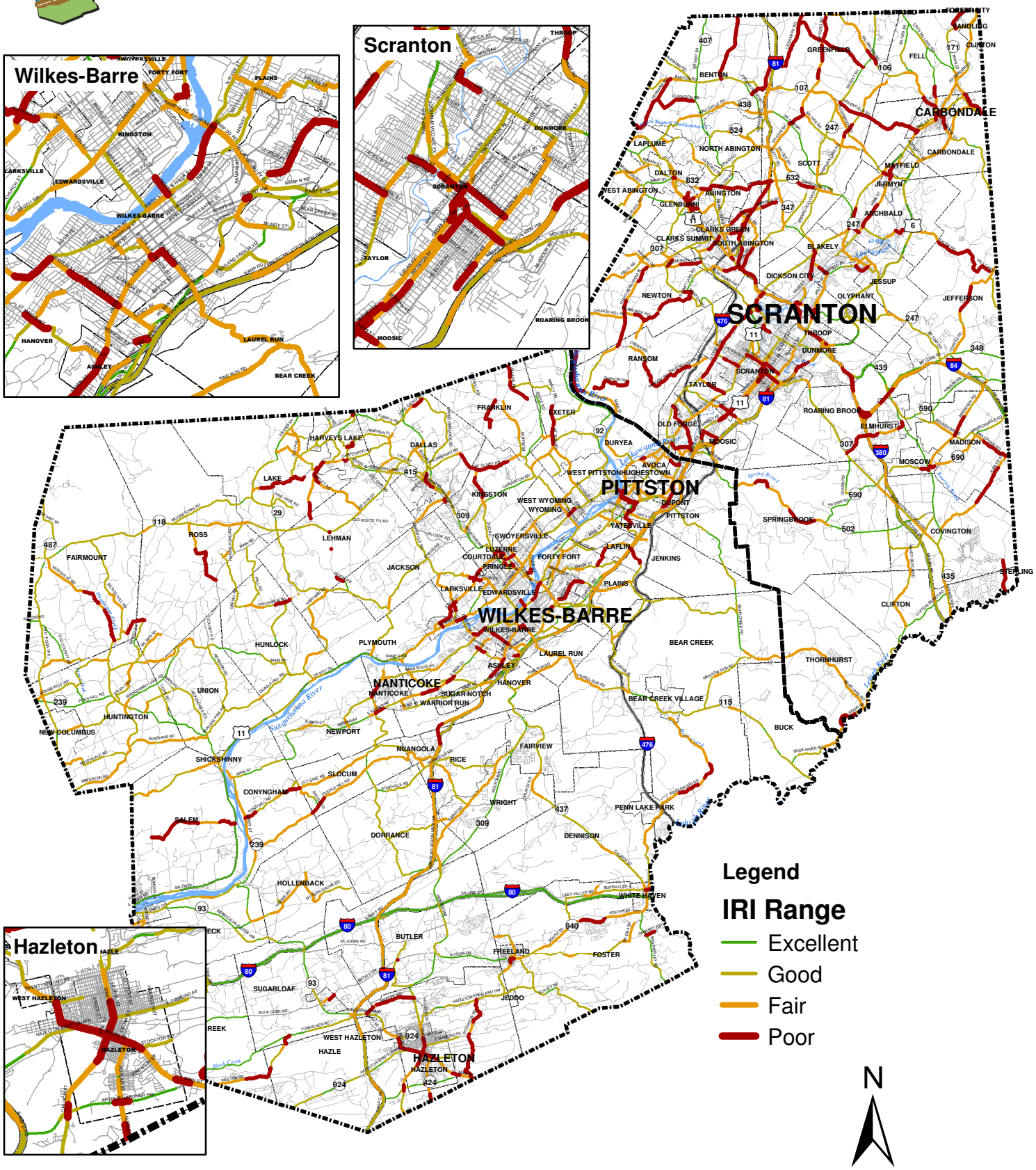
		Functional Class	Excellent	Good	Fair	Poor
Interstate	Rural	01	62.67	42.50	32.89	2.01
	Urban	11	5.71	32.72	41.48	9.54
Freeways / Expressways	Rural & Urban	12	16.21	33.49	11.55	0.75
Principal Arterials	Rural	02	0.78	2.95	0.00	0.00
	Urban	14	24.04	96.53	38.68	17.78
Minor Arterials	Rural	06	54.77	47.46	11.97	1.26
	Urban	16	41.82	106.25	58.35	21.79
Collectors	Rural	07	67.50	87.60	42.69	11.07
	Urban	17	24.76	74.54	48.24	19.75
Minor Collectors	Rural	08	31.77	74.48	65.06	21.15
Local Roads	Rural & Urban	9 & 19	31.22	118.42	62.00	47.01
TOTALS			**361.25** (22.0%)	**716.94** (43.6%)	**412.91** (25.1%)	**152.11** (9.3%)

Source: PennDOT District 4-0, 2008; U.S. Census Bureau, 2000.

Almost 68% of the total lane miles in the region are in the Fair and Good category. These classifications take into account traffic volume and the ride index developed by PennDOT. IRI targets by functional class should be considered for future updates of the Long-Range Plan. Currently, these values are consistent with other regions of the Commonwealth and reflect the necessary asset management focus for the Commonwealth in the coming years.

INTERNATIONAL ROUGHNESS INDEX (IRI)

Figure 4.2.9



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Pavement Structure, Age & Traffic Volume

The pavement structural condition was evaluated in terms of the pavement type, age, and roadway traffic volume, as provided in PennDOT's Roadway Management System database. The evaluation generated an indicator of "Older High-Volume Pavements," which are most likely to require maintenance in the near term. ***Figure 4.2.10*** illustrates the location of Older High-Volume Pavements. These areas should be monitored in the future and serve as a basis for areas with potential deteriorating pavement structural condition. This assessment attempts to go beyond IRI and assess the age and expected life cycle of the different pavements in service in the region.

Older High-Volume Pavements Methodology

The data attached to the State Roadway shape files, as available from the PA State Data Center (PASDA), was used to cross-classify the pavement age with traffic volume and identify critical areas of pavement that were near or beyond the end of their lifecycle.

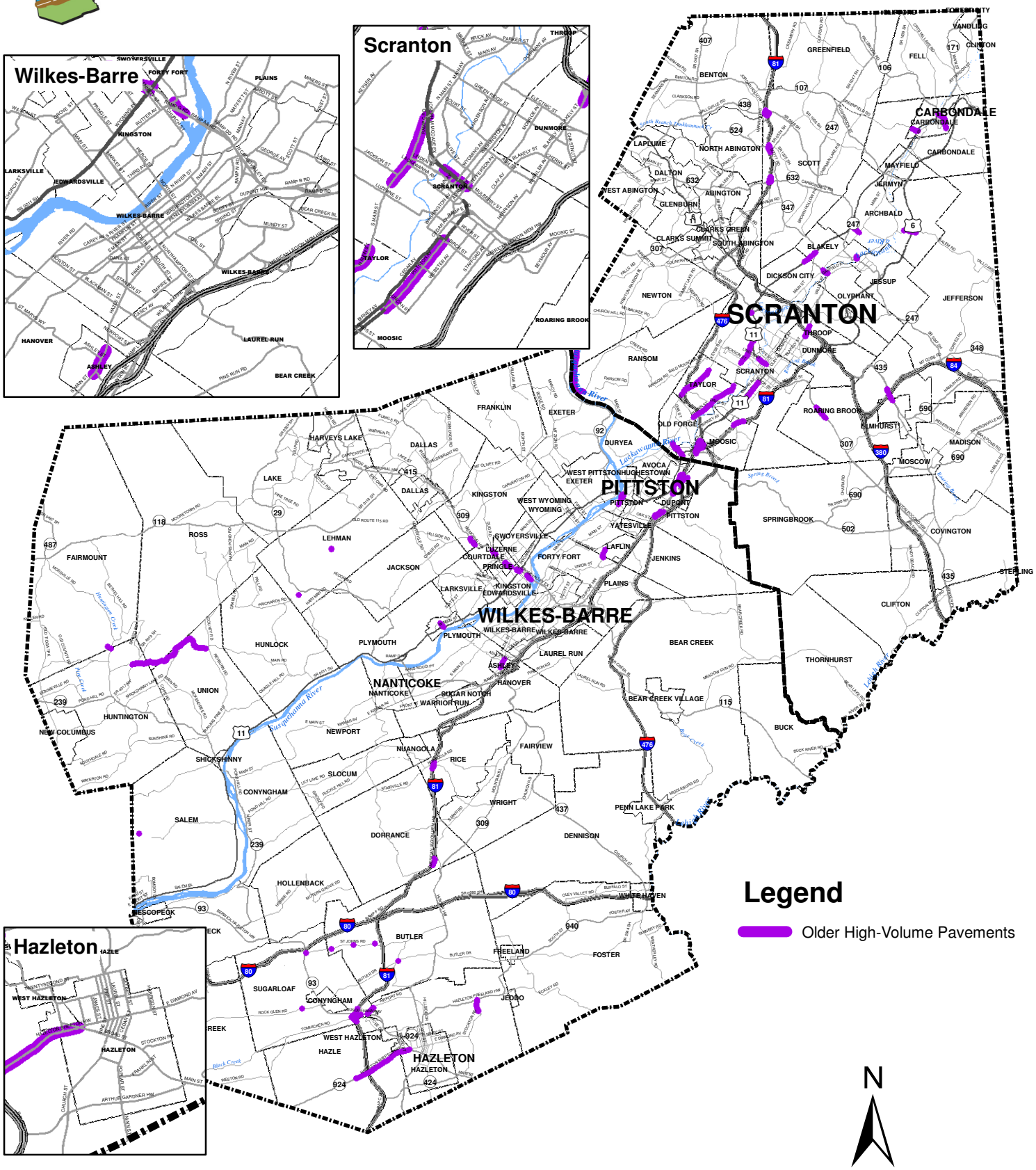
The roadways in the two-county region have been designed with a variety of pavement cross-sections, consisting of different depths, wearing surfaces, and base materials. Before cross-classifying, the pavements were classified into the following five groups according to increasing durability of the pavement design:

- Group A – Earth and Stabilized Soil, Gravel, Stone, Brick
- Group B – Bituminous Surface, Intermediate and High Types
- Group C – Bituminous Surface over Portland Cement Concrete Base
- Group D – Portland Cement Concrete Surface over Bituminous Base
- Group E – Portland Cement Concrete Surface over Portland Cement Concrete Base

Table 4.2.6 defines the ranges of traffic volume (Average Daily Traffic) and pavement age used to cross classify and identify "critical" sections of pavement. ***Table 4.2.7*** breaks down the lane miles of critical pavement of cross-classification and ***Table 4.2.8*** details the number of lane miles of critical pavement by pavement group.

Figure 4.2.10

OLDER HIGH VOLUME PAVEMENTS



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Table 4.2.6
Pavement Age and Traffic Volume Cross-Classification Criteria

Pavement Group	Pavement Age	ADT		
Group A		All Volumes		
	0 to 5 years	**OK**		
	> 5 years	**Critical**		
Group B		< 5,000	5,000 to 20,000	> 20,000
	< 20 years	**OK**	**OK**	**OK**
	20 – 25 years	**OK**	**OK**	**Critical**
	> 25 years	**Critical**	**Critical**	**Critical**
Group C		< 5,000	5,000 to 20,000	> 20,000
	< 30 years	**OK**	**OK**	**OK**
	30 – 35 years	**OK**	**OK**	**Critical**
	> 35 years	**Critical**	**Critical**	**Critical**
Group D		< 10,000	10,000 to 20,000	> 20,000
	< 30 years	**OK**	**OK**	**OK**
	30 – 35 years	**OK**	**OK**	**Critical**
	> 35 years	**Critical**	**Critical**	**Critical**
Group E		< 10,000	10,000 to 30,000	> 30,000
	< 40 years	**OK**	**OK**	**OK**
	40 – 45 years	**OK**	**OK**	**Critical**
	> 45 years	**Critical**	**Critical**	**Critical**

Source: PennDOT District 4-0 Roadway Management System 2008.

Table 4.2.7
Lane Miles of Critical Pavement by Cross-Classification

Pavement Group	Pavement Age	ADT		
Group A		All Volumes		
	0 to 5 years	**Unknown**		
	> 5 years	**Unknown**		
Group B		< 5,000	5,000 to 20,000	> 20,000
	< 20 years	**1,576.94**	**386.13**	**120.93**
	20 – 25 years	**18.77**	**28.93**	**1.00**
	> 25 years	**29.69**	**17.66**	**0.00**
Group C		< 5,000	5,000 to 20,000	> 20,000
	< 30 years	**257.55**	**595.24**	**22.81**
	30 – 35 years	**6.96**	**8.02**	**0.67**
	> 35 years	**4.66**	**10.28**	**1.38**
Group D		< 10,000	10,000 to 20,000	> 20,000
	< 30 years	**0.00**	**141.00**	**22.35**
	30 – 35 years	**0.00**	**0.00**	**0.00**
	> 35 years	**0.00**	**0.00**	**0.00**
Group E		< 10,000	10,000 to 30,000	> 30,000
	< 40 years	**82.64**	**50.67**	**20.95**
	40 – 45 years	**0.00**	**0.00**	**0.00**
	> 45 years	**0.00**	**0.00**	**0.00**

Source: PennDOT District 4-0, 2008.

Table 4.2.8
Lane Miles of Critical Pavement

	Non-Critical	Critical	Unknown	TOTAL
Group A	0.00	0.00	7.83	7.83
Group B	2,131.70	48.35	404.27	2,584.32
Group C	890.58	16.99	53.96	961.53
Group D	163.56	0.00	0.00	163.56
Group E	154.26	0.00	22.09	176.35
TOTAL	**3,340.10** (86.8%)	**65.34** (1.7%)	**488.15** (12.5%)	**3,893.59**

Source: PennDOT District 4-0, 2008.

Bridge Sufficiency Rating

The general integrity of state-owned bridges was evaluated in terms of the Federal Highway Administration's "Sufficiency Rating," as provided by PennDOT District 4-0. The Sufficiency Rating, which was developed as a prioritization tool for allocating improvement funds, assesses bridges on a scale from 0 (poor) to 100 (very good) based on structural adequacy, whether the bridge is functionally obsolete, and the level-of-service provided to the public.[14] It should be noted that PennDOT's system for identifying "structurally deficient" bridges differs somewhat from FHWA's Sufficiency Rating scheme.

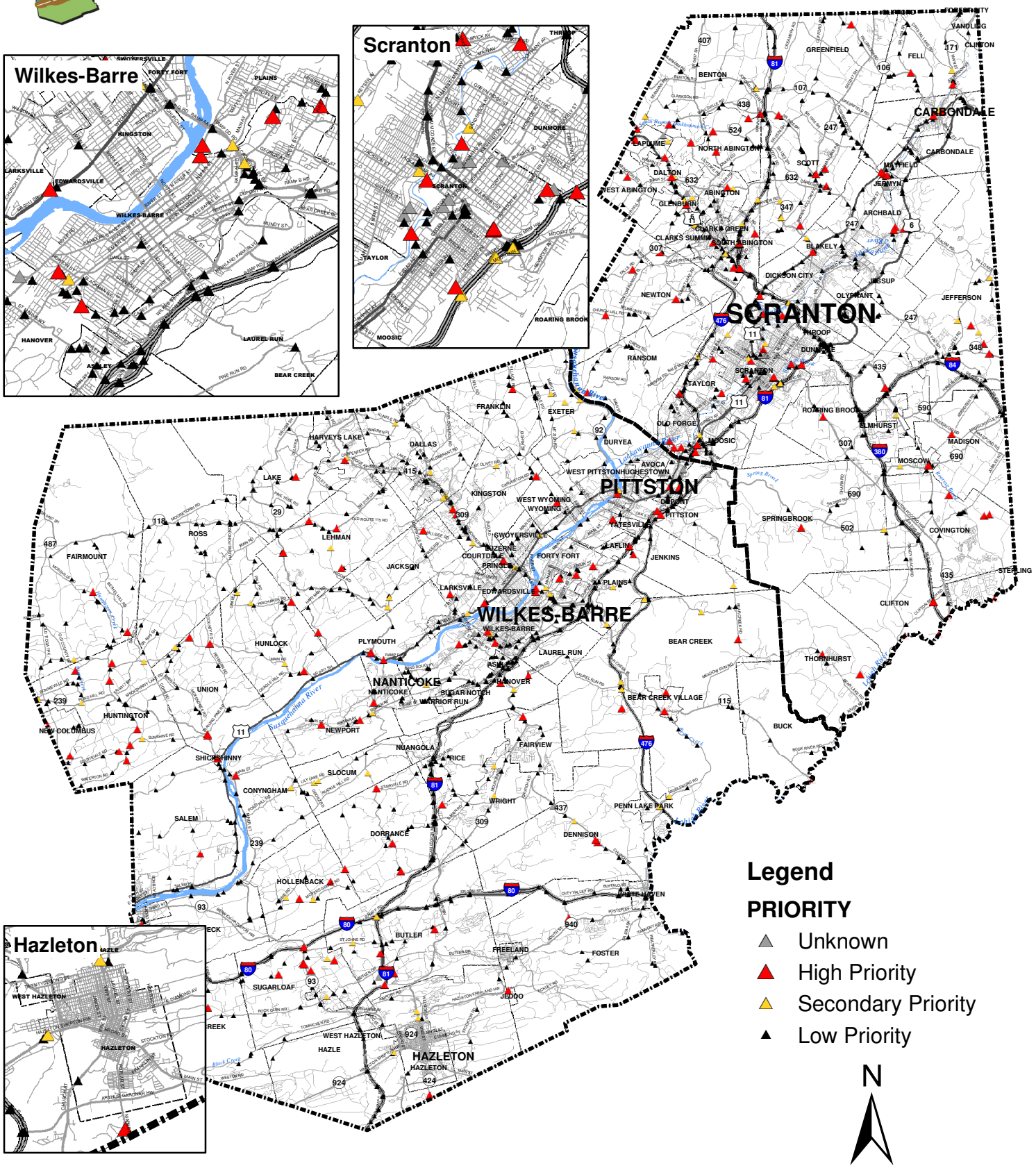
Figure 4.2.11 illustrates the general degree of need and priority for bridge improvements in the study area. ***Table 4.2.9*** shows the number of state-maintained bridges by priority category.

Beginning in early 2008, PennDOT launched a state-wide bridge initiative. The ultimate goal of this program is to make a significant reduction in the number of structurally deficient bridges throughout Pennsylvania. An initial target is to repair or replace a minimum of 1000 structurally deficient bridges in the next 3 years. In order to achieve this goal, PennDOT has developed a target for both the total resources to be dedicated to this purpose and the expected number of bridges to be let each year.

[14] Association of State Highway Transportation Officials, "Facts and Figures about the U.S. Transportation System," http://www.transportation.org/?siteid=93&pageid=2496, 2008.

PRIORITY FOR BRIDGE IMPROVEMENTS

Figure 4.2.11



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Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Table 4.2.9
State Bridges by Condition

Location	Low Priority	Secondary Priority	High Priority	Unknown	TOTAL
State Roadway	1,126	80	63	33	1,302
Local Roadway	148	18	86	28	280
TOTAL	1,274	98	149	61	1,582

Source: PennDOT District 4-0, 2008.

System Performance

The current and future demand for travel and the performance of the transportation system are fundamental long-range planning parameters for evaluating the adequacy of the current transportation system and the need for improvement. Measures of passenger travel demand include commuting worker flows, vehicle volumes, and passenger transit ridership. Measures of freight travel demand include truck volumes and freight tonnage. System performance is evaluated according to levels-of-service, traffic congestion, and crash history. The following sections evaluate travel and freight demand, future demand trends, and the overall performance of the transportation system.

Highway Level-of-Service and Congestion

For the purposes of the plan, the performance or "level-of-service" provided by the highway network under these traffic conditions is estimated by comparing the traffic volume to the theoretical "capacity" of the roadway. Capacity is primarily a function of the roadway design, number of lanes, and the mix of vehicles on the roadway. The vehicle volume divided by the capacity is the "volume-to-capacity (VC) ratio".

Figure 4.2.12 illustrates current year VC ratios for roadways in Lackawanna and Luzerne counties. In general, roadways with a VC less than 0.80 are non-congested. Roadways with VC ratios between 0.80 and 1.00 experience moderate and/or peak hour congestion, while VC ratios over 1.00 indicate locations where persistent congestion is likely. In general, the area does not experience severe congestion levels with isolated signalized corridors being the most problematic areas. Overall, the Interstate 81 corridor, a focus of the "Focus 81" steering committee for several years, experiences peak hour congestion and has a significant statewide and regional importance that is acknowledged in this plan.

The Focus 81 Committee was convened in the Spring of 2003 by the Northeastern Pennsylvania Alliance (NEPA), following discussions with numerous officials in northeastern Pennsylvania regarding overall safety and congestion issues along Interstate 81 in a targeted corridor stretching from Waverly in Lackawanna County to Nanticoke in Luzerne County.

The Committee serves in an advisory capacity to:

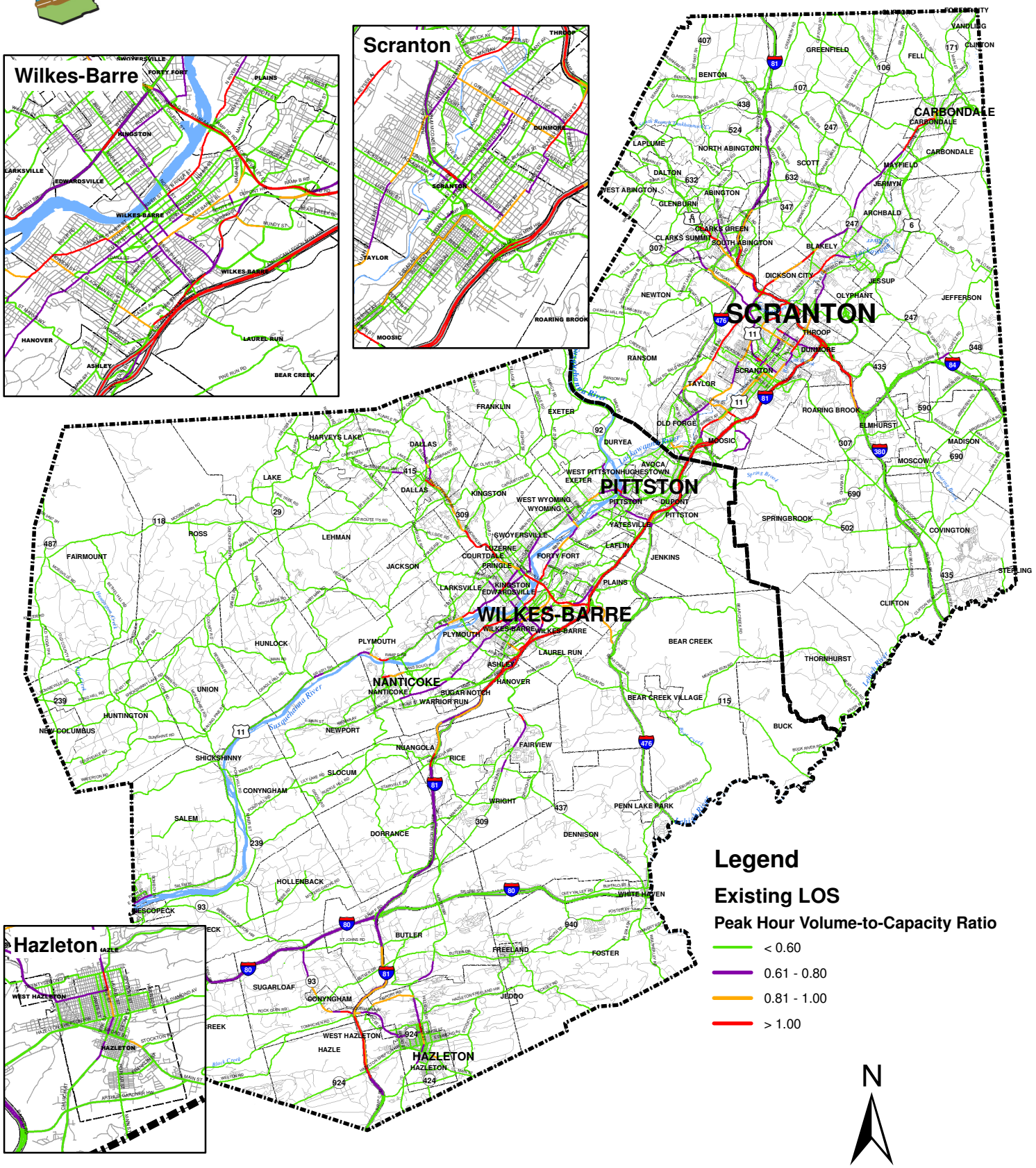
- Provide input on measures that will reduce congestion throughout the targeted corridor of Interstate 81;
- Offer input regarding the design and scope of efforts to increase the capacity of the targeted corridor of Interstate 81;
- Develop educational material and programs to promote safety throughout the targeted corridor of Interstate 81;
- Assist to identify and secure funding for corridor improvements.

The role of NEPA is to coordinate and administer the activities of the Focus 81 Committee in conjunction with PennDOT, the Lackawanna/Luzerne MPO and other stakeholders, to develop and enact measures which will improve safety and reduce congestion within this targeted corridor of Interstate 81.

LACKAWANNA-LUZERNE
COME, SHAPE THE FUTURE

Figure 4.2.12

2007 LEVEL-OF-SERVICE



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Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Current MPO Congestion Management Program

In addition to this analysis to identify potential congestion hot spots, the MPO maintains a Congestion Management Program report as required by the Federal Highway Administration. (***Table 4.2.10 and Table 4.2.11)*** This report is updated every two years and shows that the following corridors are currently facing congestion:

Table 4.2.10 Congested Corridors from Lackawanna County CMP report							
					Priority		
Town	**Corridor Location**	**Level of Congestion**	**Cause of Congestion**	**Mitigation Needs**	**High**	**Med**	**Low**
Blakely	Main St. Lackawanna Ave to Gino Merli Dr.	Acceptable	Pass through/Commerce	Signal updates			X
Carbondale City	Downtown CBD	Approaching	Pass through/Local	Signal updates		X	
Clarks Summit	State St. – Weis Market to Winola Road	Approaching	Pass through/Commerce	Bypass		X	
Dickson City	Main St. – Boulevard Ave to Lackawanna Ave.	Acceptable	Pass through/Commerce	Turning lanes			X
Dunmore	Blakely St. – Jessup Ave. to Cherry St.	Acceptable	Pass through/Commerce	Added capacity		X	
Jessup	Constitution Ave. – Bridge St. to Main Ave.	Acceptable	Pass through	None			X
Moosic	Montage Rd.	Acceptable	Event Specific	None			X
Old Forge	Main Ave – Drakes Lane to Taylor Line	Acceptable	Pass through	None			X
Scranton	Jefferson Ave – Mulberry St. to CS Expressway	Acceptable	Pass through	None		X	
Scranton	Main Ave. – Eynon St to Lackawanna Ave	Acceptable	Pass through/Commerce	None			X
Scranton	Keyser Ave. – Continental Rd. to Market St.	Approaching	Pass through/Commerce	Turning lane	X		
South Abington	Northern Boulevard – Layton Rd to Weis market	Acceptable	Pass through	Bypass		X	
Countywide	I-81	Approaching	Pass through/Local	Added capacity	X		

Table 4.2.11 Congested Corridors from Luzerne County CMP report

Route	Municipality	Corridor Location	2007	Status	2008	Congestion Status	2009	Congestion Status
SR 6309	Wilkes-Barre T.	Between Casey Ave. & E. Northampton St.	0.99	High	1	Congested	1.04	Congested
SR 0924	Hazle T.	Between Maplewood Dr. & Old St.	0.76	High	0.82	High	0.88	High
SR 0309	Hazleton C.	Between 22nd St. & Broad St.	0.4	Low	0.39	Low	0.87	High
PA 6309	Wilkes-Barre T.	Between Home Depot & Mundy St.	0.56	Moderate	0.84	High	0.88	High
SR 2004	Jenkins T.	Between Saylor Ave. & 8th St.	0.56	Moderate	0.52	Moderate	0.47	Low

This information was included in the development of projects and will be improved to measure the performance of the corridors in the future.

Future Highway Level-of-Service & Congestion

Figure 4.2.13 illustrates future year V/C ratios and illustrates hot spots related to potential future traffic congestion should traffic volumes and development continue to grow as they have in the past. ***Table 4.2.12*** compares the number of existing and forecasted V/C ratios by roadway segment. This information is presented for information and to educate the stakeholders of expected future problem areas.

Table 4.2.12
Roadway Segment Level-of-Service Comparison
2007 vs. 2035 Volume to Capacity Ratios

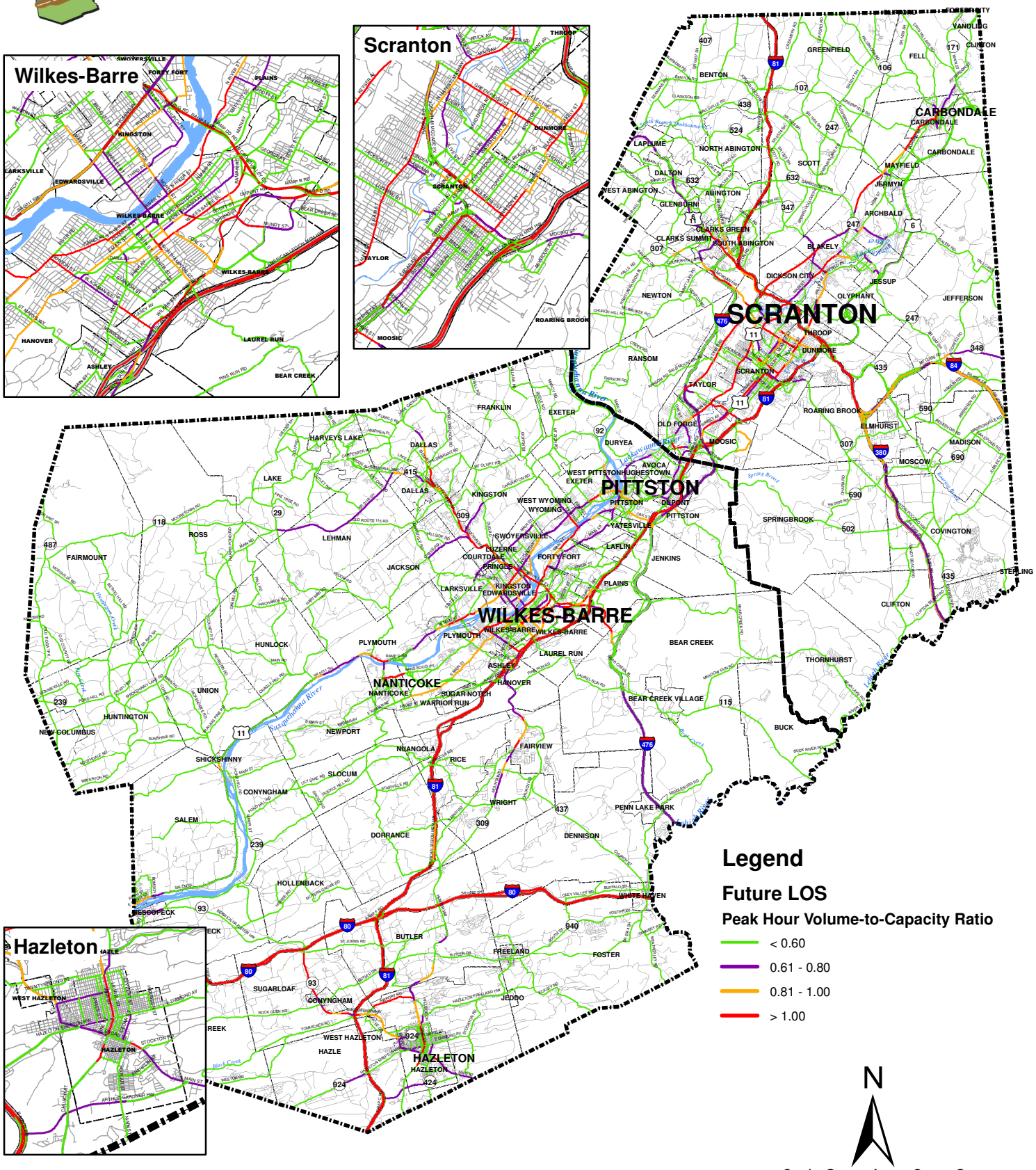
	< 0.50	0.50 to 0.79	0.80 to 0.99	1.00 to 1.19	> 1.20
Existing	3,780	644	132	47	167
Future	3,307	622	239	187	420

Source: PennDOT District 4-0, 2008

Further discussion and analysis of the trend land use scenario is included in section 4.11. Section 4.11 also includes the Scenario Planning and Analysis completed as part of the planning effort. With appropriate land use decisions, the potential exists to mitigate some of this future congestion with increased transit utilization.

Figure 4.2.13

FUTURE LEVEL-OF-SERVICE



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Highway Safety Performance

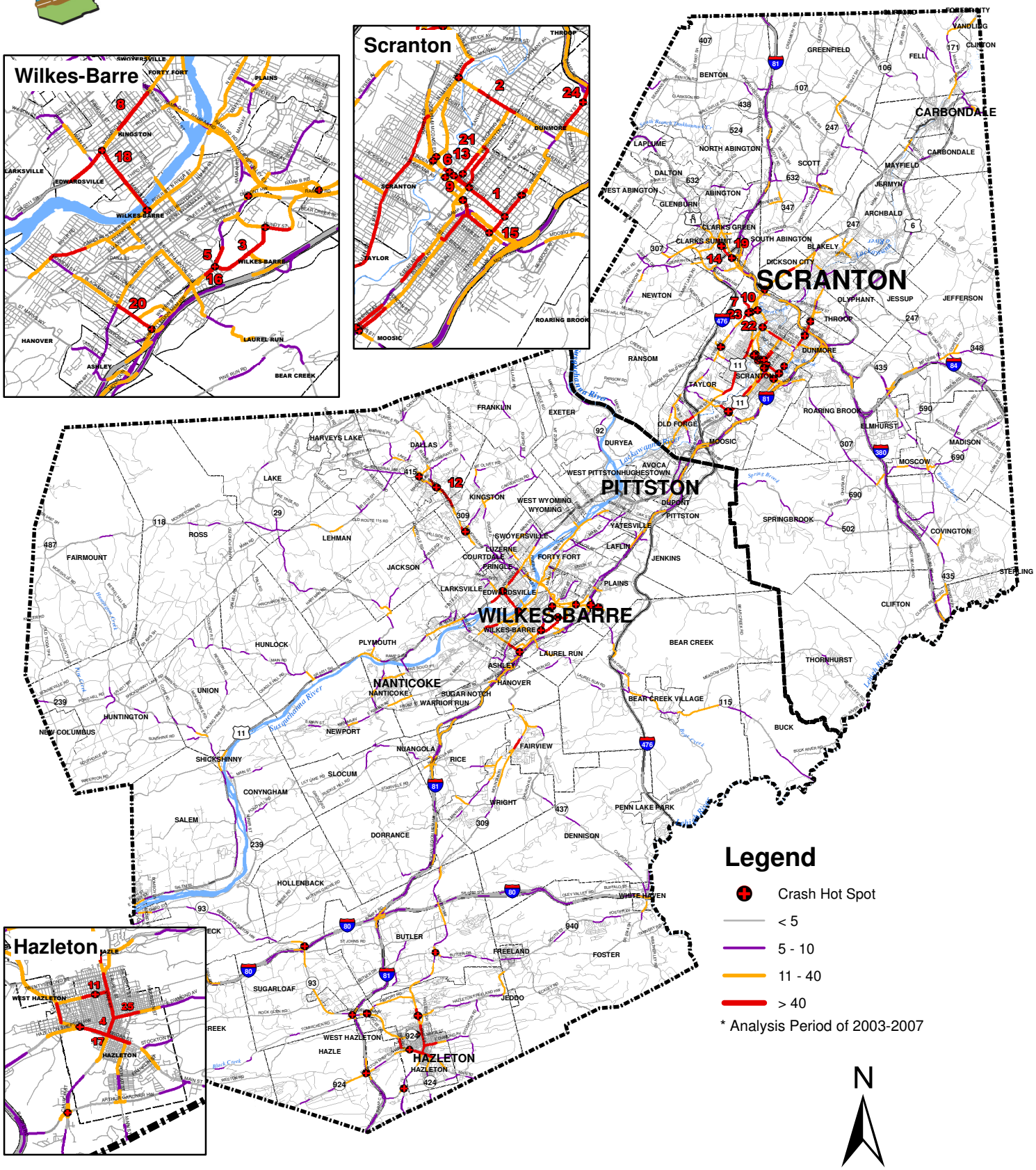
The performance of the highway system may also be evaluated in terms of its safety or lack thereof, according to the frequency, severity, and distribution of roadway crashes. Such an evaluation not only suggests project locations but also assists in prioritizing projects in comparison to others. The following evaluation of highway safety considers the history of reportable crashes for the previous 5-year period (2003 to 2007), which was provided by PennDOT District 4-0 for all state-maintained roadways.

Segment Crashes and Crash Rates

Crashes in the PennDOT crash database were located and summarized by roadway segment. The segment crash rate is given in terms of crashes-per-million-vehicle-miles-of-travel and accounts for traffic volume, number of crashes, and length of the segment. The number of crashes on individual roadway segments in the two-county area are summarized by ranges and illustrated in ***Figure 4.2.14***. ***Table 4.2.13*** lists the specific segments with the highest number of crashes.

SEGMENT CRASHES & CRASH HOT SPOTS

Figure 4.2.14



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Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Table 4.2.13
Highway Segments with the Highest Number of Crashes (2003-2007)

Rank	County	Street Name	Route		Segment	Crashes	Total Injury Crashes	Major Injury Crashes	Fatal Crashes	Average ADT
1	LACKAWANNA	MULBERRY ST		3027	0010	101	75	1	0	15,758
2	LACKAWANNA	GREEN RIDGE ST		6011	0260	85	80	3	0	13,665
3	LUZERNE	HIGHLAND PARK BLVD		2063	0010	81	81	3	0	5,255
4	LUZERNE	CHURCH ST	PA	0309	0110	79	57	0	0	10,871
5	LUZERNE	WILKES-BARRE TWP BL	PA	6309	0590	79	84	0	0	11,818
6	LACKAWANNA	MULBERRY ST	US	0011	0212	74	61	1	0	17,253
7	LACKAWANNA	MORGAN HW	PA	0307	0250	74	65	1	0	14,816
8	LUZERNE	WYOMING AV	US	0011	0580	70	51	0	1	11,784
9	LACKAWANNA	MULBERRY ST	US	0011	0213	69	60	1	0	20,937
10	LACKAWANNA	KEYSER AV		6307	0240	68	62	1	0	6,164
11	LUZERNE	FIFTEENTH ST	PA	0924	0150	68	69	0	0	9,922
12	LUZERNE	MEMORIAL HW	PA	0309	0750	67	56	1	0	14,678
13	LACKAWANNA	WYOMING AV		3025	0020	65	62	2	2	5,752
14	LACKAWANNA	STATE ST	US	0006	0171	65	39	0	0	13,902
15	LACKAWANNA	HARRISON AV		6011	0190	64	42	1	0	17,398
16	LUZERNE	WILKES-BARRE TWP BL		6309	0591	63	61	0	0	11,818
17	LUZERNE	BROAD ST	PA	0093	0070	61	64	2	1	7,754
18	LUZERNE	MARKET ST		1009	0030	61	54	4	0	10,151
19	LACKAWANNA	STATE ST	US	0006	0161	61	53	3	0	13,902
20	LUZERNE	BLACKMAN ST		2005	0010	61	43	0	0	13,159
21	LACKAWANNA	WYOMING AV		3025	0021	60	58	1	2	5,733
22	LACKAWANNA	KEYSER AV	US	6307	0241	59	49	1	0	6,856
23	LACKAWANNA	KEYSER AV		3011	0170	58	48	1	0	18,173
24	LACKAWANNA	ONEILL HW	PA	0347	0021	58	43	0	0	12,494
25	LUZERNE	W DIAMOND AV		3030	0010	57	41	1	0	3,397

Source: PennDOT District 4-0, 2008.

Intersection Crash Hot Spots

Intersections are focal points for crashes because of the conflict between different traffic movements and roadway users (vehicles, pedestrians, bicycles, etc.). To identify crash hot spots in Lackawanna and Luzerne Counties, the PennDOT crash data was processed to identify segment crashes within 250 feet of an intersection. These locations were then ranked according to a "Severity Index", which accounts for both the number of crashes and the severity of those crashes. The top 20 Intersection Crash Hot Spots in Lackawanna and Luzerne Counties are given in ***Tables 4.2.14*** and ***4.2.15***, respectively, and illustrated on ***Figure 4.2.14***. While most of these locations are intersections of surface streets, about a quarter are intersections of highway ramps with surface streets.

Table 4.2.14
Lackawanna County Intersection Crash Hot Spots (2003-2007)

Rank	Major Street	Route		Cross Street	Route		Crashes	Municipality
1	Moosic Street	PA	307	Crown Avenue	SR	6011	17	SCRANTON CITY
2	North 7th Avenue	SR	3029	Scranton Expressway Ramps	US	11	16	SCRANTON CITY
3	North Blakley Street	PA	347	Keystone Industrial Drive		0	16	DUNMORE BOROUGH
4	Mulberry Street	US	11	Franklin Street		0	16	SCRANTON CITY
5	Pittston Avenue	US	11	Davis Street	SR	3016	28	SCRANTON CITY
6	Mulberry Street	US	11	Kressler Court		0	25	SCRANTON CITY
7	Mulberry Street	US	11	Jefferson Avenue	SR	3018	24	SCRANTON CITY
8	Scranton-Carbondale Highway	SR	6006	I-81 Ramps	SR	8013	15	SCRANTON CITY
9	Keyser Avenue	PA	307	Scranton Expressway Ramps	US	11	22	SCRANTON CITY
10	Jefferson Avenue	US	11	Spruce Street	SR	3018	23	SCRANTON CITY
11	Keyser Avenue	SR	6307	Oak Street		0	24	SCRANTON CITY
12	Harrison Avenue	SR	6011	Gibson Street		0	18	SCRANTON CITY
13	Jackson Street	SR	3003	Keyser Avenue	SR	3011	19	SCRANTON CITY
14	Linden Street	SR	3020	Franklin Avenue		0	18	SCRANTON CITY
15	Northern Boulevard	US	6	South Abington Road	PA	407	21	SOUTH ABINGTON TOWNSHIP
16	Birney Avenue	US	11	Davis Avenue	SR	3016	20	SCRANTON CITY
17	Main Street	SR	3013	Green Ridge Street	SR	6011	16	SCRANTON CITY
18	Morgan Highway	PA	307	Keyser Avenue	SR	6011	20	SCRANTON CITY
19	Mulberry Street	SR	3027	Harrison Avenue	SR	6011	18	SCRANTON CITY
20	Mulberry Street	US	11	Penn Avenue		0	33	SCRANTON CITY

Source: PennDOT District 4-0, 2008.

Table 4.2.15
Luzerne County Intersection Crash Hot Spots (2003-2007)

Rank	Major Street	Route		Cross Street	Route		Crashes	Municipality
1	I-81Off-Ramp	SR	8013	Wilkes-Barre Township Blvd	PA	309	30	WILKES BARRE TOWNSHIP
2	Memorial Highway	PA	415	Center Hill Road		0	15	DALLAS BOROUGH
3	Market Street	SR	1009	River Street	SR	2004	24	WILKES BARRE CITY
4	Crossover Road	PA	315	PA 309 Ramps	SR	8045	19	PLAINS TOWNSHIP
5	Broad Street	PA	93	Diamond Avenue	PA	924	24	HAZLETON CITY
6	Mundy Street	SR	2061	Highland Park Boulevard	SR	2063	31	WILKES BARRE TOWNSHIP
7	Bear Creek Boulevard	PA	115	Wildflower Drive		0	18	PLAINS TOWNSHIP
8	Bear Creek Boulevard	PA	115	I-81 Ramps	SR	8015	19	PLAINS TOWNSHIP
9	Berwick-Hazleton Highway	PA	93	Country Club Road	SR	3020	21	SUGARLOAF TOWNSHIP
10	Wyoming Avenue	US	11	Market Street	SR	1009	21	KINGSTON BOROUGH
11	Hunter Highway	PA	309	Butler Drive	SR	3022	20	BUTLER TOWNSHIP
12	Memorial Highway	PA	309	Carverton Road	SR	1036	24	KINGSTON TOWNSHIP
13	Wilkes-Barre Township Blvd	SR	6309	Highland Park Boulevard	SR	2063	50	WILKES BARRE TOWNSHIP
14	Memorial Highway	PA	309	Tunkhannock Highway	PA	415	18	DALLAS BOROUGH
15	Hunter Highway	PA	309	28th Street		0	19	HAZLE TOWNSHIP
16	Susquehanna Avenue	PA	93	Kiwanis Boulevard	SR	3026	31	SUGARLOAF TOWNSHIP
17	Washington Street	PA	924	Locust Street		0	18	HAZLETON CITY
18	Hazleton-Shepton Highway	PA	924	I-81 Ramps		0	18	HAZLE TOWNSHIP
19	Berwick-Hazleton Highway	PA	93	Old Berwick Road		0	15	SUGARLOAF TOWNSHIP

Source: PennDOT District 4-0, 2008.

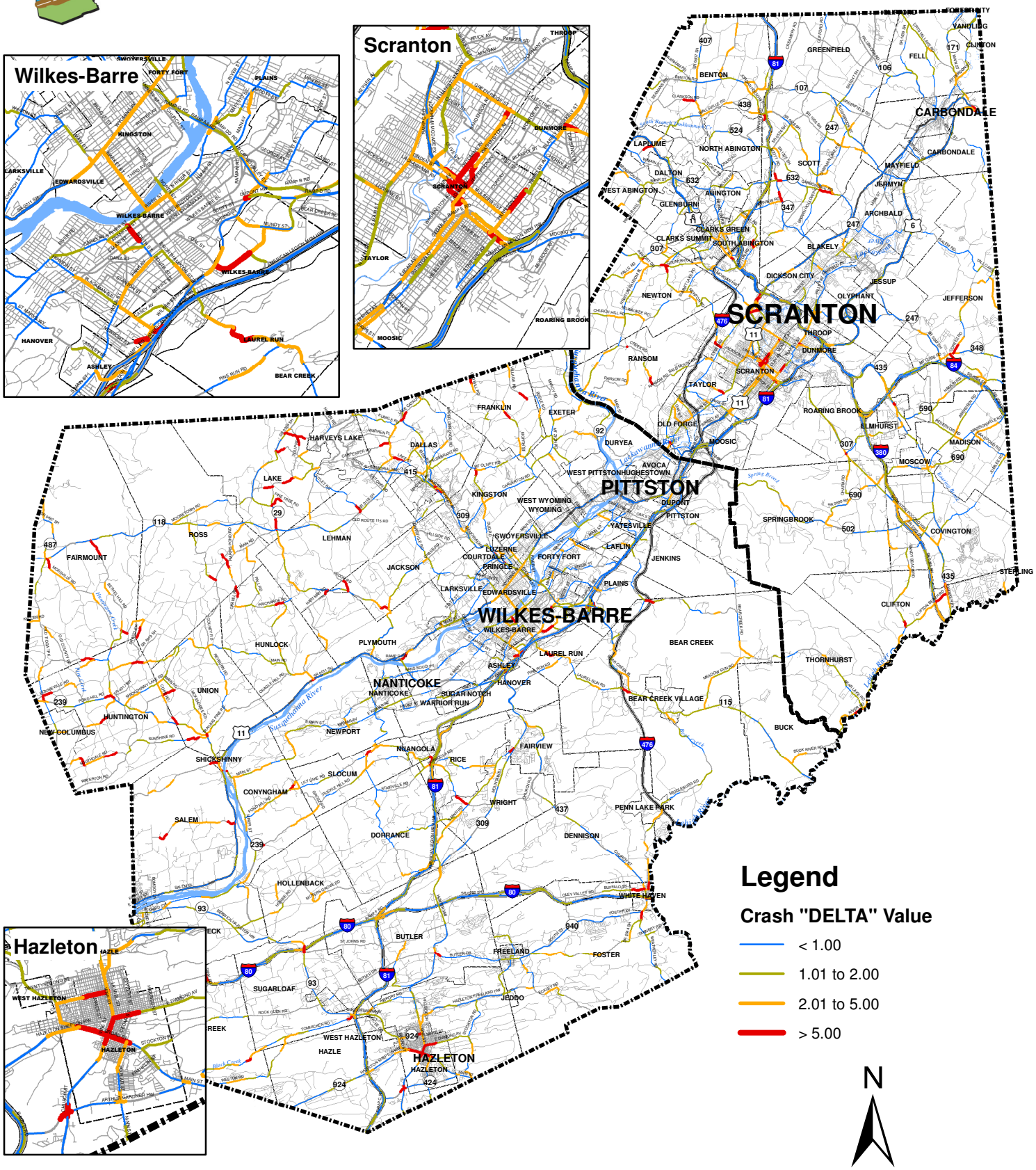
Segment crash rates were also evaluated according to the "DELTA" value, which is the segment crash rate divided by the Statewide Homogeneous Crash Rate for similar segments, as provided by PennDOT's Center for Highway Safety. Segments are grouped in categories based on functional class, PennDOT traffic pattern group, traffic volumes and type of cross section for this analysis. The crash rate DELTA values were also summarized by ranges and are illustrated in ***Figure 4.2.15***. ***Table 4.2.16*** gives the segments with the highest crash rate DELTA values.

Under Federal mandate, each state must submit a yearly "Five Percent Report" describing at least the top five percent of its locations currently exhibiting the most severe highway safety needs. Several roadway segments of PA Route 93 (Segments 60 to 110) in Luzerne County were listed in the 2008 Five Percent Report, and signal upgrades as well as roadway widening improvements were recently completed. PA Route 93, Segment 70 does show up in ***Table 4.2.13*** as the 17th highest crash segment.[15]

[15] Federal Highway Administration (FHWA), Pennsylvania 2008 Five Percent Report, http://safety.fhwa.dot.gov/fivepercent/08pa.htm, August 2008.

Figure 4.2.15

SEGMENT CRASH DELTA VALUES



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Table 4.2.16
Highway Segments with the Highest Crash Rate DELTA Values (2003-2007)

Rank	County	Street Name	Route		Segment	# of Crashes	Average ADT	Crash Rate	Homogen. Rate	DELTA
3	LACKAWANNA	ROBERT P CASEY HW	US	0006	0565	27	4,697	26.23	0.46	57.01
4	LACKAWANNA	ROBERT P CASEY HW	US	0006	0564	23	4,697	22.34	0.46	48.57
6	LACKAWANNA	MORGAN HW	PA	0307	0247	20	7,950	64.41	1.65	39.04
8	LUZERNE	KIDDER ST		2009	0003	24	4,012	57.71	1.65	34.97
9	LACKAWANNA	MORGAN HW	PA	0307	0246	19	9,493	51.73	1.65	31.35
10	LUZERNE	ARTHUR GARDNER HW	PA	0424	0090	32	4,388	13.05	0.46	28.36
11	LUZERNE	KIDDER ST		2009	0002	21	4,547	38.17	1.65	23.13
13	LUZERNE	SR 0011 SH	US	0011	0334	10	3,552	13.76	0.82	16.78
14	LACKAWANNA	ADAMS AV		3023	0080	50	3,680	26.78	1.65	16.23
15	LUZERNE	TOMHICKON RD		3020	0230	28	2,529	18.55	1.15	16.13
18	LUZERNE	MAIN ST		1045	0010	18	1,369	21.05	1.38	15.26
19	LUZERNE	NUANGOLA RD		3006	0220	22	1,307	16.26	1.15	14.14
20	LACKAWANNA	RAMP K RD		6011	0310	11	4,424	23.21	1.65	14.07
21	LACKAWANNA	KEYSER AV		6307	0240	68	6,164	20.22	1.65	12.26

Source: PennDOT District 4-0, 2008. Note: < 5 # of crashes not included on table.

Pedestrian Crash Hot Spots

Crashes involving pedestrians are of particular concern. Pedestrian injury crashes and fatalities in Lackawanna and Luzerne Counties from the PennDOT crash database were summarized by roadway segment. ***Table 4.2.17*** lists all of the roadway segments in the two-county region where three or more pedestrian-related crashes were reported. ***Table 4.2.18*** lists all of the roadway segments where one or more fatal pedestrian-related crashes were reported. Both sets of segments are illustrated on **Figure *4.2.16***. It should be noted that, while the crash data contains midblock pedestrian crashes, it is likely that most of these crashes are associated with intersections along the segment.

Table 4.2.17
Highway Segments with Three or More Pedestrian Crashes (2003-2007)

Rank	County	Street Name	Route		Segment	Pedestrian Crashes	Fatal Pedestrian Crashes	Average ADT
1	LACKAWANNA	MULBERRY ST	US	0011	0202	9	0	8,670
2	LACKAWANNA	MULBERRY ST	SR	3027	0010	8	0	15,448
3	LACKAWANNA	S MAIN ST	SR	3013	0100	8	0	14,995
4	LUZERNE	WYOMING AV	US	0011	0580	7	1	11,551
5	LACKAWANNA	N MAIN ST	SR	3013	0150	6	0	11,751
6	LACKAWANNA	N MAIN ST	SR	3013	0110	6	1	14,900
7	LACKAWANNA	BLAKELY ST	PA	0347	0010	5	1	19,438
8	LACKAWANNA	LINDEN ST	SR	3020	0024	5	0	4,998
9	LACKAWANNA	WASHINGTON AV	SR	3023	0090	5	0	9,888
10	LUZERNE	BROAD ST	PA	0093	0060	5	0	5,674
11	LACKAWANNA	S STATE ST	US	0006	0150	5	0	18,010
12	LACKAWANNA	WYOMING AV	SR	3025	0020	5	2	5,695
13	LACKAWANNA	CEDAR AV	US	0011	0160	4	1	8,549
14	LUZERNE	PARK AV	SR	2010	0150	4	0	4,081
15	LUZERNE	BROAD ST	PA	0093	0100	4	1	7,664
16	LACKAWANNA	BIRCH ST	US	0011	0170	3	0	10,557
17	LACKAWANNA	LACKAWANNA AV	SR	3018	0010	3	0	10,930
18	LACKAWANNA	MOOSIC ST	PA	0307	0220	3	0	6,670
19	LACKAWANNA	HARRISON AV	SR	6011	0200	3	0	13,744
20	LACKAWANNA	LACKAWANNA AV	PA	0347	0100	3	0	13,579
21	LUZERNE	BROAD ST	PA	0093	0080	3	0	7,601
22	LUZERNE	ACADEMY ST	SR	2014	0008	3	0	12,053
23	LUZERNE	MAIN ST	SR	1007	0020	3	0	10,542
24	LUZERNE	W DIAMOND AV	SR	3030	0010	3	0	3,330
25	LACKAWANNA	MULBERRY ST	US	0011	0212	3	0	16,681
26	LUZERNE	SOUTH ST	SR	2007	0160	3	0	6,387
27	LUZERNE	W MAIN ST	US	0011	0480	3	0	8,597

Source: PennDOT District 4-0, 2008.

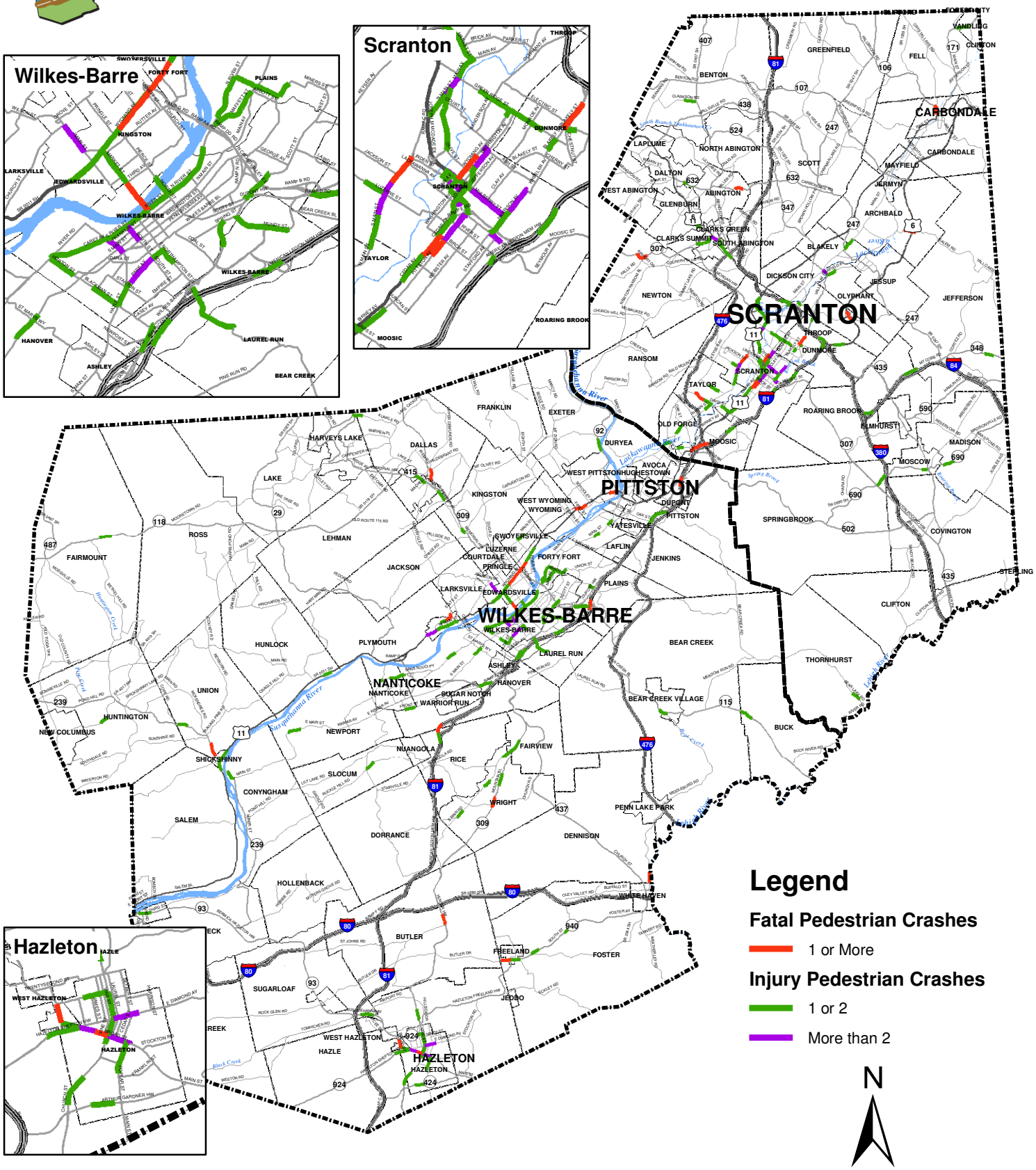
Table 4.2.18
Highway Segments with One or More Fatal Pedestrian Crashes (2003-2007)

Rank	County	Street Name	Route		Segment	Fatal Pedestrian Crashes	Other Pedestrian Crashes	Average ADT
1	LACKAWANNA	WYOMING AV		3025	0020	2	5	5,695
2	LUZERNE	WYOMING AV	US	0011	0580	1	7	11,551
3	LACKAWANNA	N MAIN ST		3013	0110	1	6	14,900
4	LACKAWANNA	BLAKELY ST	PA	0347	0010	1	5	19,438
5	LUZERNE	BROAD ST	PA	0093	0100	1	4	7,664
6	LACKAWANNA	CEDAR AV	US	0011	0160	1	4	8,549
7	LUZERNE	W SHAWNEE AV		1002	0030	1	2	4,083
8	LUZERNE	BROAD ST	PA	0093	0070	1	2	7,601
9	LUZERNE	MARKET ST		1009	0020	1	2	9,950
10	LACKAWANNA	PITTSTON AV		3023	0030	1	2	11,574
11	LUZERNE	TUNKHANNOCK HW	PA	0309	0770	1	2	12,042
12	LUZERNE	AMERICAN LEGION MEM HW	I	0081	1700	1	2	33,792
13	LACKAWANNA	SALEM RD		1012	0060	1	1	954
14	LUZERNE	SR 2041 SH		2041	0020	1	1	1,354
15	LACKAWANNA	CARBONDALE RD	PA	0632	0090	1	1	3,401
16	LUZERNE	SR 0239 SH	PA	0239	0210	1	1	5,302
17	LACKAWANNA	WINOLA RD	PA	0307	0380	1	1	5,310
18	LUZERNE	SOUTH ST		3022	0080	1	1	5,551
19	LUZERNE	MOUNTAIN BL	PA	0309	0401	1	1	5,786
20	LUZERNE	HUNTER HW	PA	0309	0271	1	1	5,931
21	LACKAWANNA	UNION ST		3010	0020	1	1	6,008
22	LUZERNE	WYOMING AV	US	0011	0600	1	1	7,968
23	LACKAWANNA	FALLBROOK ST	PA	0106	0172	1	1	8,119
24	LACKAWANNA	ROBERT P CASEY HW	US	0006	0304	1	1	9,261
25	LUZERNE	WYOMING AV	US	0011	0710	1	1	10,354
26	LUZERNE	WYOMING AV	US	0011	0680	1	1	13,999
27	LACKAWANNA	BIRNEY AV	US	0011	0031	1	1	14,842
28	LUZERNE	AMERICAN LEGION MEM HW	I	0081	1605	1	1	26,666
29	LUZERNE	AMERICAN LEGION MEM HW	I	0081	1775	1	1	28,296
30	LACKAWANNA	AMERICAN LEGION MEM HW	I	0081	1795	1	1	33,127

Source: PennDOT District 4-0, 2008.

Figure 4.2.16

PEDESTRIAN CRASH SEGMENTS



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Transit Level-of-Service

The performance of transit systems in the two-county region was evaluated using the methodology provided in the Transportation Research Board's Transit Capacity and Quality of Service Manual. This methodology examines the following performance measures in assigning a level-of-service letter grade:

1. ***Transit Vehicle Headway*** is a measure of service frequency and is defined as the time between successive transit vehicles at a given stop. Headways may vary throughout the day, with more frequent service during the morning and afternoon rush hours. Therefore, the average transit vehicle headway was used in this analysis.

2. ***Total Hours of Service*** is more straightforward and is defined as the total number of hours during the day that active transit service is provided on that route.

Table 4.2.19 gives the thresholds established in the Transit Capacity and Quality of Service Manual for assigning levels of service (LOS) letter grades based on transit vehicle headways and hours of service.

Table 4.2.19
Fixed Route Level of Service

Level of Service (LOS)	Transit Vehicle Headway (minutes)	Total Hours of Operation
A	< 10	19-24
B	10-14	17-18
C	15-20	14-16
D	21-30	12-13
E	31-60	4-11
F	> 60	0-3

Source: Transit Cooperative Research Program, *Report 100: Transit Capacity and Quality of Service Manual*, 2003.

Current route and schedule information was obtained from the websites maintained by the three major transit providers in the two-county region — the County of Lackawanna Transit System (COLTS), Luzerne County Transportation Authority (LCTA), and Hazleton Public Transit (HPT). ***Figure 4.2.3*** illustrates all three of the transit systems and their estimated "service areas", which were generated in GIS by a ¼-mile buffer on either side of the transit line.

The headway and house of operation information were coded onto each route, and a transit level-of-service analysis was completed. ***Tables 4.2.20, 4.2.21*, and *4.2.22*** summarize the results of this analysis.

Table 4.2.20
County of Lackawanna Transit System (COLTS)
Levels of Service, 2008

Route	Service Area	Weekday Levels of Service		Weekend Levels of Service	
		Total Hours of Operation (Outbound / Inbound)	**Transit Vehicle Headway** (Outbound / Inbound)	**Total Hours of Operation** (Outbound / Inbound)	**Transit Vehicle Headway** (Outbound / Inbound)
12	Jessup	E / E	D / D	E / E	E / E
14	Drinker	E / E	D / D	F / F	E / E
15	Chestnut & Ash	E / E	E / E	F / F	E / E
18	Petersburg	D / D	D / D	E / E	E / E
21	East Mountain/Wintermantle/Oakmount	E / E	E / E	F / F	E / E
25	Valley View/Hill Top	E / E	D / D	E / E	E / E
27	Minooka	E / E	D / D	N / A	N / A
28	Pittston	E / E	D / E	E / E	E / E
31-32	Old Forge/Sibley	D / D	D / D	E / E	E / E
33	Taylor/McDade	F / F	E / E	F / F	E / E
35	Keyser Valley	E / E	D / D	E / E	E / E
36	Lafayette	E / E	D / D	E / E	E / E
38	Oram	E / E	E / D	E / E	E / E
41	High Works/Allied	D / D	D / D	F / F	E / E
43-44	Bangor/Viewmont Mall	D / D	D / D	E / E	E / E
45-48-49	Viewmont Mall Express/Dalton/Waverly	F / F	D / D	F / F	E / E
52	Carbondale	E / E	D / D	E / E	E / E
53	Marywood	E / E	E / E	F / F	E / E
54	Green Ridge	E / E	D / D	E / E	E / E
58	North Pocono/Daleville	F / F	E / E	F / F	E / E
N/A	Carbondale/Route 6 Shuttle	F / F	E / E	F / F	E / E
N/A	Route 6 Shuttle	E / E	E / E	E / E	E / E
N/A	Shopper's Special	F / F	E / E	F / F	E / E
Overall Composite Level-of-Service		*E*	*D*	*E*	*E*

Source: County of Lackawanna Transit System, "2008 Schedules," http://www.coltsbus.com/schedules.htm. Transit Cooperative Research Program, *Report 100: Transit Capacity and Quality of Service Manual*, 2003.

Table 4.2.21
Luzerne County Transportation Authority (LCTA)
Levels of Service, 2008

Route	Service Area	Weekday Levels of Service		Weekend Levels of Service	
		Total Hours of Operation (Outbound / Inbound)	**Transit Vehicle Headway** (Outbound / Inbound))	**Total Hours of Operation** (Outbound / Inbound)	**Transit Vehicle Headway** (Outbound / Inbound)
1	Miners Mills – Hudson	F / F	D / D	F / F	E / E
3	Grove & Brown / Heights	E / E	D / D	F / F	E / E
5	Parsons	E / E	D / D	E / E	E / E
6	Dallas	E / E	D / D	F / F	E / E
7	Georgetown	E / E	D / D	F / F	E / E
8	Swoyersville	F / F	E / D	F / F	E / E
10	Wyoming Valley Mall	D / D	D / D	E / E	E / E
11	West Pittston	E / E	D / D	E / E	E / E
12	Larksville	E / E	D / D	F / F	E / E
13	Ashley/Sugar Notch	E / E	D / D	E / E	E / E
14	Nanticoke via Glen Lyon	E / E	D / D	E / E	E / E
15	Nanticoke / Middle Road	E / E	D / D	F / F	E / E
16	Old Forge	E / E	D / D	F / F	E / E
18	Shopper's Delight / Wyoming valley Mall	F / F	E / E	E / E	E / E
22	Plymouth / Old River Road	E / E	D / D	F / F	E / E
Overall Level of Service		*E*	*D*	*F*	*E*

Source: Luzerne County Transportation Authority, "2008 Schedules," http://www.lctabus.com/Schedules.htm. Transit Cooperative Research Program, *Report 100: Transit Capacity and Quality of Service Manual*, 2003.

Table 4.2.22
Hazleton Public Transit (HPT)
Levels of Service, 2008

Route	Service Area	Weekday Levels of Service		Weekend Levels of Service	
		Total Hours of Operation (Outbound / Inbound)	Transit Vehicle Headway (Outbound / Inbound)	Total Hours of Operation (Outbound / Inbound)	Transit Vehicle Headway (Outbound / Inbound)
10	Hazleton Heights / Tresckow	E / E	D / D	F / F	F / F
10	Lattimer / Pardeesville	F / F	E / E	F / F	F / F
20/30	McAdoo / Kelayres	F / F	D / D	F / F	F / F
20/30	Beaver Meadows / Weatherly	F / F	E / E	F / F	F / F
40	Freeland	F / F	D / D	F / F	E / E
50	Northeast / 9th and Arthur	E / E	E / E	E / E	E / E
60	Northwest / Diamond Avenue	E / E	E / E	E / E	E / E
70	West Hazleton	E / E	E / D	E / E	E / E
80	Hazle Marketplace	E / E	D / E	E / E	E / E
90	Penn State	F / F	B / C	F / F	F / F
100	Sunday Loop	F / F	F / F	F / F	E / E
110	Saturday Night Loop	F / F	F / F	E / E	E / E
Overall Level of Service		*F*	*E*	*F*	*E*

Source: Hazleton Public Transit, "2008 Schedules," http://www.hazletoncity.org/public/public-transit/hazleton-public-transit.html. Transit Cooperative Research Program, *Report 100: Transit Capacity and Quality of Service Manual*, 2003.

In the two-county area, vehicle headway levels of service range from C to F, which indicates service that is available, if needed, but is generally unattractive. Most riders must adjust their routines or carefully arrange their schedules to fit the service provided. The prevailing, average headway level of service is D.

The levels of service based on the hours of operation were generally worse than those for headways, ranging from D to F. At this level, the needs of daylight shift commuters with consistent schedules are generally met. However, at level of service E or F, midday service is generally sparse, and the choice of commuting travel times is quite limited. The prevailing, average level of service, based on hours of operation, is E.

Railroad Freight Movement

The demand for railroad freight travel in Pennsylvania is significant and accounts for about eight percent of all freight transported within the state and more than 15 percent of all inter-state freight.[16] Commodities originating and terminating in Pennsylvania and carried by rail are dominated by coal (62 percent of originating tons and 39 percent of terminating tons) and also include primary metal products, petroleum, chemicals and food products.[17]

[16] U.S. Department of Transportation (USDOT), Office of Freight Management and Operations, Pennsylvania's Freight Analysis Framework, http://ops.fhwa.dot.gov/freight/freight_analysis/faf/state_info/faf2/pdfs/pa.pdf, 2002.
[17] PennDOT Rail Plan, 2003.

4.3 Demographic, Housing, and Employment Profile

Examinations of recent demographic trends and the preparation of population, housing, and employment forecasts for a 20-year horizon period are key elements in planning for the future. This information can provide a clearer understanding of future needs for housing, community facilities, and other forms of development.

Population Forecasts and Housing Units to be Constructed for Year 2030

Population and housing forecasts are a critical component of long-range planning. Since the nature of the future cannot be precisely known from the perspective of the present, forecasting is by definition as much of an art as a science. Forecasters look at a number of factors when doing their work, although these factors are subject to change. And the further into the future a forecast is made, the less reliable it is likely to be.

The following forecasts for Lackawanna and Luzerne Counties for the year 2030 are based on Pennsylvania Department of Environmental Protection (DEP) State Water Planning forecasts, as well as United States Census forecasts.

Four population forecasts for Lackawanna and Luzerne Counties are shown in ***Table 4.3.1***. The first follows an average of the Lackawanna County and Luzerne County rates of population change made by DEP as part of its State Water Planning forecasting activities. By 2030, there would be a 7% decline in population of the two-county area. The second follows an average of the rates of population change for the ten-county area of Northeastern Pennsylvania that includes Lackawanna and Luzerne Counties and eight counties that touch either one of the two named counties. This forecast also relies on State Water Planning forecasting data and shows that by 2030 Lackawanna and Luzerne Counties, combined, would grow by 13.3% and achieve a population of 603,373 persons, a gain of 70,828 residents from 2000 to 2030.

The third population forecast is similar to the second, but in this case the rate of growth applied is that for a five-county area consisting of Lackawanna and Luzerne Counties and three counties to the east – Wayne, Pike and, Monroe – that lie between the two-county area and adjoin New Jersey and New York. Since these latter counties are forecast to grow significantly over the planning period, the effect of combining their rates of growth with those forecast by the State Water Planning for Lackawanna and Luzerne Counties is to bump the rate for the two counties alone. As a result, this third population forecast shows that by 2030 Lackawanna and Luzerne Counties, combined, would grow by 22.9% and achieve a population of 654,498 persons, a gain of 121,953 residents from 2000 to 2030.

The fourth population forecast uses a rate of growth projected by the US Census Bureau for the State of Pennsylvania to the Year 2030 and applies it to the two-county area. In this case, Lackawanna and Luzerne Counties would have a combined population of 580,474 people by 2030, an increase of 9.0 percent from 2000 to 2030 or 47,929 residents.

Table 4.3.1
Alternative Population Forecasts, 1980-2030
Source: PA DEP State Water Planning Forecast and U.S. Census Bureau (2000 Decennial Census)

Alternative Population Forecasts 2000-2030 Bi- County								
Alternative	1980	1990	2000	2010	2020	2030	2000-2030	
							Number	Percent
1. DEP State Water Planning Forecast (2 County Rate)	570,987	547,188	532,545	512,551	495,416	495,008	-37,537	-7%
2. DEP State Water Planning Forecast (Ten County Rate)	570,987	547,188	532,545	556,154	579,764	603,373	70,828	13.3%
3. DEP State Water Planning Forecast (5 County Rate)	570,987	547,188	532,545	573,196	612,427	654,498	121,953	22.9%
4. US Census Forecast (Pennsylvania Rate)	570,987	547,188	532,545	548,521	564,497	580,474	47,929	9.0%

A forecast for housing construction over the period 2000 to 2030 (including 2008 to 2030) in Lackawanna and Luzerne Counties has been made using the second forecast cited above as the “high” end of future population prospects, the actual population of the two-county area in 2000 (532,545 persons) as the “low” end (this assumes no net change in the two-county area from 2000 to 2030), and the average of the high and low figures as a “medium” prospect (567,979 residents).

These figures have been used in ***Table 4.3.2*** in order to forecast housing units to be constructed by 2030. Base data from the 2000 Census includes an assumed vacancy rate of 9.6 percent and 96.1 percent of the population in households, carried through the planning period. In addition, the table assumes an average of 2.25 persons per household for the Year 2030. According to the medium forecast, approximately 24,000 additional housing units are to be constructed by the planning horizon year, an average of around 1,100 new units per year.

Table 4.3.2
Housing Unit Construction Forecasts, 2000-2030
Source: PA DEP State Water Planning Forecast and U.S. Census Bureau (2000 Decennial Census)

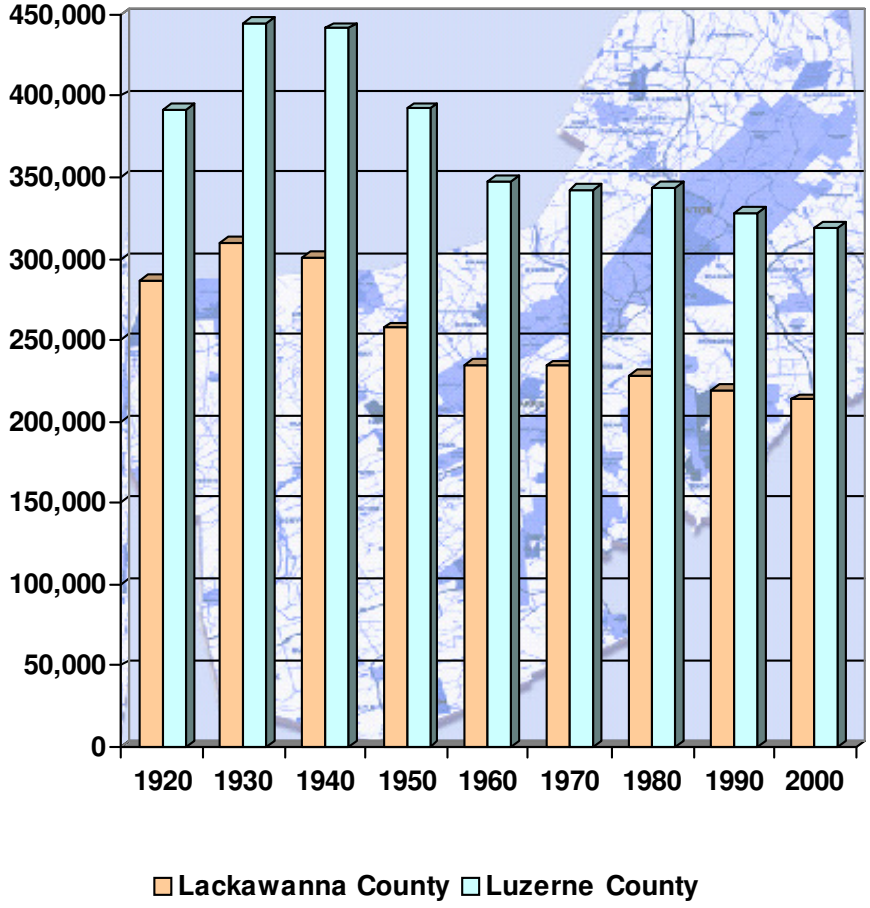
Two-County Housing Units to be Constructed, 2000-2030 (9.6 vacancy rate)			
Housing Units to be Constructed			
	Low	**Medium**	**High**
Population Projection, Year 2030	532,545	567,959	603,373
Population in Households (96.1%)	511,776	545,809	579,842
Persons per Household	2.25	2.25	2.25
Occupied Housing Units	227,456	242,582	257,708
Vacant Units (9.6% Vacancy Rate)	24,155	25,761	27,367
Total Housing Units Required (OHU / 0.904)	251,611	268,343	285,075
Existing Stock, Year-Round Housing Units, 2000	240,048	240,048	240,048
Net Additions to Housing Stock	11,563	28,295	45,027
Replacement of Existing Stock (3%)	7,201	7,201	7,201
Conversions (-1%)	-2,400	-2,400	-2,400
Total Housing Units to be Constructed, 2000-2030 (30 years)	16,364	33,096	49,828
Average Number of Housing Units to be Constructed per year (2000-2030)	**545**	**1,103**	**1,661**
Total Housing Units to be Constructed, 2008-2030 (22 years)	12,000	24,270	36,541

Population Characteristics

Population Trends

Population trends for both Lackawanna and Luzerne Counties are shown from 1920 to 2000 in ***Figure 4.3.1***. In 2000, the total population for the two-county area was 532,545 people (213,295 individuals in Lackawanna County and 319,250 persons in Luzerne County). Peak population occurred in the region around 1930, with 310,397 persons in Lackawanna County and 445,109 residents in Luzerne County. After 1930, the region experienced significant population losses, with the greatest declines occurred during the 1940s in Luzerne County and the 1950s in Lackawanna County.

Figure 4.3.1
Population Trends by County, 1920-2000
Source: U.S. Census Bureau (1990 & 2000 Decennial Census)
University of Virginia Library Geospatial and Statistical Data Center



Lackawanna County's 40 municipalities include two cities, 17 boroughs, and 21 townships. The county seat, the City of Scranton, is the most populous municipality, with 76,415 residents. The county's second-largest city, Carbondale, has 9,800 residents. Township populations range between 8,705 residents in South Abington Township to 298 residents in West Abington Township. Boroughs range in size from 14,018 inhabitants in Dunmore Borough to Vandling Borough, with 733 residents. (***Table 4.3.3***)

Luzerne County has four cities, 36 boroughs, and 36 townships (76 total municipalities.) According to the 2000 Census, the county seat of Wilkes-Barre is the most populous municipality, with 43,123 residents. The second largest city is Hazleton, with 23,264 residents, followed by Nanticoke, with 10,955 residents and Pittston, with 8,104 residents. Townships range in size from Hanover Township with 11,462 residents, to Buck Township with 397 people. The population in boroughs range from 13,855 residents in Kingston, to 144 residents in Jeddo (***Table 4.3.4***).

Table 4.3.3

Population Trends by Municipality, Lackawanna County, Two-County, Pennsylvania and Nation, 1960-2000

Source: U.S. Census Bureau and Pennsylvania State Data Center (1960-2000 Decennial Census)

Population Trends by Municipality 1960-2000 Lackawanna County					
	1960	1970	1980	1990	2000
Archbald Borough	5,642	6,118	6,295	6,291	6,220
Benton Township	1,012	1,141	1,670	1,837	1,881
Blakely Borough	6,374	6,391	7,438	7,222	7,027
Carbondale City	13,595	12,808	11,255	10,664	9,800
Carbondale Township	827	610	1,032	925	1,008
Clarks Green Borough	1,256	1,674	1,862	1,603	1,626
Clarks Summit Borough	3,693	5,376	5,272	5,433	5,063
Clifton Township	349	526	855	1,040	1,152
Covington Township	1,107	1,460	1,858	2,055	1,994
Dalton Borough	1,227	1,282	1,383	1,369	1,294
Dickson City Borough	7,738	7,698	6,699	6,276	6,205
Dunmore Borough	18,917	17,300	16,781	15,403	14,018
Elmhurst Township	788	799	953	850	852
Fell Township	2,672	2,963	2,817	2,432	2,340
Glenburn Township	731	1,113	1,257	1,242	1,212
Greenfield Township	816	1,140	1,524	1,749	1,990
Jefferson Township	1,195	1,809	3,132	3,419	3,592
Jermyn Borough	2,397	2,435	2,411	2,263	2,287
Jessup Borough	5,456	4,948	4,974	4,605	4,718
La Plume Township	475	971	1001	644	642
Madison Township	788	993	1,659	2,210	2,569
Mayfield Borough	1,996	2,176	1,812	1,890	1,756
Moosic Borough	4,243	4,273	6,068	5,339	5,575
Moscow Borough	1,212	1,430	1,536	1,527	1,883
Newton Township	2,377	2,568	2,521	2,844	2,698
North Abington Township	388	553	619	692	756
Old Forge Borough	8,928	9,522	9,304	8,834	8,798
Olyphant Borough	5,864	5,422	5,204	5,222	4,978
Ransom Township	1,251	1,196	1,506	1,607	1,430
Roaring Brook Township	576	1,385	1,895	1,966	1,623
Scott Township	2,747	3,803	4,624	5,344	4,931
Scranton City	111,443	103,564	88,117	81,805	76,415
South Abington Township	2,449	3,374	6,353	6,377	8,705
Spring Brook Township	1,064	1,577	2,144	2,097	2,340
Taylor Borough	6,148	6,977	7,246	6,941	6,475
Thornhurst Township	156	167	326	487	785
Throop Borough	4,732	4,307	4,166	4,070	4,010
Vandling Borough	578	633	557	654	733
Waverly Township	1,077	1,316	1,487	1,515	1,616
West Abington Township	247	309	295	296	298
Lackawanna County Total	234,531	234,107	227,908	219,039	213,295
Luzerne County Total	346,972	342,211	343,079	328,149	319,250
Two-County Total	581,503	576,318	570,987	547,188	532,545
Pennsylvania Total	11,319,366	11,800,766	11,863,895	11,881,643	12,281,054
US Total	179,323,175	203,211,926	226,545,805	248,709,873	281,421,906

Source: U.S. Census Bureau (1990 & 2000 Decennial Census)
Source: Pennsylvania State Data Center (1960, 1970, & 1980 Decennial Census)

Table 4.3.4
Population Trends by Municipality, Luzerne County, Two-County, Pennsylvania and Nation, 1960-2000

Population Trends by Municipality 1960-2000 Luzerne County	1960	1970	1980	1990	2000
Ashley Borough	4,258	4,095	3,512	3,291	2,866
Avoca Borough	3,562	3,543	3,536	2,897	2,851
Bear Creek Township	1,352	1,825	3,076	2,719	2,580
Bear Creek Village Borough	-	-	-	-	279
Black Creek Township	1,554	1,745	1,927	1,937	2,132
Buck Township	256	294	397	377	397
Butler Township	3,094	3,762	5,537	6,020	7,166
Conyngham Borough	1,163	1,850	2,242	2,049	1,958
Conyngham Township	1,819	1,693	1,663	1,509	1,385
Courtdale Borough	845	1,027	844	766	791
Dallas Borough	2,229	2,913	2,679	2,608	2,557
Dallas Township	4,410	5,232	7,287	7,625	8,179
Dennison Township	584	784	753	807	907
Dorrance Township	983	1,209	1,829	1,778	2,110
Dupont Borough	3,669	3,431	3,460	2,984	2,719
Duryea Borough	5,626	5,264	5,415	4,869	4,634
Edwardsville Borough	5,711	5,633	5,729	5,399	4,984
Exeter Borough	4,747	4,670	5,493	5,691	5,955
Exeter Township	1,309	1,869	2,355	2,457	2,557
Fairmount Township	819	825	1,167	1,211	1,226
Fairview Township	2,061	2,658	2,908	3,016	3,995
Forty Fort Borough	6,431	6,114	5,590	5,049	4,579
Foster Township	2,683	2,594	3,258	3,380	3,396
Franklin Township	880	1,145	1,473	1,414	1,601
Freeland Borough	5,068	4,784	4,285	3,916	3,643
Hanover Township	12,781	12,108	12,601	12,050	11,462
Harveys Lake Borough	-	1,693	2,318	2,746	2,888
Hazle Township	7,478	7,619	9,495	9,308	8,991
Hazleton City	32,056	30,426	27,318	24,730	23,264
Hollenback Township	626	663	1,006	1,198	1,243
Hughestown Borough	1,615	1,407	1,783	1,734	1,541
Hunlock Township	2,057	1,682	2,419	2,496	2,568
Huntington Township	1,355	1,518	1,943	1,905	2,098
Jackson Township	1,364	1,956	2,941	5,336	4,453
Jeddo Borough	183	177	128	135	144
Jenkins Township	3,475	3,252	4,508	4,740	4,584
Kingston Borough	20,261	18,325	15,681	14,507	13,855
Kingston Township	5,450	6,196	6,535	6,763	7,145
Laflin Borough	235	399	1,650	1,487	1,502
Lake Township	1,895	1,332	1,783	1,924	2,110
Larksville Borough	4,390	3,937	4,410	4,700	4,694
Laurel Run Borough	855	327	725	720	727
Lehman Township	2,318	2,219	3,030	3,035	3,206
Luzerne Borough	5,118	4,504	3,703	3,206	2,952
Nanticoke City	15,601	14,632	13,044	12,267	10,955
Nescopeck Borough	1,934	1,807	1,768	1,651	1,528
Nescopeck Township	640	708	833	1,072	1,096
New Columbus Borough	144	149	214	228	221
Newport Township	7,083	6,002	4,989	4,593	5,006
Nuangola Borough	346	464	726	690	686
Penn Lake Park Borough	-	-	217	234	270
Pittston City	12,407	11,113	9,930	9,389	8,104
Pittston Township	2,992	3,564	3,611	2,725	3,450
Plains Township	10,995	11,481	11,338	10,988	10,906
Plymouth Borough	10,401	9,536	7,605	7,134	6,507
Plymouth Township	2,783	2,614	2,437	1,773	2,097
Pringle Borough	1,418	1,155	1,221	1,179	991
Rice Township	642	941	1,935	1,907	2,460
Ross Township	1,360	1,592	2,323	2,655	2,742
Salem Township	3,124	3,890	4,627	4,482	4,269
Shickshinny Borough	1,843	1,685	1,192	1,108	959
Slocum Township	796	858	1,015	1,170	1,096
Sugarloaf Township	1,850	2,035	3,202	3,534	3,652
Sugar Notch Borough	1,524	1,333	1,191	1,036	1,013
Swayersville Borough	6,751	6,786	5,795	5,630	5,157
Union Township	768	1,253	1,828	2,028	2,100
Warrior Run Borough	833	816	784	664	634
West Hazleton Borough	6,278	6,059	4,871	4,136	3,543
West Pittston Borough	6,998	7,074	5,980	5,590	5,072
West Wyoming Borough	3,166	3,659	3,288	3,117	2,833
White Haven Borough	1,778	2,134	1,921	1,128	1,182
Wilkes-Barre City	63,551	58,856	51,551	47,523	43,123
Wilkes-Barre Township	4,319	3,535	4,244	3,572	3,235
Wright Township	1,423	3,179	4,797	4,685	5,593
Wyoming Borough	4,127	4,195	3,655	3,255	3,221
Yatesville Borough	472	407	555	517	649
Luzerne County Total	346,972	342,211	343,079	328,149	319,250
Lackawanna County Total	234,531	234,107	227,908	219,039	213,295
Two-County Total	581,503	576,318	570,987	547,188	532,545
Pennsylvania Total	11,319,366	11,800,766	11,863,895	11,881,643	12,281,054
US Total	179,323,175	203,211,926	226,545,805	248,709,873	281,421,906

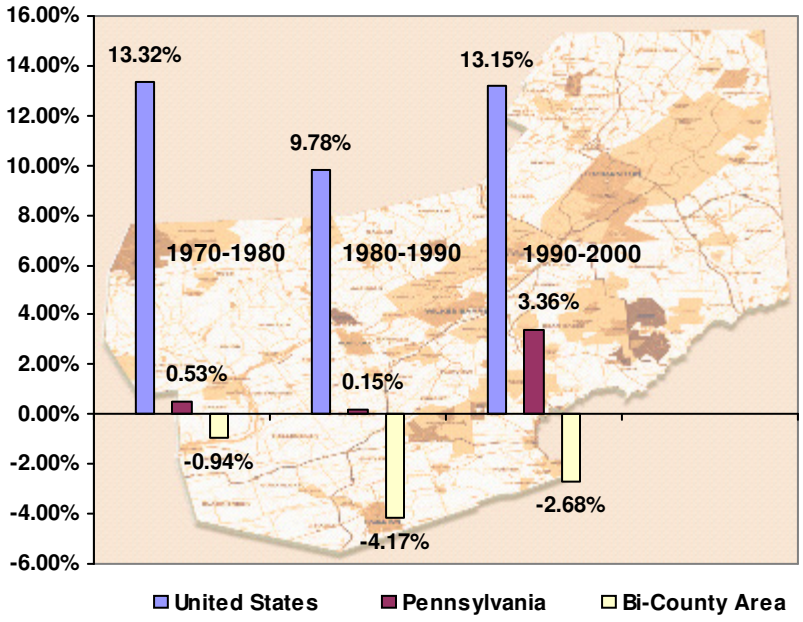
Source: U.S. Census Bureau (1990 & 2000 Decennial Census)
Source: Pennsylvania State Data Center (1960, 1970, & 1980 Decennial Census)

Population Change

The decades from 1970 to 2000 saw a decline in population for the two-county area, while the State of Pennsylvania experienced modest growth and the nation had robust increases (***Figure 4.3.2***).

Figure 4.3.2
Population Percent Change, United States, Pennsylvania and Two-County Area by Decade, 1970-2000

Source: U.S. Census Bureau (1990 & 2000 Decennial Census), University of Virginia Library Geospatial and Statistical Data Center



Recent population change for all municipalities in the two-county area is shown in ***Table 4.3.5*** and ***Table 4.3.6***. These data can be used to identify the ten fastest growing and declining municipalities. During the 1990 to 2000 period, population growth in the region's townships was generally greater than that for boroughs and cities. In both absolute change and percent change, South Abington Township, Lackawanna County was the fastest growing municipality in the two-county area.

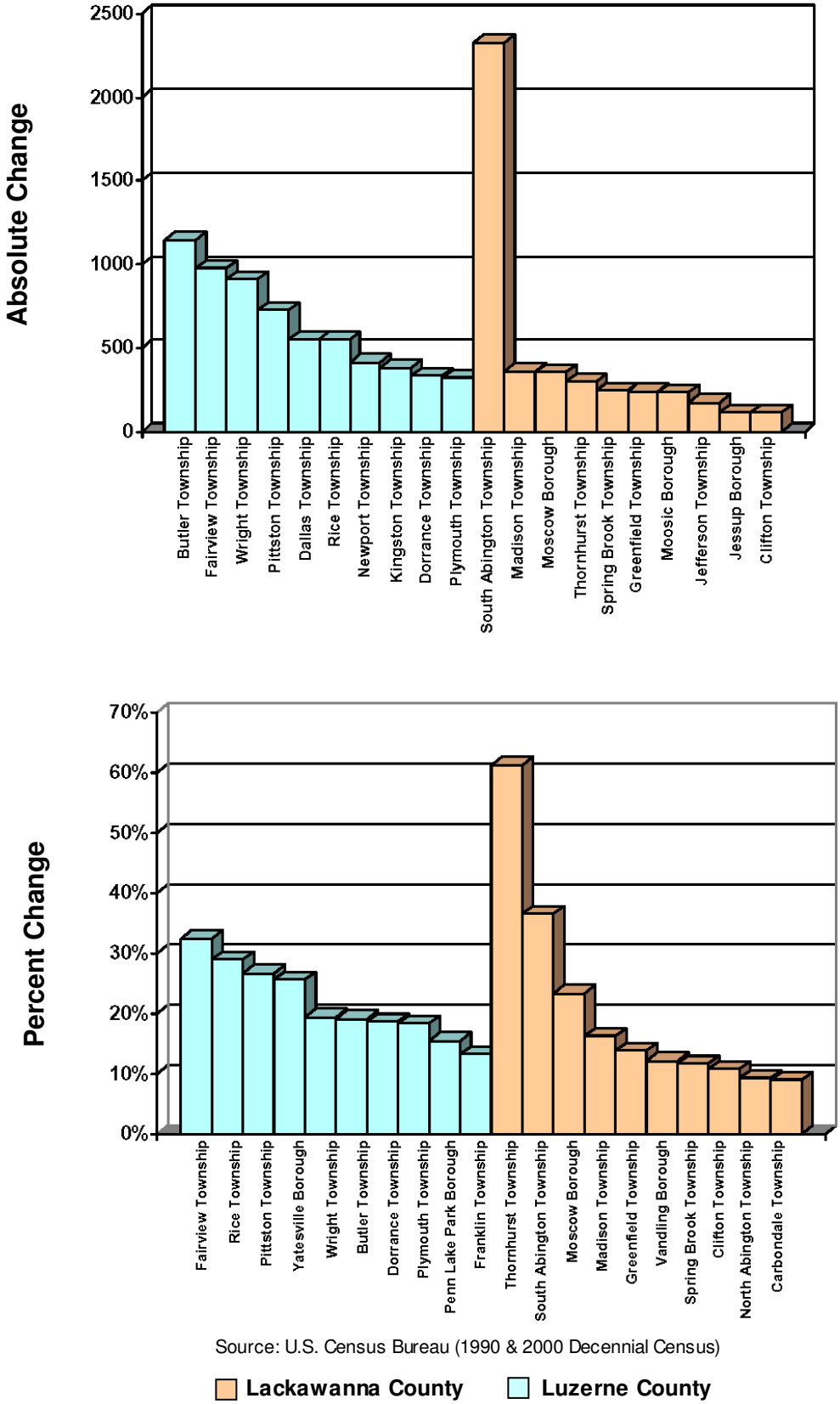
The ten fastest growing municipalities between 1990 and 2000 in terms of absolute change are non-urban townships (***Figure 4.3.3, Figure 4.3.5***). In Lackawanna County the three highest increases occurred in South Abington Township, with 2,328 new residents; Madison Township, with 359 new residents; and the Borough of Moscow, with 356 new residents. In Luzerne County, the three highest population increases were experienced by Butler Township, with 1,146 new residents; Fairview Township, with 979 new residents; and Wright Township, with 908 new residents.

Percent change indicates that the majority of the fastest growing municipalities were also townships. The two exceptions were the Boroughs of Moscow in Lackawanna County and Yatesville in Luzerne County. In Lackawanna County, Thornhurst Township was the fastest growing, with a 61.2 percent increase; followed by South Abington Township, with a 36.5 percent increase; and Moscow Borough, with a 23.3 percent increase. In Luzerne County, the top three fastest growing municipalities were Fairview Township, at 32.5 percent; Rice Township, with 29.0 percent; and Pittston Township, with 26.6 percent.

The two-county area's most urban municipalities were among the ten fastest declining municipalities in terms of absolute change between 1990 and 2000. In Lackawanna County, the City of Scranton experienced the fastest decline for both counties, with a decrease of 5,390 residents, while the Borough of Dunmore had a decrease of 1,385 residents and City of Carbondale declined by 864 residents. In Luzerne County, the highest population loss occurred in the City of Wilkes-Barre, with 4,400 residents lost; the City of Hazleton, with a loss of 1,466 residents; and the City of Nanticoke, with a loss of 1,312 people (**Figure 4.3.4, Figure 4.3.6**).

The percent change, however, demonstrates a greater mix among urban, suburban and rural areas. A decrease of around 17.5 percent in Lackawanna County's Roaring Brook Township was the highest for both counties, followed in Lackawanna County by Ransom Township (11.0 percent decline), and Dunmore Borough, with a decline of 9.0 percent. Luzerne County municipalities having the highest percent decrease between 1990 and 2000 were Jackson Township (-16.5 percent), followed by Pringle Borough (-15.9 percent) and West Hazleton Borough (-14.3 percent).

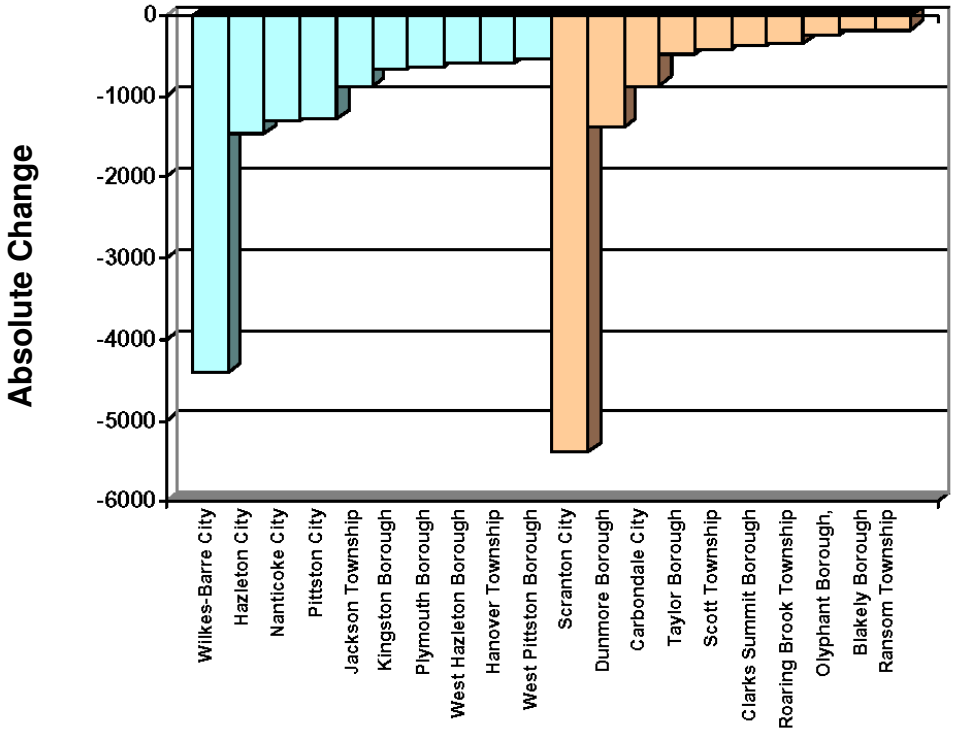
Figure 4.3.3
Ten Fastest Growing Municipalities, in Each County, 1990-2000

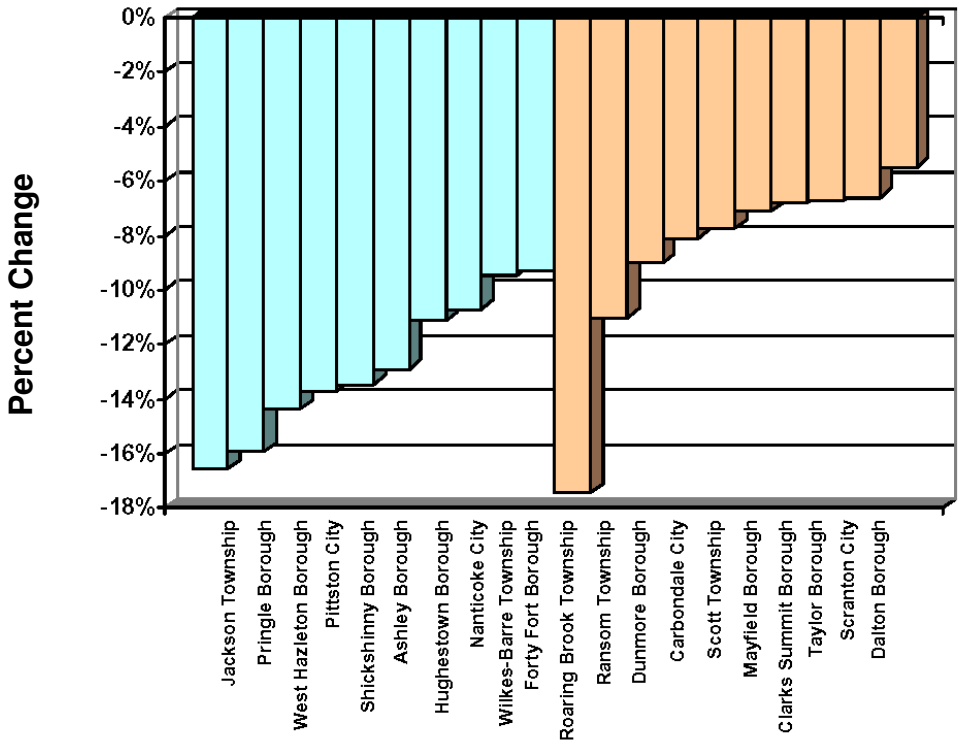


Source: U.S. Census Bureau (1990 & 2000 Decennial Census)

Lackawanna County **Luzerne County**

Figure 4.3.4
Ten Fastest Declining Municipalities, in Each County, 1990-2000



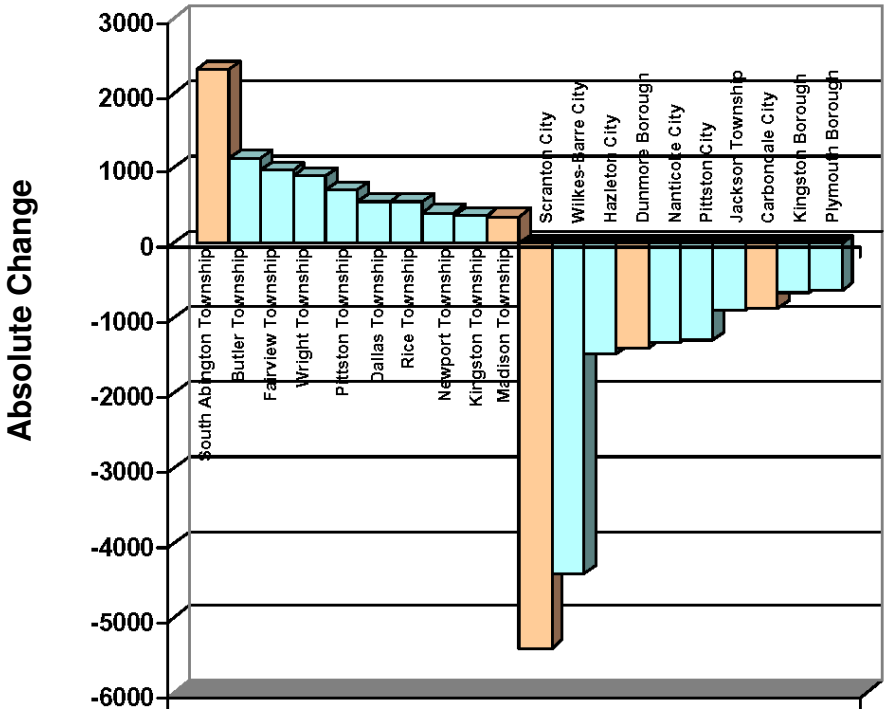


Source: U.S. Census Bureau (1990 & 2000 Decennial Census)

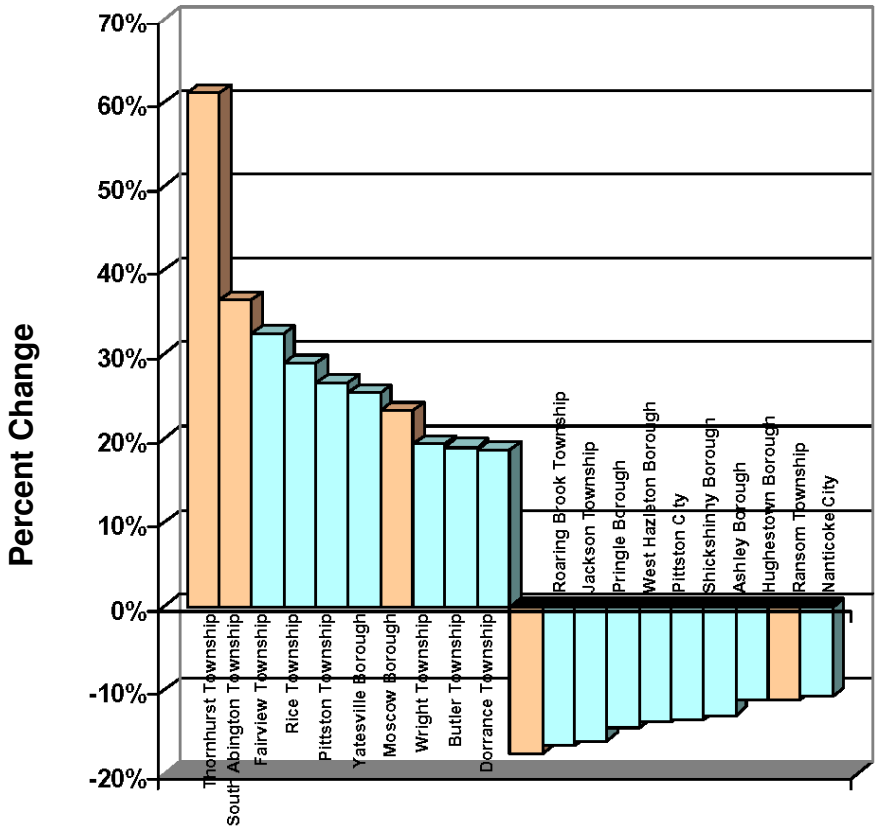
Lackawanna County **Luzerne County**

Figure 4.3.5

Ten Fastest Growing & Declining Municipalities, Two-County Area 1990-2000



Source: U.S. Census Bureau (1990 & 2000 Decennial Census)



Source: U.S. Census Bureau (1990 & 2000 Decennial Census)

Luzerne County **Lackawanna County**

Table 4.3.5
Population Change by Municipality, Lackawanna County

Population Change by Municipality 1960-2000 Lackawanna County								
	1960-1970		1970-1980		1980-1990		1990-2000	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Archbald Borough	476	8.44%	177	2.89%	-4	-0.06%	-71	-1.13%
Benton Township	129	12.75%	529	46.36%	167	10.00%	44	2.40%
Blakely Borough	17	0.27%	1,047	16.38%	-216	-2.90%	-195	-2.70%
Carbondale City	-787	-5.79%	-1,553	-12.13%	-591	-5.25%	-864	-8.10%
Carbondale Township	-217	-26.24%	422	69.18%	-107	-10.37%	83	8.97%
Clarks Green Borough	418	33.28%	188	11.23%	-259	-13.91%	23	1.43%
Clarks Summit Borough	1,683	45.57%	-104	-1.93%	161	3.05%	-370	-6.81%
Clifton Township	177	50.72%	329	62.55%	185	21.64%	112	10.77%
Covington Township	353	31.89%	398	27.26%	197	10.60%	-61	-2.97%
Dalton Borough	55	4.48%	101	7.88%	-14	-1.01%	-75	-5.48%
Dickson City Borough	-40	-0.52%	-999	-12.98%	-423	-6.31%	-71	-1.13%
Dunmore Borough	-1,617	-8.55%	-519	-3.00%	-1,378	-8.21%	-1,385	-8.99%
Elmhurst Township	11	1.40%	154	19.27%	-103	-10.81%	2	0.24%
Fell Township	291	10.89%	-146	-4.93%	-385	-13.67%	-92	-3.78%
Glenburn Township	382	52.26%	144	12.94%	-15	-1.19%	-30	-2.42%
Greenfield Township	324	39.71%	384	33.68%	225	14.76%	241	13.78%
Jefferson Township	614	51.38%	1,323	73.13%	287	9.16%	173	5.06%
Jermyn Borough	38	1.59%	-24	-0.99%	-148	-6.14%	24	1.06%
Jessup Borough	-508	-9.31%	26	0.53%	-369	-7.42%	113	2.45%
La Plume Township	496	104.42%	30	3.09%	-357	-35.66%	-2	-0.31%
Madison Township	205	26.02%	666	67.07%	551	33.21%	359	16.24%
Mayfield Borough	180	9.02%	-364	-16.73%	78	4.30%	-134	-7.09%
Moosic Borough	30	0.71%	1,795	42.01%	-729	-12.01%	236	4.42%
Moscow Borough	218	17.99%	106	7.41%	-9	-0.59%	356	23.31%
Newton Township	191	8.04%	-47	-1.83%	323	12.81%	-146	-5.13%
North Abington Township	165	42.53%	66	11.93%	73	11.79%	64	9.25%
Old Forge Borough	594	6.65%	-218	-2.29%	-470	-5.05%	-36	-0.41%
Olyphant Borough	-442	-7.54%	-218	-4.02%	18	0.35%	-244	-4.67%
Ransom Township	-55	-4.40%	310	25.92%	101	6.71%	-177	-11.01%
Roaring Brook Township	809	140.45%	510	36.82%	71	3.75%	-343	-17.45%
Scott Township	1,056	38.44%	821	21.59%	720	15.57%	-413	-7.73%
Scranton City	-7,879	-7.07%	-15,447	-14.92%	-6,312	-7.16%	-5,390	-6.59%
South Abington Township	925	37.77%	2,979	88.29%	24	0.38%	2,328	36.51%
Spring Brook Township	513	48.21%	567	35.95%	-47	-2.19%	243	11.59%
Taylor Borough	829	13.48%	269	3.86%	-305	-4.21%	-466	-6.71%
Thornhurst Township	11	7.05%	159	95.21%	161	49.39%	-298	61.19%
Throop Borough	-425	-8.98%	-141	-3.27%	-96	-2.30%	-60	-1.47%
Vandling Borough	55	9.52%	-76	-12.01%	97	17.41%	79	12.08%
Waverly Township	239	22.19%	171	12.99%	28	1.88%	101	6.67%
West Abington Township	62	25.10%	-14	-4.53%	1	0.34%	2	0.68%
Lackawanna County Total	-424	-0.18%	-6,199	-2.65%	-8,869	-3.89%	-5,744	-2.62%
Luzerne County Total	-4,761	-1.37%	868	0.25%	-14,930	-4.35%	-8,925	-2.72%
Two-County Total	-5,185	-0.89%	-5,331	-0.93%	-23,799	-4.17%	-14,669	-2.68%
Pennsylvania Total	481,400	4.25%	63,129	0.53%	17,748	0.15%	399,411	3.36%
US Total	23,888,751	13.32%	23,333,879	11.48%	22,164,068	9.78%	32,712,033	13.15%

Source: U.S. Census Bureau (1990 & 2000 Decennial Census)
Source: Pennsylvania State Data Center (1960, 1970, & 1980 Decennial Census)

Table 4.3.6
Population Change by Municipality, Luzerne County, Two-County, Pennsylvania and Nation, 1960-2000

Population Change by Municipality 1960-2000 Luzerne County	1960-1970		1970-1980		1980-1990		1990-2000	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Ashley Borough	-163	-3.83%	-583	-14.24%	-221	-6.29%	-425	-12.91%
Avoca Borough	-19	-0.53%	-7	-0.20%	-639	-18.07%	-46	-1.59%
Bear Creek Township	473	34.99%	1,251	68.55%	-357	-11.61%	-139	-5.11%
Bear Creek Village Borough	--	--	--	--	--	--	--	--
Black Creek Township	191	12.29%	182	10.43%	10	0.52%	195	10.07%
Buck Township	38	14.84%	103	35.03%	-20	-5.04%	20	5.31%
Butler Township	668	21.59%	1,775	47.18%	483	8.72%	1,146	19.04%
Conyngham Borough	687	59.07%	392	21.19%	-193	-8.61%	-91	-4.44%
Conyngham Township	-126	-6.93%	-30	-1.77%	-154	-9.26%	-124	-8.22%
Courtdale Borough	182	21.54%	-183	-17.82%	-78	-9.24%	25	3.26%
Dallas Borough	684	30.69%	-234	-8.03%	-71	-2.65%	-51	-1.96%
Dallas Township	822	18.64%	2,055	39.28%	338	4.64%	554	7.27%
Dennison Township	200	34.25%	-31	-3.95%	54	7.17%	100	12.39%
Dorrance Township	226	22.99%	620	51.28%	-51	-2.79%	332	18.67%
Dupont Borough	-238	-6.49%	29	0.85%	-476	-13.76%	-265	-8.88%
Duryea Borough	-362	-6.43%	151	2.87%	-546	-10.08%	-235	-4.83%
Edwardsville Borough	-78	-1.37%	96	1.70%	-330	-5.76%	-415	-7.69%
Exeter Borough	-77	-1.62%	823	17.62%	198	3.60%	264	4.64%
Exeter Township	560	42.78%	486	26.00%	102	4.33%	100	4.07%
Fairmount Township	6	0.73%	342	41.45%	44	3.77%	15	1.24%
Fairview Township	597	28.97%	250	9.41%	108	3.71%	979	32.46%
Forty Fort Borough	-317	-4.93%	-524	-8.57%	-541	-9.68%	-470	-9.31%
Foster Township	-89	-3.32%	664	25.60%	122	3.74%	16	0.47%
Franklin Township	265	30.11%	328	28.65%	-59	-4.01%	187	13.22%
Freeland Borough	-284	-5.60%	-499	-10.43%	-369	-8.61%	-273	-6.97%
Hanover Township	-673	-5.27%	493	4.07%	-551	-4.37%	-588	-4.88%
Harveys Lake Borough	--	--	625	36.92%	428	18.46%	142	5.17%
Hazle Township	141	1.89%	1,876	24.62%	-187	-1.97%	-317	-3.41%
Hazleton City	-1,630	-5.08%	-3,108	-10.21%	-2,588	-9.47%	-1,466	-5.93%
Hollenback Township	37	5.91%	343	51.73%	192	19.09%	45	3.76%
Hughestown Borough	-208	-12.88%	376	26.72%	-49	-2.75%	-193	-11.13%
Hunlock Township	-375	-18.23%	737	43.82%	77	3.18%	72	2.88%
Huntington Township	163	12.03%	425	28.00%	-38	-1.96%	193	10.13%
Jackson Township	592	43.40%	985	50.36%	2,395	81.43%	-883	-16.55%
Jeddo Borough	-6	-3.28%	-49	-27.68%	7	5.47%	9	6.67%
Jenkins Township	-223	-6.42%	1,256	38.62%	232	5.15%	-156	-3.29%
Kingston Borough	-1,936	-9.56%	-2,644	-14.43%	-1,174	-7.49%	-652	-4.49%
Kingston Township	746	13.69%	339	5.47%	228	3.49%	382	5.65%
Laflin Borough	164	69.79%	1,251	313.53%	-163	-9.88%	15	1.01%
Lake Township	-563	-29.71%	451	33.86%	141	7.91%	186	9.67%
Larksville Borough	-453	-10.32%	473	12.01%	290	6.58%	-6	-0.13%
Laurel Run Borough	-528	-61.75%	398	121.71%	-5	-0.69%	7	0.97%
Lehman Township	-99	-4.27%	811	36.55%	5	0.17%	171	5.63%
Luzerne Borough	-614	-12.00%	-801	-17.78%	-497	-13.42%	-254	-7.92%
Nanticoke City	-969	-6.21%	-1,588	-10.85%	-777	-5.96%	-1,312	-10.70%
Nescopeck Borough	-127	-6.57%	-39	-2.16%	-117	-6.62%	-123	-7.45%
Nescopeck Township	68	10.63%	125	17.66%	239	28.69%	24	2.24%
New Columbus Borough	5	3.47%	65	43.62%	14	6.54%	-7	-3.07%
Newport Township	-1,081	-15.26%	-1,013	-16.88%	-396	-7.94%	413	8.99%
Nuangola Borough	118	34.10%	262	56.47%	-36	-4.96%	-4	-0.58%
Penn Lake Park Borough	--	--	--	--	17	7.83%	36	15.38%
Pittston City	-1,294	-10.43%	-1,183	-10.65%	-541	-5.45%	-1,285	-13.69%
Pittston Township	572	19.12%	47	1.32%	-886	-24.54%	725	26.61%
Plains Township	486	4.42%	-143	-1.25%	-350	-3.09%	-82	-0.75%
Plymouth Borough	-865	-8.32%	-1,931	-20.25%	-471	-6.19%	-627	-8.79%
Plymouth Township	-169	-6.07%	-177	-6.77%	-664	-27.25%	324	18.27%
Pringle Borough	-263	-18.55%	66	5.71%	-42	-3.44%	-188	-15.95%
Rice Township	299	46.57%	994	105.63%	-28	-1.45%	553	29.00%
Ross Township	232	17.06%	731	45.92%	332	14.29%	87	3.28%
Salem Township	766	24.52%	737	18.95%	-145	-3.13%	-213	-4.75%
Shickshinny Borough	-158	-8.57%	-493	-29.26%	-84	-7.05%	-149	-13.45%
Slocum Township	62	7.79%	157	18.30%	155	15.27%	-74	-6.32%
Sugarloaf Township	185	10.00%	1,167	57.35%	332	10.37%	118	3.34%
Sugar Notch Borough	-191	-12.53%	-142	-10.65%	-155	-13.01%	-23	-2.22%
Swayersville Borough	35	0.52%	-991	-14.60%	-165	-2.85%	-473	-8.40%
Union Township	485	63.15%	575	45.89%	200	10.94%	72	3.55%
Warrior Run Borough	-17	-2.04%	-32	-3.92%	-120	-15.31%	-30	-4.52%
West Hazleton Borough	-219	-3.49%	-1,188	-19.61%	-735	-15.09%	-593	-14.34%
West Pittston Borough	76	1.09%	-1,094	-15.47%	-390	-6.52%	-518	-9.27%
West Wyoming Borough	493	15.57%	-371	-10.14%	-171	-5.20%	-284	-9.11%
White Haven Borough	356	20.02%	-213	-9.98%	-793	-41.28%	54	4.79%
Wilkes-Barre City	-4,695	-7.39%	-7,305	-12.41%	-4,028	-7.81%	-4,400	-9.26%
Wilkes-Barre Township	-784	-18.15%	709	20.06%	-672	-15.83%	-337	-9.43%
Wright Township	1,756	123.40%	1,618	50.90%	-112	-2.33%	908	19.38%
Wyoming Borough	68	1.65%	-540	-12.87%	-400	-10.94%	-34	-1.04%
Yatesville Borough	-65	-13.77%	148	36.36%	-38	-6.85%	132	25.53%
Lackawanna County Total	-424	-0.18%	-6,199	-2.65%	-8,869	-3.89%	-5,744	-2.62%
Luzerne County Total	-4,761	-1.37%	868	0.25%	-14,930	-4.35%	-8,925	-2.72%
Bi-County Total	-5,185	-0.89%	5,185	0.90%	-23,799	-4.17%	-14,669	-2.68%
Pennsylvania Total	481,400	4.25%	63,129	0.53%	17,748	0.15%	399,411	3.36%
US Total	23,888,751	13.32%	23,333,879	11.48%	22,164,068	9.78%	32,712,033	13.15%

Source: U.S. Census Bureau (1990 & 2000 Decennial Census)
Source: Pennsylvania State Data Center (1960, 1970, & 1980 Decennial Census)

Population Density

Population density directly relates to the existence of urban areas and municipal proximity to them. With few exceptions, municipalities' densities decline as one moves out from urban cores to urban-fringe areas and then to suburbs and the exurban municipalities. However, the analysis of population trends shows that cities and many boroughs in the two-county area have been experiencing continuing population decline, and outlying townships have been growing. So we should expect urban densities to be declining and several townships' densities to be increasing.

In ***Tables 4.3.7*** and ***4.3.8***, population density and density changes by municipality are provided for each county between 1960 and 2000. Clarks Summit Borough has been Lackawanna County's most dense municipality, with 3,331 persons per square mile, followed by Clarks Green Borough at 3,145 persons per square mile and the City of Scranton, with 3,002 persons per square mile in 2000. Thornhurst Township is the county's least dense municipality, with 34 persons per square mile, followed by West Abington Township, with 54 persons per square mile, and Clifton Township, with 60 persons per square mile.

The largest percent increases in density between 1980 and 2000 occurred in Madison Township (54.9 percent), Spring Brook Township (37.0 percent), and Clifton Township (34.7 percent). The Township of La Plume experienced the highest percent decline in density (-35.9 percent), followed by Fell Township (-16.9 percent), and Dunmore Borough (-16.5 percent) over the same time span.

In Luzerne County, the City of Wilkes-Barre has been most dense, with approximately 14,962 persons per square mile, followed by 6,351 persons per square mile in Kingston Borough and 5,514 persons per square mile in Plymouth Borough, according to the 2000 census. From the same census, Buck Township had the lowest population density of 24 persons per square mile, followed by Dennison Township, having 25 persons per square mile, and Fairmount Township, with 26 persons per square mile. Jackson Township (54.0 percent), Fairview Township (37.4 percent), and Nescopeck Township (31.6 percent) experienced the greatest percent increase in density countywide between 1980 and 2000. White Haven Borough (-38.5 percent), West Hazleton Borough (-27.3 percent), and Wilkes-Barre Township (-23.8 percent) experienced the greatest percent decrease in density in the county.

Table 4.3.7
Population Density and Density Changes by Municipality, Lackawanna County, 1960-2000

Source: U.S. Census Bureau and Pennsylvania State Data Center (1960-2000 Decennial Census)

Population Density Changes 1960-2000 (persons per square mile) Lackawanna County									
	1960	1970	1980	1990	2000	Change 1960-1980		Change 1980-2000	
Archbald Borough	334	362	372	372	368	39	11.57%	-4	-1.19%
Benton Township	41	46	67	74	75	26	65.02%	8	12.63%
Blakely Borough	1,658	1,663	1,935	1,879	1,828	277	16.69%	-107	-5.53%
Carbondale City	4,248	4,003	3,517	3,333	3,063	-731	-17.21%	-455	-12.93%
Carbondale Township	59	44	74	66	72	15	24.79%	-2	-2.33%
Clarks Green Borough	2,430	3,238	3,602	3,101	3,145	1,172	48.25%	-457	-12.67%
Clarks Summit Borough	2,429	3,536	3,468	3,574	3,331	1,039	42.76%	-137	-3.96%
Clifton Township	18	27	44	54	60	26	144.99%	15	34.74%
Covington Township	45	60	76	84	82	31	67.84%	6	7.32%
Dalton Borough	396	413	446	441	417	50	12.71%	-29	-6.44%
Dickson City Borough	1,647	1,639	1,426	1,336	1,321	-221	-13.43%	-105	-7.37%
Dunmore Borough	2,136	1,953	1,895	1,739	1,583	-241	-11.29%	-312	-16.47%
Elmhurst Township	417	423	505	450	451	87	20.94%	-53	-10.60%
Fell Township	171	189	180	155	149	9	5.43%	-30	-16.93%
Glenburn Township	161	245	276	273	266	116	71.96%	-10	-3.58%
Greenfield Township	38	54	72	82	93	33	86.76%	22	30.58%
Jefferson Township	35	53	92	101	106	57	162.09%	14	14.69%
Jermyn Borough	3,102	3,152	3,121	2,929	2,960	18	0.58%	-160	-5.14%
Jessup Borough	806	731	735	680	697	-71	-8.83%	-38	-5.15%
La Plume Township	201	412	424	273	272	223	110.74%	-152	-35.86%
Madison Township	46	58	97	130	151	51	110.53%	53	54.85%
Mayfield Borough	815	889	740	772	717	-75	-9.22%	-23	-3.09%
Moosic Borough	644	649	922	811	847	277	43.01%	-75	-8.12%
Moscow Borough	437	516	554	551	679	117	26.73%	125	22.59%
Newton Township	108	116	114	129	122	7	6.06%	8	7.02%
North Abington Township	41	59	66	74	81	25	59.54%	15	22.13%
Old Forge Borough	2,625	2,799	2,735	2,597	2,587	111	4.21%	-149	-5.44%
Olyphant Borough	1,073	992	952	955	911	-121	-11.26%	-41	-4.34%
Ransom Township	65	62	79	84	75	13	20.38%	-4	-5.05%
Roaring Brook Township	26	62	85	88	73	59	228.99%	-12	-14.35%
Scott Township	99	137	167	193	178	68	68.33%	11	6.64%
Scranton City	4,379	4,069	3,462	3,214	3,002	-916	-20.93%	-460	-13.28%
South Abington Township	285	393	739	742	1,013	454	159.41%	274	37.02%
Spring Brook Township	29	44	59	58	65	30	101.50%	5	9.14%
Taylor Borough	1,187	1,347	1,399	1,340	1,250	212	17.86%	-149	-10.64%
Thornhurst Township	--	--	--	--	--	--	--	--	--
Throop Borough	936	852	824	805	793	-112	-11.96%	-31	-3.74%
Vandling Borough	428	468	412	484	542	-16	-3.63%	130	31.60%
Waverly Township	223	272	307	313	334	85	38.07%	27	8.68%
West Abington Township	45	56	54	54	54	9	19.43%	1	1.02%

Table 4.3.8
Population Density and Density Changes by Municipality, Luzerne County, 1960-2000

Source: U.S. Census Bureau and Pennsylvania State Data Center (1960-2000 Decennial Census)

Population Density Changes 1960-2000 (persons per square mile) Luzerne County									
	1960	1970	1980	1990	2000	Change 1960-1980		Change 1980-2000	
Ashley Borough	4,617	4,440	3,808	3,568	3,107	-809	-17.52%	-700	-18.39%
Avoca Borough	3,388	3,370	3,363	2,755	2,711	-25	-0.73%	-651	-19.37%
Bear Creek Township	20	27	45	40	38	25	127.51%	-7	-16.12%
Bear Creek Village Borough	--	--	--	--	137	--	--	--	--
Black Creek Township	63	71	79	79	87	15	24.00%	8	10.64%
Buck Township	15	17	24	22	24	8	55.08%	0	0.00%
Butler Township	92	112	165	179	213	73	78.96%	48	29.42%
Conyngham Borough	1,119	1,780	2,157	1,971	1,883	1,038	92.78%	-273	-12.67%
Conyngham Township	108	101	99	90	82	-9	-8.58%	-17	-16.72%
Courtdale Borough	825	1,003	824	748	773	-1	-0.12%	-52	-6.28%
Dallas Borough	936	1,223	1,125	1,095	1,073	189	20.19%	-51	-4.55%
Dallas Township	235	279	389	407	436	153	65.24%	48	12.24%
Dennison Township	16	22	21	23	25	5	28.94%	4	20.45%
Dorrance Township	40	50	75	73	87	35	86.06%	12	15.36%
Dupont Borough	2,493	2,331	2,351	2,027	1,847	-142	-5.70%	-503	-21.42%
Duryea Borough	968	906	932	838	797	-36	-3.75%	-134	-14.42%
Edwardsville Borough	4,667	4,604	4,682	4,412	4,073	15	0.32%	-609	-13.00%
Exeter Borough	952	937	1,102	1,141	1,194	150	15.72%	93	8.41%
Exeter Township	97	139	175	182	190	78	79.91%	15	8.58%
Fairmount Township	18	18	25	26	26	8	42.49%	1	5.06%
Fairview Township	218	281	308	319	423	90	41.10%	115	37.38%
Forty Fort Borough	4,226	4,017	3,673	3,318	3,009	-553	-13.08%	-664	-18.09%
Foster Township	60	58	72	75	76	13	21.43%	3	4.24%
Franklin Township	67	88	113	108	123	45	67.39%	10	8.69%
Freeland Borough	7,275	6,867	6,151	5,621	5,229	-1,124	-15.45%	-922	-14.98%
Hanover Township	665	630	656	627	597	-9	-1.41%	-59	-9.04%
Harveys Lake Borough	--	274	375	445	468	--	--	92	24.59%
Hazle Township	166	169	211	207	200	45	26.97%	-11	-5.31%
Hazleton City	5,332	5,061	4,544	4,114	3,870	-788	-14.78%	-674	-14.84%
Hollenback Township	703	745	1,130	1,346	1,396	427	60.70%	266	23.56%
Hughestown Borough	107	93	118	114	102	11	10.40%	-16	-13.57%
Hunlock Township	98	81	116	119	123	17	17.60%	7	6.16%
Huntington Township	47	52	67	66	72	20	43.39%	5	7.98%
Jackson Township	102	147	220	400	334	118	115.62%	113	51.41%
Jeddo Borough	648	627	453	478	510	-195	-30.05%	57	12.50%
Jenkins Township	249	233	324	340	329	74	29.73%	5	1.69%
Kingston Borough	9,287	8,400	7,188	6,650	6,351	-2,099	-22.61%	-837	-11.64%
Kingston Township	395	450	474	491	518	79	19.91%	44	9.33%
Laflin Borough	178	302	1,247	1,124	1,136	1,070	602.13%	-112	-8.97%
Lake Township	71	50	67	72	79	-4	-5.91%	12	18.34%
Larksville Borough	904	811	908	968	967	4	0.46%	59	6.44%
Laurel Run Borough	165	63	140	139	141	-25	-15.20%	0	0.28%
Lehman Township	100	96	131	131	138	31	30.72%	8	5.81%
Luzerne Borough	7,336	6,456	5,308	4,595	4,231	-2,028	-27.65%	-1076	-20.28%
Nanticoke City	4,370	4,099	3,654	3,436	3,069	-716	-16.39%	-585	-16.02%
Nescopeck Borough	1,653	1,544	1,511	1,411	1,306	-142	-8.58%	-205	-13.57%
Nescopeck Township	34	38	45	58	59	10	30.16%	14	31.57%
New Columbus Borough	48	50	71	76	74	23	48.61%	2	3.27%
Newport Township	412	349	290	267	291	-122	-29.56%	1	0.34%
Nuangola Borough	286	384	600	571	567	314	109.83%	-33	-5.51%
Penn Lake Park Borough	--	--	138	149	171	--	--	34	24.42%
Pittston City	7,208	6,456	5,769	5,454	4,708	-1,439	-19.96%	-1061	-18.39%
Pittston Township	215	256	260	196	248	45	20.69%	-12	-4.46%
Plains Township	832	869	858	831	825	26	3.12%	-33	-3.81%
Plymouth Borough	8,814	8,081	6,445	6,046	5,514	-2,369	-26.88%	-930	-14.44%
Plymouth Township	170	159	149	108	128	-21	-12.43%	-21	-13.95%
Pringle Borough	3,075	2,505	2,648	2,557	2,149	-427	-13.89%	-499	-18.84%
Rice Township	58	84	173	171	220	116	201.40%	47	27.13%
Ross Township	31	36	53	60	62	22	70.81%	10	18.04%
Salem Township	105	131	155	151	143	50	48.11%	-12	-7.74%
Shickshinny Borough	3,757	3,435	2,430	2,259	1,955	-1,327	-35.32%	-475	-19.55%
Slocum Township	79	86	101	117	109	22	27.51%	8	7.98%
Sugarloaf Township	82	91	143	157	163	60	73.08%	20	14.05%
Sugar Notch Borough	1,411	1,234	1,102	959	938	-308	-21.85%	-165	-14.95%
Swayersville Borough	3,031	3,047	2,602	2,528	2,315	-429	-14.16%	-286	-11.01%
Union Township	38	62	91	100	104	53	138.02%	13	14.88%
Warrior Run Borough	1,110	1,087	1,045	885	845	-65	-5.88%	-200	-19.13%
West Hazleton Borough	4,193	4,047	3,253	2,762	2,366	-940	-22.41%	-887	-27.26%
West Pittston Borough	7,365	7,445	6,293	5,883	5,338	-1,071	-14.55%	-956	-15.18%
West Wyoming Borough	873	1,009	907	860	781	34	3.85%	-125	-13.84%
White Haven Borough	1,425	1,711	1,540	904	947	115	8.04%	-592	-38.47%
Wilkes-Barre City	22,050	20,421	17,886	16,489	14,962	-4,164	-18.88%	-2924	-16.35%
Wilkes-Barre Township	591	484	581	489	443	-10	-1.74%	-138	-23.77%
Wright Township	107	239	360	352	420	253	237.10%	60	16.59%
Wyoming Borough	2,633	2,676	2,332	2,077	2,055	-301	-11.44%	-277	-11.87%
Yatesville Borough	841	725	989	921	1,157	148	17.58%	168	16.94%

Housing Unit and Household Characteristics

The supply and occupancy status of existing housing stock was examined, along with data on household size, from 1970 through 2000. With an increase of 4.2 percent in new housing between 1990 and 2000, the rate of construction over the two-county area increased despite the decline in population over the same period. (***Table 4.3.9)*** This trend is consistent with the Northeastern Pennsylvania region as well as the nation. Overall, the two-county area has been seeing transfer of population from cities to the townships around urban areas and to the remote rural areas of the two counties. Housing units have been abandoned in Scranton, Wilkes-Barre, and Hazleton, and new dwelling units have been constructed in suburban and exurban municipalities. These statistics are confirmation of an outward migration of population from cities and many boroughs in the two-county area to townships at the edge of urbanized areas and beyond, to municipalities that have been historically rural, with very low populations.

The two-county area had a very high vacancy rate in 2000: 9.6%. This number contrasts to that for Lehigh County, for example, which had a vacancy rate of 5.4% in 2000. In 2000, Scranton had more than 4,000 vacant units, an increase of some 1,300 vacant units over 10 years. In Wilkes-Barre, a total of more than 2,300 vacant units represented an increase of more than a thousand vacant units in 10 years. And in Hazleton, a total of nearly 1,300 vacant units reflected an increase of more than 500 vacant units over the period. Overall, the entire 2-county area saw an increase of 5,000 vacant units. So, even while 9,600 units were added through new construction over the decade, more than half that number were being left vacant over the same period (***Table 4.3.10***).

Lackawanna County had over 86,200 occupied housing units in 2000 while Luzerne County had roughly 130,700 occupied units that year. Between 1990 and 2000, owner occupancy status for the region increased by nearly 3,900 units or 1.8 percent. For Lackawanna County, the percentage of owner occupancy in 2000 was 67.6 percent of occupied housing units, with 32.5 percent renter occupancy. In Luzerne County, 70.3 percent of occupied units had an owner occupancy and 29.7 percent had renter occupancy.

Table 4.3.9
Housing Units in Structure, Two-County Area, 1990-2000
Source: U.S. Census Bureau (1990 & 2000 Decennial Census)

Housing Units by Units in Structure, Bi-County Area 1990-2000					
Housing Units, Luzerne County					
	No. of Units		**% of Units**		**% Change**
Units in Structure	**1990**	**2000**	**1990**	**2000**	
Total Housing Units	138,724	144,686	100.0%	100.0%	4.3%
1 - Unit Detached	79,866	88,406	57.6%	61.1%	10.7%
1 - Unit Attached	18,756	17,468	13.5%	12.1%	-6.9%
2-4 Units	20,090	20,683	14.5%	14.3%	3.0%
5 + Units	11,801	12,208	8.5%	8.4%	3.4%
Mobile Home, Boat, RV, Van, etc	8,211	5,924	5.9%	4.1%	-27.9%
Housing Units, Lackawanna County					
	No. of Units		**% of Units**		**% Change**
Units in Structure	**1990**	**2000**	**1990**	**2000**	
Total Housing Units	91,707	95,362	100.0%	100.0%	4.0%
1 - Unit Detached	52,008	57,277	56.7%	60.1%	10.1%
1 - Unit Attached	3,533	3,930	3.9%	4.1%	11.2%
2-4 Units	23,710	23,154	25.9%	24.3%	-2.3%
5 + Units	7,977	8,262	8.7%	8.7%	3.6%
Mobile Home, Boat, RV, Van, etc	4,479	2,739	4.9%	2.9%	-38.8%
Housing Units, Bi County					
	No. of Units		**% of Units**		**% Change**
Units in Structure	**1990**	**2000**	**1990**	**2000**	
Total Housing Units	230,431	240,048	100.0%	100.0%	4.2%
1 - Unit Detached	131,874	145,683	57.2%	60.7%	10.5%
1 - Unit Attached	22,289	21,398	9.7%	8.9%	-4.0%
2-4 Units	43,800	43,837	19.0%	18.3%	0.1%
5 + Units	19,778	20,470	8.6%	8.5%	3.5%
Mobile Home, Boat, RV, Van, etc	12,690	8,663	5.5%	3.6%	-31.7%

Table 4.3.10

Occupancy Status, Pennsylvania, Two-County Area, 1990-2000

Source: U.S. Census Bureau (1990 & 2000 Decennial Census)

Occupancy Status, 1990-2000								
	Pennsylvania		Bi-County Area		Lackawanna County		Luzerne County	
	1990	2000	1990	2000	1990	2000	1990	2000
Total:	4,938,140	5,249,750	230,431	240,048	94,769	95,362	135,662	144,686
Occupied	4,495,966	4,777,003	213,011	216,905	84,528	86,218	128,483	130,687
Vacant	442,174	472,747	17,420	23,143	10,241	9,144	7,179	13,999
	1990-2000		1990-2000		1990-2000		1990-2000	
	Change	Percent	Change	Percent	Change	Percent	Change	Percent
Total:	311,610	6.31%	9,617	4.17%	593	0.63%	9,024	6.65%
Occupied	281,037	6.25%	3,894	1.83%	1,690	2.00%	2,204	1.72%
Vacant	30,573	6.91%	5,723	32.85%	-1,097	-10.71%	6,820	95.00%
	Pennsylvania		Bi-County Area		Lackawanna County		Luzerne County	
	1990	2000	1990	2000	1990	2000	1990	2000
Total:	4,495,966	4,777,003	213,011	216,905	84,528	86,218	128,483	130,687
Owner occupied	3,176,121	3,406,337	145,734	150,157	56,625	58,243	89,109	91,914
Renter occupied	1,319,845	1,370,666	67,277	66,748	27,903	27,975	39,374	38,773
	1990-2000		1990-2000		1990-2000		1990-2000	
	Change	Percent	Change	Percent	Change	Percent	Change	Percent
Total:	281,037	6.25%	3,894	1.83%	1,690	2.00%	2,204	1.72%
Owner occupied	230,216	7.25%	4,423	3.03%	1,618	2.86%	2,805	3.15%
Renter occupied	50,821	3.85%	-529	-0.79%	72	0.26%	-601	-1.53%
	Pennsylvania		Bi-County Area		Lackawanna County		Luzerne County	
	1990	2000	1990	2000	1990	2000	1990	2000
Total:	442,174	472,747	17,420	23,143	7,179	13,999	10,241	9,144
For rent	102,774	105,585	3,963	6,411	1,754	3,745	2209	2,666
For sale only	48,763	55,891	1,567	2,865	742	1,744	825	1,121
Rented or sold, not	43,747	37,494	1,820	2,110	695	1,556	1125	554
For seasonal, recreational, or occasional use	144,359	148,230	4,358	4,432	1,582	2,517	2776	1,915
For migrant workers	212	386	10	7	4	7	6	0
Other vacant	102,319	125,161	5,702	7,318	2,402	4,430	3300	2,888
	1990-2000		1990-2000		1990-2000		1990-2000	
	Change	Percent	Change	Percent	Change	Percent	Change	Percent
Total:	30,573	6.91%	5,723	32.85%	6,820	95.00%	-1,097	-10.71%
For rent	2,811	2.74%	2,448	61.77%	1,991	113.51%	457	20.69%
For sale only	7,128	14.62%	1,298	82.83%	1,002	135.04%	296	35.88%
occupied	-6,253	-14.29%	290	15.93%	861	123.88%	-571	-50.76%
For seasonal, recreational, or occasional use	3,871	2.68%	74	1.70%	935	59.10%	-861	-31.02%
For migrant workers	174	82.08%	-3	-30.00%	3	75.00%	-6	-100.00%
Other vacant	22,842	22.32%	1,616	28.34%	2,028	84.43%	-412	-12.48%

The heaviest concentrations of owner occupied housing (by percent) are found in the southern end of the Wyoming Valley (Lower Luzerne County) and in northern and western portions of Lackawanna County (***Figure 4.3.7***). These areas are generally rural, with owner-occupancy, single family detached housing being characteristic. Urban communities across the central portions of the two-county area support a lower percentage of owner occupancy, as these localities provide greater varieties of housing structural types, including increased opportunities for rental occupancy.

The two-county area experienced a decrease from an average of 3.0 persons per household in 1970 to 2.4 persons per household in 2000 (***Figure 4.3.6***). This number has been steadily declining for both counties, as well as statewide. However a slowing in this trend is taking place in Lackawanna and Luzerne Counties, from a combined 5.1 percent decline in average persons per household over the decade between 1980 and 1990 to a 3.3 percent reduction for the ten years between 1990 and 2000. (***Table 4.3.11***)

Figure 4.3.6
Average Persons per Household, United States, Pennsylvania, and Region, 1970-2000

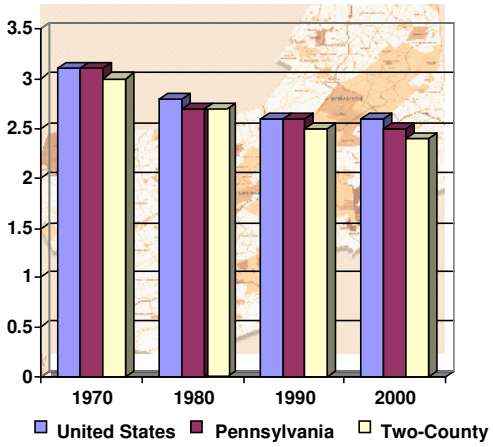
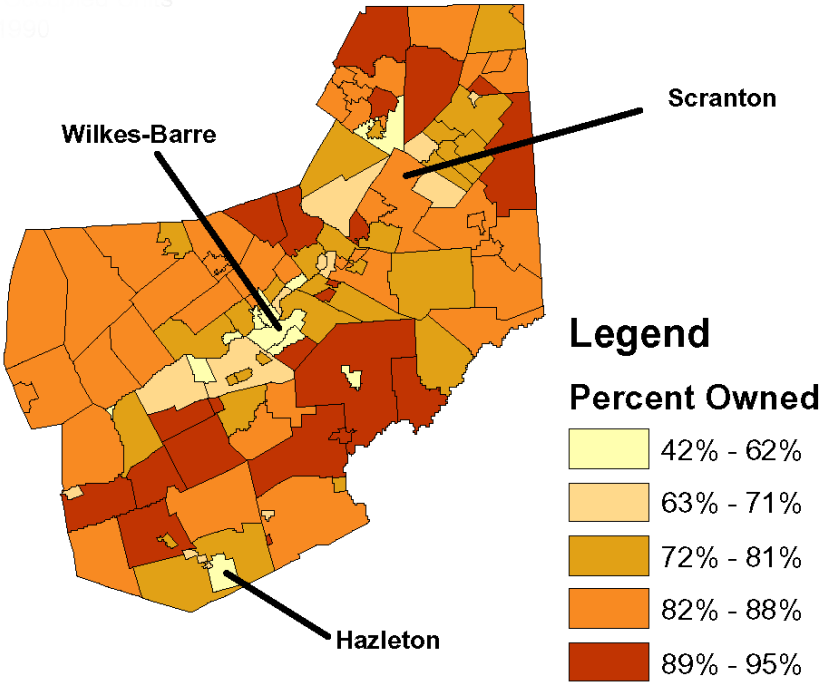


Figure 4.3.7
Percent of Owner Occupancy, 1990 & 2000
Source: U.S. Census Bureau (1990-2000 Decennial Census)



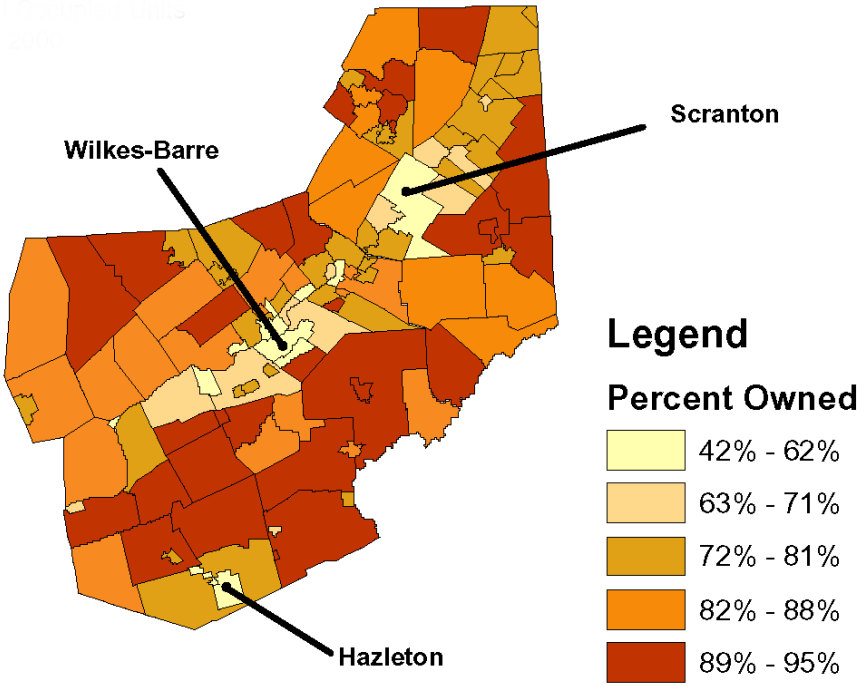


Table 4.3.11
Households, Persons per Household, Percent Change
Two-County Area, 1970-2000
Source: U.S. Census Bureau (1970-2000 Decennial Census)

Households and Persons per Household, Bi-County 1970-2000				
Population in Households				
	1970	**1980**	**1990**	**2000**
Lackawanna County	228,074	221,727	211,738	205,460
Luzerne County	335,102	335,735	317,568	306,387
Bi-County Area	563,176	557,462	529,306	511,847
Pennsylvania	11,491,699	11,566,626	11,881,643	11,847,607
United States	197,399,913	220,796,157	242,012,129	273,643,273
HOUSEHOLDS				
Lackawanna County	75,670	82,056	84,528	86,218
Luzerne County	111,694	125,502	128,483	130,687
Bi-County Area	187,364	207,558	213,011	216,905
Pennsylvania	3,705,410	4,219,606	4,495,966	4,777,003
United States	63,449,747	80,389,673	91,947,410	105,480,101
PERSONS PER HOUSEHOLDS				
Lackawanna County	3.0	2.7	2.5	2.4
Luzerne County	3.0	2.7	2.5	2.3
Bi-County Area	3.0	2.7	2.5	2.4
Pennsylvania	3.1	2.7	2.6	2.5
United States	3.1	2.8	2.6	2.6
Population in Households - Percent Changes				
		1970-1980	**1980-1990**	**1990-2000**
Lackawanna County		-2.8%	-4.5%	-3.0%
Luzerne County		0.2%	-5.4%	-3.5%
Bi-County Area		-1.0%	-5.1%	-3.3%
Pennsylvania		0.7%	2.7%	-0.3%
United States		11.9%	9.6%	13.1%
HOUSEHOLDS				
Luzerne County		12.4%	2.4%	1.7%
Lackawanna County		8.4%	3.0%	2.0%
Bi-County Area		10.8%	2.6%	1.8%
Pennsylvania		13.9%	6.5%	6.3%
United States		26.7%	14.4%	14.7%
PERSONS PER HOUSEHOLDS				
Lackawanna County		-10.3%	-7.4%	-8.0%
Luzerne County		-10.7%	-7.8%	-6.9%
Bi-County Area		-10.1%	-7.4%	-6.0%
Pennsylvania		-12.9%	-3.7%	-3.8%
United States		-9.7%	-7.1%	0.0%

Income Characteristics

Household income for 1999 in the two-county area is presented in ***Table 4.3.12*** and ***Table 4.3.13***. Almost 70 percent of household income was derived in 1999 through wages or salaries. The median household income was $34,438 in Lackawanna County and $33,771 in Luzerne County. For the State of Pennsylvania, median household income was $40,106 and for the nation it was $41,944.

Most households were in the $50,000 to $74,999 bracket, with a total of 38,025 households (17.5%) in the two-county area, followed by the $35,000 to $49,999 bracket with 37,277 (17.2%) of households. Over 45,000 households earned less than $15,000 annually. (***Figure 4.3.8)***

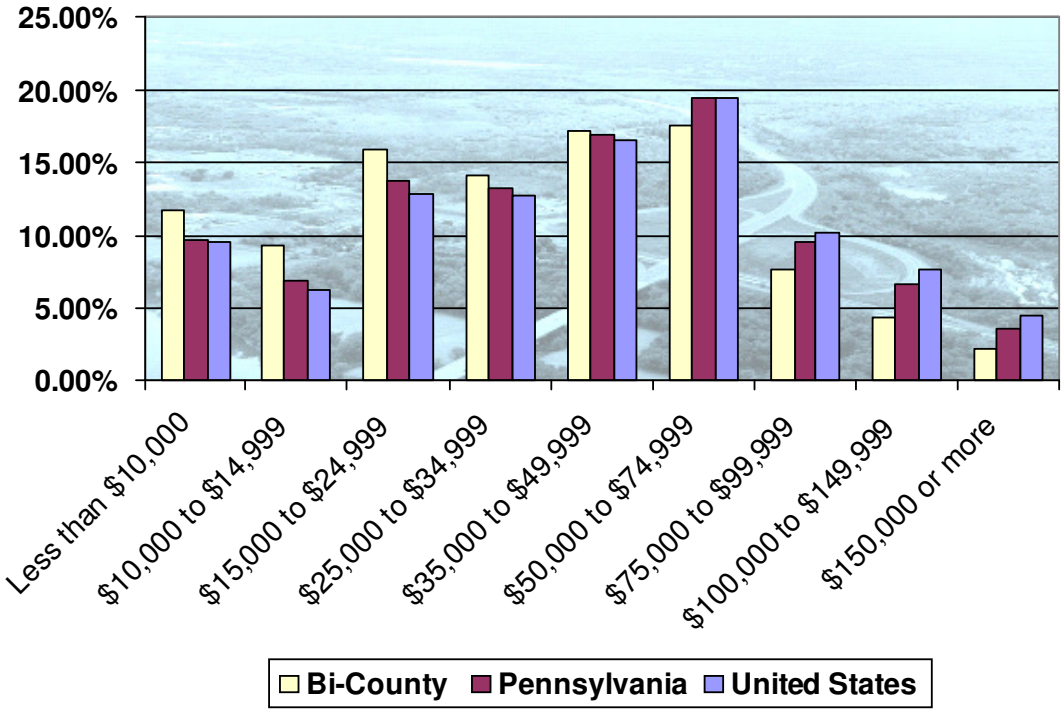
Table 4.3.12
Household Income in Absolute Value, Lackawanna County, Luzerne County, Two-County Area, State and Nation, 2000
Source: U.S. Census Bureau (2000 Decennial Census)

Household Income, Absolute Value, 1999					
	Lackawanna County	Luzerne County	Bi-County Area	Pennsylvania	United States
Total:	86,204	130,703	216,907	4,779,186	105,539,122
Less than $10,000	10,022	15,516	25,538	465,860	10,067,027
$10,000 to $14,999	8,079	12,112	20,191	333,381	6,657,228
$15,000 to $24,999	13,614	20,934	34,548	657,266	13,536,965
$25,000 to $34,999	11,958	18,678	30,636	633,953	13,519,242
$35,000 to $49,999	14,628	22,649	37,277	809,165	17,446,272
$50,000 to $74,999	15,001	23,024	38,025	929,863	20,540,604
$75,000 to $99,999	6,840	9,828	16,668	457,480	10,799,245
$100,000 to $149,999	4,029	5,457	9,486	317,171	8,147,826
$150,000 or more	2033	2,505	4,538	175,047	4,824,713
Median household income in 1999	34,438	33,771	34,105	40,106	41,994
Total:	86,204	130,703	216,907	4,779,186	105,539,122
With wage or salary income	59,696	90,970	150,666	3,552,944	82,024,820
No wage or salary income	26,508	39,733	66,241	1,226,242	23,514,302

Table 4.3.13
Household Income in Percent,
Lackawanna County, Luzerne County, Bi-County Area, State and Nation, 2000
Source: U.S. Census Bureau (2000 Decennial Census)

Household Income, Percent, 1999					
	Lackawanna County	Luzerne County	Bi-County Area	Pennsylvania	United States
Total:	100%	100%	100%	100%	100%
Less than $10,000	11.63%	11.87%	11.77%	9.75%	9.54%
$10,000 to $14,999	9.37%	9.27%	9.31%	6.98%	6.31%
$15,000 to $24,999	15.79%	16.02%	15.93%	13.75%	12.83%
$25,000 to $34,999	13.87%	14.29%	14.12%	13.26%	12.81%
$35,000 to $49,999	16.97%	17.33%	17.19%	16.93%	16.53%
$50,000 to $74,999	17.40%	17.62%	17.53%	19.46%	19.46%
$75,000 to $99,999	7.93%	7.52%	7.68%	9.57%	10.23%
$100,000 to $149,999	4.67%	4.18%	4.37%	6.64%	7.72%
$150,000 or more	2.36%	1.92%	2.09%	3.66%	4.57%
Total:	100.00%	100.00%	100.00%	100.00%	100.00%
With wage or salary income	69.25%	69.60%	69.46%	74.34%	77.72%
No wage or salary income	30.75%	30.40%	30.54%	25.66%	22.28%

Figure 4.3.8
Percent of Household Income
Bi-County Area, Pennsylvania, and United States, 1999
Source: U.S. Census Bureau



Employment Characteristics

There were 239,782 persons employed in the two-county area in 2000, with 96,290 employed people in Lackawanna County and 143,492 employed individuals in Luzerne County. This was a decline of 671 employed persons in the two-county area since 1990. However, the region experienced a decline in the unemployment percentage by 8.9 percent, with a total number of 13,698 unemployed civilians, a decrease of 1,332 individuals since 1990. ***(Table 4.3.45)*** (Note that employed persons in the two-county area may or may not reside in the study region. Such persons may reside inside the two-county area or, conversely, may reside outside the two-county area and commute to a job within the area.)

Census data for 2000 (***Table 4.3.15*** and ***Figure 4.3.9***) show a distribution of jobs by sector for the two-county area that emphasizes educational, health, and social services (22.6% of all jobs), followed by manufacturing (16.2%), and retail trade (13%). Of the preceding three, only education, health and social services has increased significantly in numbers of employees since 1990, adding 9,988 individuals over the decade. Agriculture, forestry, hunting, and mining (0.6%) for 2000 was the smallest sector, with 1,523 employees across the two-county area, a 1.46 percent decrease since 1990.

Table 4.3.14
Change in Population Employed, Two-County Area, 1990-2000
Source: U.S. Census Bureau (1990-2000 Decennial Census)

BI-County				
	1990	2000	Change	
	Number	Number	Number	Percent
TOTAL EMPLOYED	240,453	239,782	-671	-0.28%
TOTAL UNEMPLOYED	15,030	13,698	-1,332	-8.86%

Table 4.3.15
Employment by Industry,
Lackawanna County, Luzerne County and Region, 2000
Source: U.S. Census Bureau (2000 Decennial Census)

Employment by Industry, 2000						
	Lackawanna County		Luzerne County		Bi-County	
	Number	Percent	Number	Percent	Number	Percent
TOTAL EMPLOYED	96,290	100.00%	143,492	100.00%	239,782	100%
INDUSTRY						
Agriculture, Forestry, Fishing, Hunting & Mining	466	0.48%	1,057	0.74%	1,523	0.6%
Construction	4,976	5.17%	8,515	5.93%	13,491	5.6%
Manufacturing	15,159	15.74%	23,754	16.55%	38,913	16.2%
Wholesale Trade	3,480	3.61%	6,075	4.23%	9,555	4.0%
Retail Trade	12,886	13.38%	18,595	12.96%	31,481	13.1%
Transportation, Warehousing & Utilities	5,308	5.51%	8,260	5.76%	13,568	5.7%
Information	2,671	2.77%	4,916	3.43%	7,587	3.2%
Finance, Insurance, Real Estate & Rentals/Leasing	6,340	6.58%	8,322	5.80%	14,662	6.1%
Scientific, Management, Administrative & Waste Management Services	5,820	6.04%	8,963	6.25%	14,783	6.2%
Educational, Health & Social Services	23,289	24.19%	30,882	21.52%	54,171	22.6%
Arts, Entertainment, Recreation, Accommodation & Food Services	6,442	6.69%	9,988	6.96%	16,430	6.9%
Other services	5,160	5.36%	6,369	4.44%	11,529	4.8%
Public Administration	4,293	4.46%	7,796	5.43%	12,089	5.0%

Figure 4.3.9
Employment by Industry, Lackawanna and Luzerne Counties, 2000
Source: U.S. Census Bureau (2000 Decennial Census)

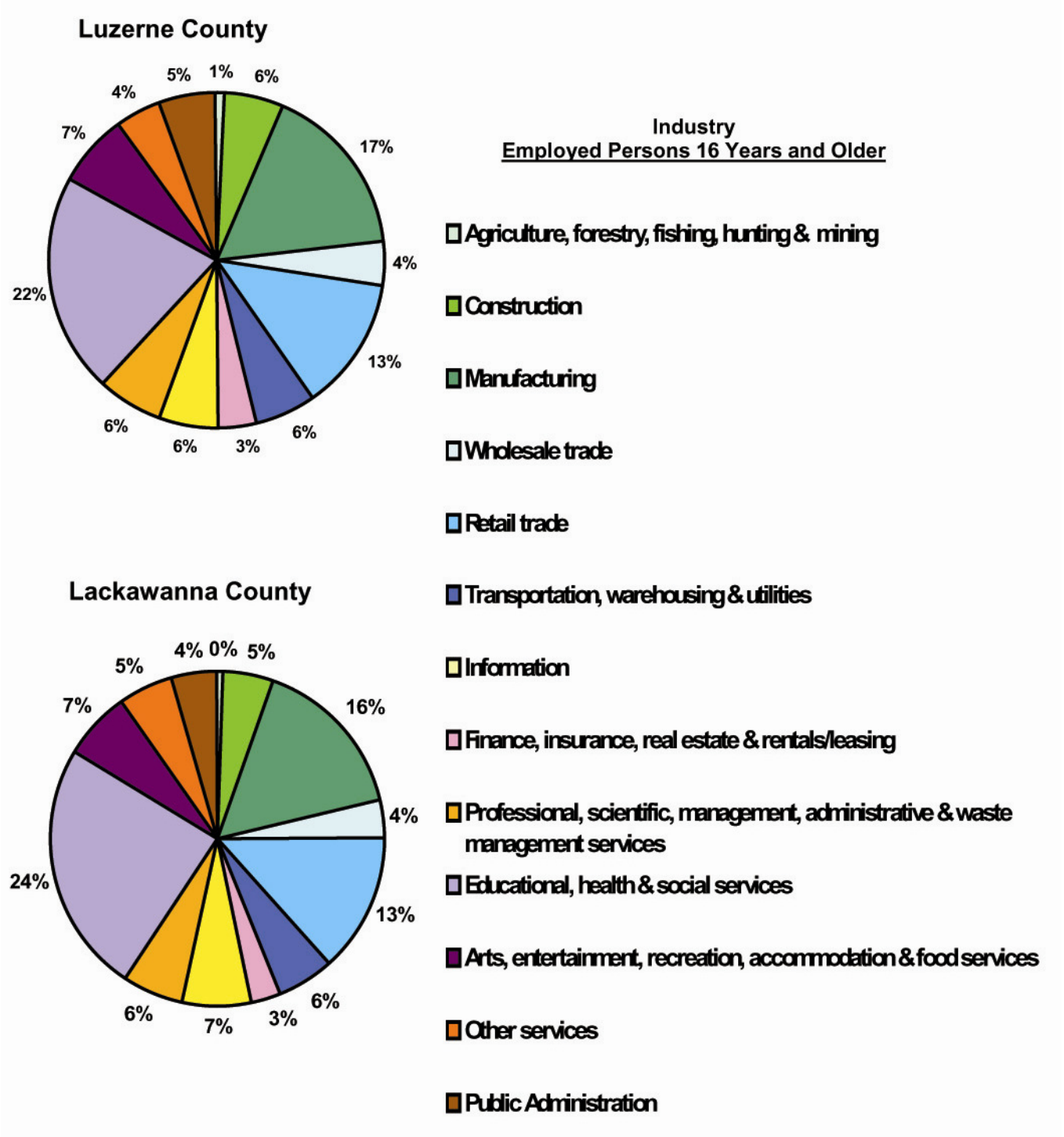


Table 4.3.16
Means of Transportation, Journey to Work, Lackawanna County, Luzerne County, Bi-County Area, 2000
Source: U.S. Census Bureau (2000 Decennial Census)

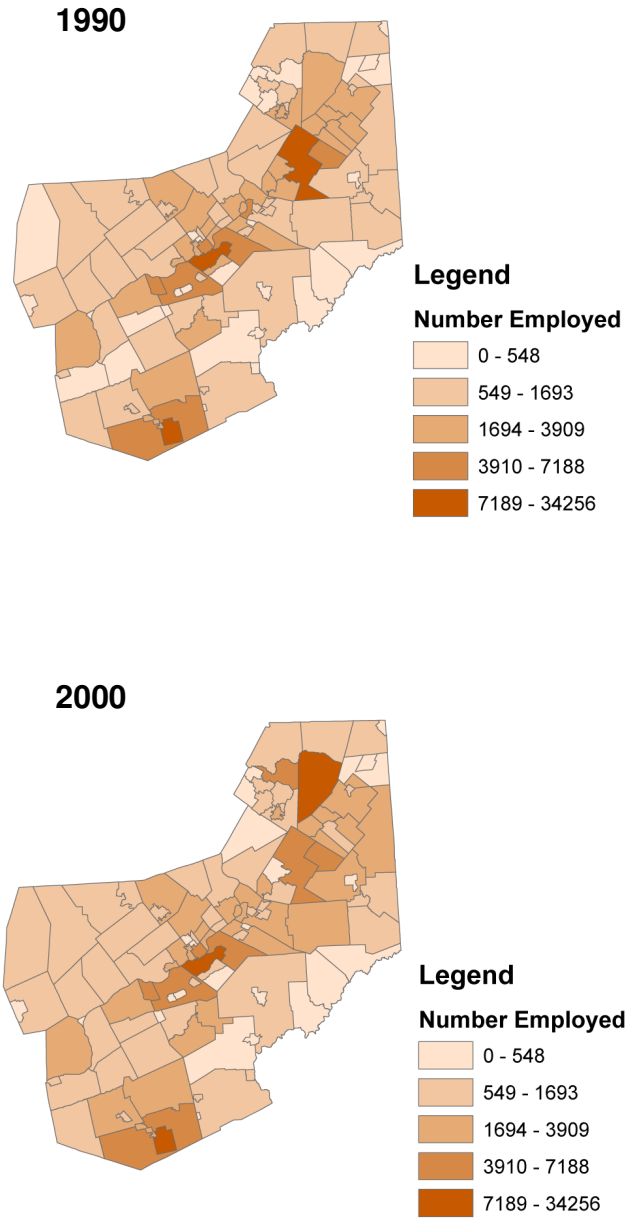
Journey to work information is shown in **Table 4.3.16.** The means of transportation or journey to work in 2000 indicated that 92.9 percent of workers above the age of 16 commuted by private vehicle (car, truck, or van). Of this amount, 11.6 percent or 27,259 out of 235,700 individuals carpooled. Public transportation in Lackawanna and Luzerne Counties totaled 2,295 journey-to-work riders or roughly 1.0 percent of the two-county area's workforce. Over 8,000 individuals walked to work (3.4%) and 4,814 or 2.0 percent worked from home. Commuting by bicycle amounted to 181 individuals or 0.1 percent of the total workforce.

Means of Transportation, Journey to Work, Bi-County Area, 2000		
Lackawanna County		
	Number	**Percent**
Total Workers Age 16+	**94,532**	**100.0%**
Car, Truck, or Van:	87,691	92.8%
Drove Alone	76,144	80.5%
Carpooled	11,547	12.2%
Public Transportation	833	0.9%
Bus or Trolley Car	665	0.7%
Subway or Elevated	25	0.0%
Railroad	0	0.0%
Ferryboat	0	0.0%
Taxicab	131	0.1%
Motorcycle	36	0.0%
Bicycle	58	0.1%
Walked	3,490	3.7%
Other Means	513	0.5%
Worked at Home	1,911	2.0%
Luzerne County		
	Number	**Percent**
Total Workers Age 16+	**141,168**	**100.0%**
Car, Truck, or Van:	131,341	93.0%
Drove Alone	115,629	81.9%
Carpooled	15,712	11.1%
Public Transportation	1,462	1.0%
Bus or Trolley Car	1,394	1.0%
Subway or Elevated	7	0.0%
Railroad	0	0.0%
Ferryboat	2	0.0%
Taxicab	55	0.0%
Motorcycle	24	0.0%
Bicycle	123	0.1%
Walked	4,577	3.2%
Other Means	738	0.5%
Worked at Home	2,903	2.1%
Bi-County Region		
	Number	**Percent**
Total Workers Age 16+	**235,700**	**100.0%**
Car, Truck, or Van:	219,032	92.9%
Drove Alone	191,773	81.4%
Carpooled	27,259	11.6%
Public Transportation	2,295	1.0%
Bus or Trolley Car	2,059	0.9%
Subway or Elevated	32	0.0%
Railroad	0	0.0%
Ferryboat	2	0.0%
Taxicab	186	0.1%
Motorcycle	60	0.0%
Bicycle	181	0.1%
Walked	8,067	3.4%
Other Means	1,251	0.5%
Worked at Home	4,814	2.0%

Figure 4.3.10
Locations Where People Work, 1990 & 2000
Source: U.S. Census Bureau (1990-2000 Decennial Census)

Figure 4.3.10 illustrates the distribution of employed people within the two-county area in 1990 and 2000. In Lackawanna County, employment tends to be concentrated along the lower half of the Lackawanna Valley, although substantial shifts in locations of employment occurred from the City of Scranton north into places like Scott Township during the period.

The distribution of employed persons remained largely unchanged over the same period in Luzerne County. The majority of employed individuals work along the central portions of the Susquehanna River Valley (with highest concentrations in Wilkes-Barre Township), along the Route 309 corridor north of Kingston Borough, and in the Greater Hazleton Area in the southern portion of the county.



4.4 Community Facilities Profile

This section provides an inventory of public and private community facilities in Lackawanna and Luzerne Counties. Included are police and fire protection facilities, as well as emergency medical services, hospitals, and nursing homes. Educational facilities, libraries, and recreational facilities are also discussed. In addition, other community facilities include places of worship and cemeteries.

Public Safety Facilities

Lackawanna County has 26 police departments, including the County Department of Corrections in Scranton as well as a State Police Headquarters in the Borough of Dunmore. Forty-seven police stations in Luzerne County include county-level law enforcement as well as a PA Turnpike Police Station in White Haven (***Table 4.4.1***). Fire departments in Lackawanna and Luzerne Counties are shown in ***Table 4.4.2***. ***Table 4.4.3*** lists the emergency medical service (EMS) facilities in Lackawanna County and EMS facilities in Luzerne County.

Located in the Valley View Business Park in Jessup Borough, the Lackawanna County Center for Public Safety facility is Lackawanna County's 911 dispatch and emergency management center. The Luzerne County Emergency Management facility is located on Water Street in the City of Wilkes-Barre and provides overlapping service with the county 911 dispatch service in Hanover Township.

Table 4.4.1
Police Facilities
Source: Lackawanna County Center for Public Safety & Luzerne County 911

LACKAWANNA COUNTY		
Archbald Police Department	Greenfield Township Police Department	Olyphant Police Department
Blakely Police Department	Jefferson Township Police Department	Roaring Brook Township Police Department
Carbondale Police Department	Jermyn Police Department	Scott Township Police Department
Carbondale Township Police Department	Jessup Police Department	Scranton Police Department
Clarks Summit Police Department	Mayfield Police Department	South Abington Township Police Department
Covington Township Police Department	Moosic Police Department	Taylor Police Department
Dalton Police Department	Moscow Police Department	Throop Police Department
Dickson City Police Department	Newton Township Police Department	Waverly Township Police Department
Dunmore Police Department	Old Forge Police Department	
LUZERNE COUNTY		
Ashley Boro Police Department	Jenkins Township Police Department	Warrior Run Boro Police Department
Avoca Boro Police Department	Kingston Boro Police Department	West Hazleton Police Department
Butler Township Police Department	Kingston Township Police Department	West Pittston Boro Police Department
Conyngham Boro Police Department	Laflin Boro Police Department	West Wyoming Boro Police Department
Courtdale Boro Police Department	Larksville Boro Police Department	White Haven Boro Police Department
Dallas Boro Police Department	Lehman Township Police Department	Wilkes Barre City Police
Dallas Township Police Department	Nanticoke City Police Department	Wilkes Barre Township Police Department
Dupont Boro Police Department	Nescopeck Boro Police Department	Wright Twp Police Department
Duryea Boro Police Department	Newport Township Police Department	Wyoming Boro Police Department
Edwardsville Boro Police Department	Pittston City Police Department	
Exeter Boro Police Department	Pittston Township Police Department	
Exeter Twp Police Department	Plains Township Police Department	
Fairview Township Police Department	Plymouth Boro Police Department	
Forty Fort Boro Police Department	Pringle Boro Police Department	
Freeland Boro Police Department	Rice Township Police Department	
Hanover Twp Police Department	Shickshinny Boro Police Department	
Harveys Lake Boro Police Department	Sugar Notch Boro Police Department	
Hazleton City Police Department	Sugarloaf Township Police Department	
Jackson Township Police Department	Swoyersville Boro Police Department	

Table 4.4.2
Fire Protection Facilities
Source: Lackawanna County Center for Public Safety & Luzerne County 911

LACKAWANNA COUNTY		
Archbald Hose Company	Eynon Hose Company	Olyphant Hose Company # 2
Artisan Hose Company #2	Fleetville Fire Company	Queen City Hose Company
Black Diamond Hose Company#2	Gouldsboro Fire Company	Scott Fire Company
Blakely Hose Company #2	Gratten Singer Hose Company	Scranton Fire Headquarters
Carbondale Fire Department	Greenfield Township Fire Company	Springbrook Volunteer Fire Company
Chinchilla Hose Company	Greenwood Hose Company #1	Taylor Hose Company #3
Clarks Summit Fire Company	Jefferson Township Fire Company	Taylor Hose Company #1
Columbia Hose Company	Jessup Hose Company #1	Taylor Hose Company #2
Cottage Hose Company #2	Jessup Hose Company #2	Thornhurst Volunteer Fire Company
Covington Fire Company	Justus Hose Company	Throop Hose Company #2
Crystal Fire Company	Lawrence Fire Company	Throop Hose Company #1
Dalton Fire Company	Liberty Hose Company #6	Throop Volunteer Hose Company #3
Dunmore Fire Headquarters	Madisonville Fire Company	Whites Crossing Fire Company
Eagle Hose Company	Mayfield Hose Company Engine 59	Whitmore Fire Company
Eagle-McClure Hose Company	Meredith Hose Company #1	William Walker Fire Company
East Side Hose Company #4	Mitchell Hose Company	Wilson Fire Company #1
Elmhurst/ Roaring Brook Fire Company	Moscow Fire Company #1	
Eureka Hose Company	Newton Ransom Fire Company	
Excelsior Hose Company	Old Forge Hose Company # 2	

LUZERNE COUNTY		
Ashley Borough Hose Company #1	Harwood Volunteer Fire Department	Pringle Volunteer Fire Department
Avoca Borough Hose Company #1	Hazle Township Fire Rescue	Rice Township Fire Department
Bear Creek Township Fire Department	Hazleton City Fire Department	Ross Township Sweet Valley Volunteer Fire Department
Buck Township Shades Creek Volunteer Fire Company	Hollenback Township Hobbie Volunteer Fire Company	Salem Township Volunteer Fire Company #1
Conyngham Township Pond Hill - Lily Lake Fire Company	Hughestown Volunteer Hose Company	Salem Township - East Berwick Hose Company #2
Courtdale Borough Vol. Hose Company	Huntington Valley Fire Company	Shickshinny Borough Fire Company
Dallas Fire Ambulance, Inc.	Jackson Township Volunteer Fire Company	Slocum Township Fire Department
Dallas Township - Kunkle Fire and Ambulance	Jenkins Township Fire Department	West Hazleton Borough Fire Department
Dennison Township Volunteer Fire Department	Kingston Borough Columbia Hose Company #2	West Pittston Hose Company #1
Dorrance Township Volunteer Fire Company	Luzerne Borough Volunteer Fire Department	West Wyoming Hose Company #1
Fairview Township - Mountaintop Hose Company #1	Mocanaqua Fire Company #1	West Wyoming Hose Company #2
Fearnots Volunteer Fire Company Foster Township	Nanticoke City Fire Department Headquarters	White Haven Borough Fire Company #1
Forty Fort Borough Volunteer Hose Company	Nescopeck Boro Volunteer Fire Department	Wilkes Barre City Fire Headquarters
Franklin Township Volunteer Hose Company	Nescopeck Township Vollunteer Fire Company #1	Wilkes Barre Township Fire Department
Freeland Fire Department	Newport Township Volunteer Fire Department	Wright Twp Volunteer Fire Company
Hanover Township Fire Department	Nuangola Volunteer Fire Department	Wyoming Hose Company #1
Hanover Township Fire Department Askam Station #6	Pittston City Fire Department Headquarters	Wyoming Hose Company #2
Hanover Township Fire Department Breslau Station #5	Pittston Township Volunteer Fire Department	Yatesville Borough Volunteer Hose Company
Hanover Township Fire Department Hanover Green Station #1	Plains Township Fire Department	
Hanover Township Fire Department Newtown Station #2	Plains Township Rescue 576	
Hanover Township Fire Department Preston Station #3	Plymouth Boro Fire Department	
Harveys Lake Fire Ambulance Company	Plymouth Township Volunteer Fire Company	

Table 4.4.3
Emergency Medical Services Facilities
Source: Lackawanna County Center for Public Safety & Luzerne County 911

LACKAWANNA COUNTY		
Archbald Ambulance Company	Factoryville Ambulance Company	Olyphant Ambulance Company
Blakely Ambulance Company	Gouldsboro Ambulance Company	Scott Township Ambulance Company
Clarks Summit Ambulance Company	Greenfield Ambulance Company	Thornhurst Ambulance Company
Community Life Support	Lackawanna Ambulance Company	William Walker Aubulance Company
Cottage Ambulance Company	Jessup Ambulance Company	
Covington Township Ambulance Company	Justus Ambulance Company	
Chinchilla Ambulance Company	Moscow Ambulance Company	
Dalton Ambulance Company	Newton-Ransom Ambulance Company	
Dickson City Ambulance Company	Old Forge Ambulance Company	
LUZERNE COUNTY		
Ashley Ambulance Association	Jenkins Township Ambulance Association	Plymouth Borough Ambulance Association
Avoca Community Ambulance Association	Kingston Fireman's Community Ambulance Medic 13	Pond Hill-Lily Lake Ambulance
Bear Creek-Buck Township Ambulance Association	Kingston Township Ambulance Association	Shickshinny Area Volunteer Ambulance
Dallas Fire - Ambulance	Kunkle Fire and Ambulance	Slocum Township Ambulance Association
Dorrance Township Ambulance	Lake Silkworth Ambulance	Sweet Valley Ambulance Association
Duryea Community Ambulance Association	Larksville Community Ambulance Association	Swoyersville Police Community Ambulance Association
Exeter Community Ambulance Association	Lehman Township Fire and Ambulance	TransMed/Spellman Ambulance Service Medic 8, 10, 19
Fairmount Township Ambulance Association	Lurerne Borough Ambulance	Valley Regional Fire Company Ambulance Medic 26
Franklin / Centermoreland Township Ambulance	Mountaintop	West Hazleton Ambulance Association
Freeland - Northside Community Ambulance	Mountaintop Area Ambulance	West Pittston Community Ambulance
Greater Pittston Community Ambulance	Nanticoke Community Ambulance Medic 25	West Wyoming Community Ambulance
Hanover Township Ambulance Association Medic 9	Nescopeck Community Ambulance Association	White Haven Ambulance Rescue Inc. Medic 22
Harding-Mount Zion Community Ambulance	Newport Township EMS	Wilkes-Barre City
Harvey's Lake Fire - Ambulance	Northeast Paramedics Medic 15	Wilkes-Barre City Ambulance
Hobbie Volunteer Fire Company Ambulance	Northeast Paramedics Medic 12	Wyoming Hose Company #1 Ambulance
Hunlock Creek Ambulance Association	Nuremburg Community Ambulance	
Huntington Township EMS	Pittston Township Ambulance Association	
Jackson Township Ambulance Association	Plains Township Volunteer Ambulance Medic 2	

Medical Facilities

There are a number of medical facilities in the two-county area (***Table 4.4.4***). Major health systems in Lackawanna County are Mercy Health Partners, Moses-Taylor Health Care System, and Community Medical Center Healthcare System. Major health systems in Luzerne County include Greater Hazleton Health Alliance, Geisinger Health System, and Wyoming Valley Health System.

Additional Lackawanna County medical facilities include rehabilitation, physical therapy, and special treatment clinics. The Allied Services campus, one of the nation's largest rehabilitation complexes, is located in Scranton. The Northeast Regional Cancer Institute is headquartered on the campus of the University of Scranton. Saint Joseph's Center of Scranton provides therapeutic and neurological treatments for children. The Friendship House is the region's only provider of mental health treatment for children at the Frances Fuller Campus, Scranton. Lourdesmont/Good Shepherd Youth and Family Services in Clarks Summit is a non-profit adolescent mental health and substance abuse treatment center sponsored by the Sisters of the Good Shepherd. The Northeast Pennsylvania Area Health Education Center at Keystone College (La Plume) works to improve the supply and distribution of health care professionals (with an emphasis on primary care) throughout Northeastern Pennsylvania. In Taylor, an American Cancer Society branch is also present. The Commonwealth Medical College opened in August 2009 in Scranton and includes clinical care services, clinical trials, as well as medical infomatics.

In Luzerne County there are a variety of types of healthcare facilities. For example, the John Heinz Institute of Rehabilitation Medicine is a not-for-profit rehabilitation hospital offering comprehensive inpatient and outpatient rehabilitation services and specialized treatment for traumatic brain injury throughout the county. First Hospital Wyoming Valley at Nesbitt Memorial Medical Center is Northeastern Pennsylvania's only private psychiatric hospital located within Nesbitt Memorial Medical Center in Kingston on Route 11. Mercy Center– Special Care Hospital in Nanticoke is a transitional care facility that specializes in care for medically complex patients requiring prolonged acute inpatient stays. Kindred Hospital Wyoming Valley, a long-term acute care specialty hospital, is located at Wyoming Valley Health Care System/CHS. Geisinger Wyoming Valley Medical is a high-tech multi-specialty surgical facility offering same-day surgery and personal nursing care in the City of Wilkes-Barre. Behavioral Health Services of Wyoming Valley Center provides outpatient and partial hospitalization, substance abuse services for adults and adolescents, dual diagnosis intensive outpatient programs, and family education and therapy at Nesbitt Memorial Medical Center.

Table 4.4.5 lists 19 nursing home facilities in Lackawanna County and 26 nursing home facilities in Luzerne County.

Table 4.4.4
Hospital Facilities

LACKAWANNA COUNTY	
Hospital Facilities	**Municipalities**
Clarks State Hospital	Newton Township
Community Medical Center	Scranton
Marian Community Hospital	Carbondale
Geisinger South	Scranton
Mid-Valley Hospital	Blakely Borough
Moses Taylor Hospital	Scranton
Saint Joseph's Hospital	Scranton
LUZERNE COUNTY	
Hospital Facilities	**Municipalities**
First Hospital Wyoming Valley	Wilkes-Barre
Geisinger Wyoming Valley Medical Center	Wilkes-Barre
Geisinger South Wilkes-Barre Hospital	Wilkes-Barre
Hazleton General Hosital	Hazleton
Nesbitt Memorial Medical Center	Kingston
Retreat State Hospital	Nanticoke
Wyoming Valley Health Care System/CHS	Wilkes-Barre

Table 4.4.5
Nursing Homes

LACKAWANNA COUNTY		LUZERNE COUNTY	
Abington Manor	100 Edella Road Clarks Summit, PA 18411	Bear Creek Health Care Center	Bear Creek, PA
Allied Services Skilled Nursing Center	300 Smallacombe Drive PO Box 2033 Scranton, PA 18501	Beverly Health Care Center – East Mountain Manor	101 East Mountain Boulevard Wilkes-Barre, PA 18702
Carbondale Nursing & Rehabilitation Center	10 Hart Place Carbondale, PA 18407	Birchwood Nursing Rehabilitation Center	395 Middle Road Nanticoke, PA 18634
Dunmore Health Care Center	1000 Mill Street Dunmore, PA 18512	Bonham Nursing Home	477 Bonnieville Road Stillwater, PA 17878 (Huntington Township)
Gino J. Merli Veterans Center	401 Penn Avenue Scranton, PA 18503	Butler Valley Manor – Skilled Nursing Facility	463 North Hunter Highway Drums, PA 18222 (Butler Township)
Golden Living Center	824 Adams AvenueScranton, PA 18510	Dallas Township Nursing Home	Dallas, PA 18612
Green Ridge Health Care Center	2741 Boulevard Avenue Scranton, PA 18509	Davis Nursing Home, Inc.	185 Mountain Boulevard Mountaintop, PA 18707 (Wright Township)
Holy Family Residence	2500 Adams Avenue Scranton, PA 18509	Hampton House Nursing Home	1548 Sans Souci ParkwayWilkes-Barre, PA 18702
Jewish Home of Eastern Pennsylvania	1101 Vine Street Scranton, PA 18510	Harveys Lake Borough Nursing Home	Harveys Lake, PA
Lackawanna County Health Care Center	108 Terrace Drive Olyphant, Pa 18477	Highland Manor Nursing & Convalescent Center	750 Schooley Avenue Exeter, PA 18643
Mercy Skilled Nursing Facility	746 Jefferson Avenue Scranton, PA 18501	Kingston Commons	615 Wyoming Avenue Kingston, PA 18704
Moses Taylor Hospital Skilled Nursing Facility	700 Quincy Avenue Scranton, PA 18510	Lakeside Nursing Center	Old Lake Road Harveys Lake, PA
Mountain Rest Nursing Home	100 Lynwood Avenue Scranton, PA 18505	Laurels Health & Rehabilitation	702 Third Avenue Kingston, PA 18704
Mountain View Care Center	2309 Stafford Avenue Scranton, PA 18505	Lincoln Manor Personal Care	532-534 Lincoln Street Hazleton, PA 18201
Osprey Ridge Health Care and Rehabilitation	45 North Scott Street Carbondale, PA 18407	Little Flower Manor Diocese of Scranton	200 South Meade Street Wilkes-Barre, PA 18702
Scranton Health Care Center	2933 McCarthy Street Scranton, PA 18505	Manor Care Health Services Kingston	200 Second Avenue Kingston, PA 18704
St. Mary's Villa Nursing Home	675 St. Mary's Villa Road Moscow, Pa 18444	Meadows Center Nursing Unit	301 Lake Street Dallas, PA 18612 (Dallas Township)
Taylor Nursing & Rehabilitation Center	500 West Hospital Street Taylor, PA 18517	Mercy Health Care Center	147 Newport Street Nanticoke, PA 18734
The Laurels Health & Rehabilitation	81 Sturges Road Peckville, PA 18452	Mountain City Nursing & Rehabilitation Center	1000 West 27th Street Hazleton, PA 18201 (Hazle Township)
		Mountainside Manor	Route 309 Dallas, PA 18612 (Dallas Township)
		River Street Manor	440 North River Street Wilkes-Barre, PA 18702
		Smith Health Care	435 Main Road Mountaintop, PA 18707
		St. Luke Manor	1711 East Broad Street Hazleton, Pa 18201
		St. Luke Pavilion	1000 Stacie Drive Hazleton, PA 18201
		Summit Health Care Center	50 North Pennsylvania Avenue Wilkes-Barre, PA 18701
		United Methodist Homes – Wesley Village Campus	209 Roberts Road Pittston, PA 18640 (Jenkins Township)

Education Facilities

The public education system (K-12) serves over 70,000 students across the two-county area. Lackawanna County has over 28,000 students attending its 12 public school districts and one career and technology school. More than 43,000 students attend Luzerne County's 12 public and four career and technology schools. (***Table 4.4.6***)

Of the 13 colleges and universities in the two-county area the University of Scranton supports that highest number of full-time enrollment with 5,000 students. A total of seven schools are in Lackawanna County and six in Luzerne County (***Table 4.4.7***).

Table 4.4.6
Public School Districts

LACKAWANNA COUNTY	
Municipality (District Office)	**School Districts**
Clarks Summit Borough	Abington Heights
Carbondale City	Carbondale Area
Dunmore Borough	Dunmore
Forest City Borough (Susquehanna Co.)	Forest City Regional
Clinton Township (Wyoming Co.)	Lackawanna Trail
Scott Township	Lakeland
Throop Borough	Mid Valley
Moscow Borough	North Pocono
Old Forge Borough	Old Forge
Taylor Borough	Riverside
Scranton City	Scranton
Archbald Borough	Valley View
Vocational and Technology Schools	
Scranton City	Career Technology Center of Lackawanna County
LUZERNE COUNTY	
Municipality (District Office)	**School Districts**
Salem Township	Berwick Area School District
Wright Township	Crestwood School District
Dallas Borough	Dallas School District
Nanticoke City	Greater Nanticoke Area School District
Hanover Township	Hanover Area School District
Hazleton City	Hazleton Area School District
Lehman Township	Lake-Lehman School District
Union Township	Northwest Area School District
Yatesville Borough	Pittston Area School District
Wilkes-Barre City	Wilkes-Barre Area School District
Exeter Borough	Wyoming Area School District
Plymouth Borough	Wyoming Valley West School District
Vocational and Technology Schools	
Hazleton City	Hazleton Area Career Center
Pringle Borough	West Side Area Vocational Technical School
Plains Township	Wilkes-Barre Area Vocational Technical School
Kingston Borough	Luzerne Intermediate Unit – 18

Table 4.4.7
Colleges & Universities

LACKAWANNA COUNTY	LUZERNE COUNTY
The Commonwealth Medical College Scranton	Kings College Wilkes-Barre City
Keystone College La Plume	Luzerne County Community College Nanticoke
Lackawanna College Scranton	Misericordia University Dallas Township
Pennsylvania State University Worthington Scranton Dunmore Borough	Pennsylvania State University, Hazleton Sugarloaf Township
Johnson College Scranton	Pennsylvania State University, Wilkes-Barre Lehman Township
Marywood University Scranton and Dunmore Borough	Wilkes University Wilkes-Barre City
University of Scranton Scranton	

Libraries

Public libraries are accessible throughout the two counties, and include 25 branches (***Table 4.4.8***).

Lackawanna County Library System includes nine public libraries and one mobile library, the “Bookmobile”. The system’s administrative offices are located at the Lackawanna County Children’s Library Building in Scranton. The county system provides genealogy and government research, as well as free delivery service, called “Books by Mail”, for homebound residents.

Luzerne County Library System consists of 16 public libraries. The county system offers an assortment of adult programs, as well as internet-based genealogy, sample testing, and the “Tell Me More” language learning system.

Table 4.4.8
Public Libraries

LACKAWANNA COUNTY	
Public Libraries	**Municipalities**
Abington Community	Clarks Summit
Albright Community	Scranton
Green Ridge Branch	Scranton
Bookmobile	*County-wide*
Carbondale	Carbondale
Dalton	Dalton
North Pocono	Moscow
Taylor Community Library	Taylor
Valley Community Library	Blakely Borough
Lackawanna County Children's Library	Scranton
LUZERNE COUNTY	
Public Libraries	**Municipalities**
Back Mountain Memorial Library	Dallas Borough
Hazleton Area Public Library	Hazleton (Main library & 4 branches)
Hoyt Library	Kingston Borough
Laflin Public Library	Laflin Borough
M.S. Kirby Library	Fairview Township
Mill Memorial Library	Nanticoke
Osterhout Free Library	Wilkes-Barre (Main library & 3 branches)
Pittston Memorial Library	Pittston
Plymouth Public Library	Plymouth Borough
West Pittston Library	West Pittston Borough

Recreation Facilities

Municipally-owned and operated park facilities are located in many of the municipalities situated throughout the two-county area. Facilities include ball fields, playgrounds, basketball and tennis courts, walking trails and picnic areas. Four county-owned and/or operated parks are located in Lackawanna County and Luzerne County operates three. Recreational opportunities at these facilities include fishing, camping, picnicking, athletic fields, and walking trails. Several private hunting and fishing clubs are also located throughout the two-county area.

A total of six state parks encompassing over 23,000 acres of protected land are located within the two-county area. Recreational opportunities at these facilities include hunting, fishing, camping, hiking and picnicking, athletic fields, walking trails, and boating.

The Pennsylvania Game Commission maintains a total of 14 state game lands, which encompass approximately 60,000 acres of protected forest lands in Luzerne and Lackawanna Counties. Recreational opportunities in these areas include hunting, fishing, trapping, hiking, bird watching, and snowmobiling. A listing of municipal, county and state parks, forests, and game lands located in the two-county area can be found in *Section 4.5*.

4.5 Recreation, Open Space & Greenways Profile

Lackawanna and Luzerne Counties are in the Pocono Mountains/Endless Mountains region of the state park system. The 2,400 square miles of wooded mountains and valleys that compose this region contain over 80 percent of Pennsylvania's resorts. The two-county area is a sizable part of this region and supports a diverse array of outdoor recreational opportunities year-round for both visitors and residents alike (***Figure 4.5.1***).

Recreation and open space in the two-county area include one state forest, six state parks, two state heritage areas, 15 individual state game lands, seven county parks, roughly 300 municipal parks and recreational facilities, as well as a growing network of open space, greenways, and trails.

State Forests

The Pennsylvania state forest system was created in 1898 to provide a continuous supply of wood products, protect watersheds, and provide outdoor recreational opportunities. The Pennsylvania Bureau of Forestry manages over 2.1 million acres of state forest lands in 48 counties across the Commonwealth, accounting for 12 percent of the State's forested land. Other forested lands throughout the State are owned by "Private Forest Landowners." Although these lands are not included within the Bureau of Forestry public lands inventory, they do account for an additional 12 million acres of forested lands. Lackawanna State Forest is the only state forest in the study area, occupying 8,813 acres of land in multiple tracts.

State Parks

Pennsylvania's state park system was created in 1893. The greatest period of state park growth occurred between 1955 and 1970. In 1955, the park system consisted of 45 state parks and five historical parks. Today, the Pennsylvania Bureau of State Parks system is one of the largest state parks systems, with 116 outdoor recreational areas and over 227,000 acres of property. Meeting the demands and changing interests of the public remains a charge of the Bureau of State Parks.

The two-county area includes six state parks, two in Lackawanna County and four in Luzerne. Lackawanna State Park is located in northwestern Lackawanna County while in the northeastern portion of the county is Archbald Pothole State Park. In northeastern Luzerne County is Frances Slocum State Park and in the southeastern portion is Nescopeck State Park. Ricketts Glen State Park spans portions of Luzerne, Sullivan, and Columbia counties. Running parallel to the Lehigh River is Lehigh Gorge State Park, which lies between Luzerne and Carbon Counties (***Table 4.5.1***).

Table 4.5.1
State Parks in the Two-County Area

LACKAWANNA COUNTY		LUZERNE COUNTY	
Lackawanna State Park	Benton and North Abington Townships	Frances Slocum State Park	Kingston Township
Archbald Pothole State Park	Archbald Borough	Nescopeck State Park	Butler and Dennison Townships
		Ricketts Glen State Park	Fairmount Township
		Lehigh Gorge State Park	White Haven Borough

Pennsylvania Heritage Areas

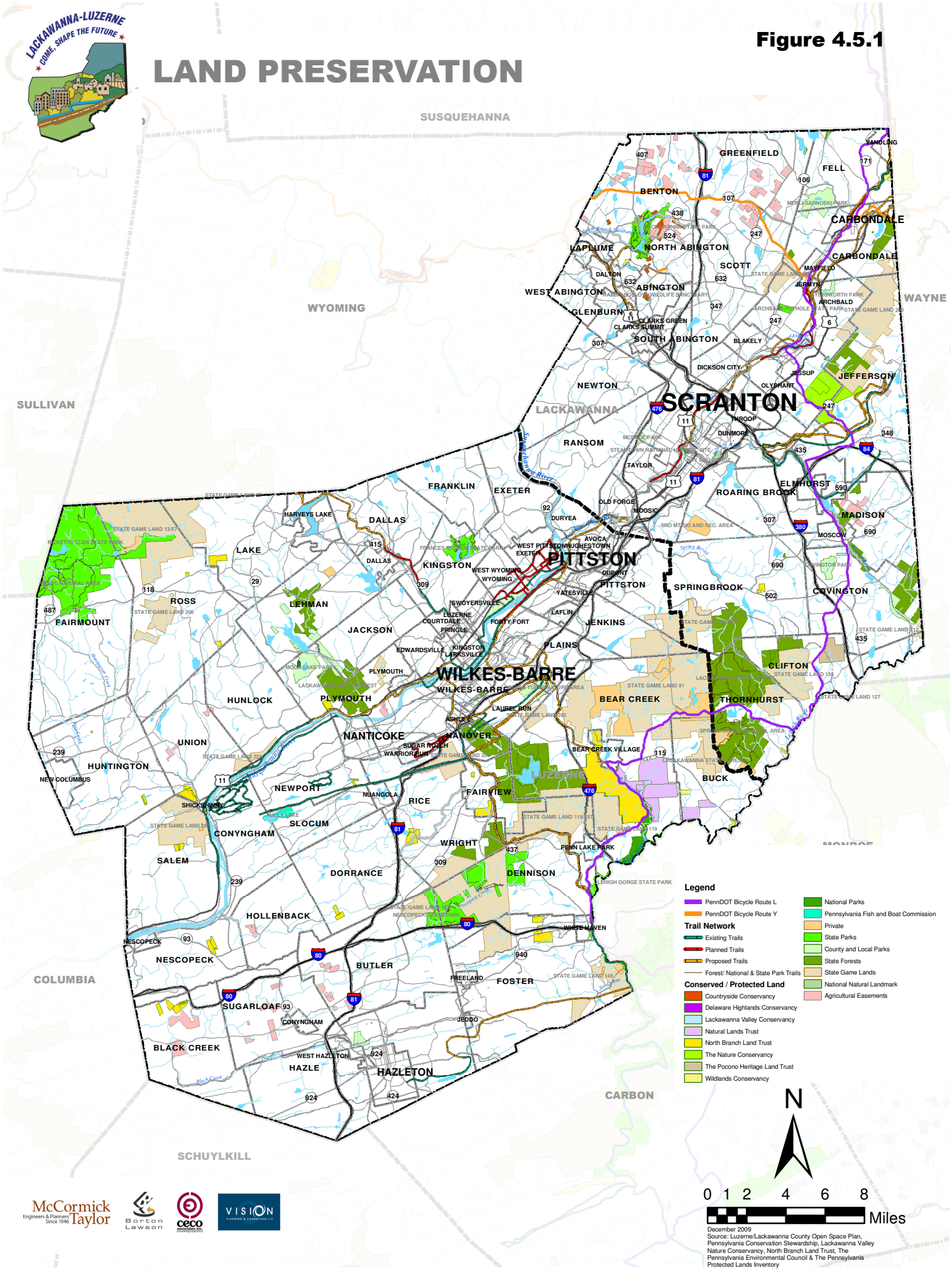
Heritage areas are distinct geographic regions with identifiable natural, cultural, historical, and recreational resources that combine to tell a unique story about an area. Heritage Areas are recognized by the state and nation. The Pennsylvania Heritage Parks Program oversees 11 heritage area parks statewide, two of which are in the two-county area. An approximate 2,900 square miles that cover portions of Lackawanna, Luzerne, and Susquehanna Counties are designated as Lackawanna National Heritage Valley, including the 40-mile-long Lackawanna River Heritage Trail. The second heritage area is the Delaware and Lehigh Canal State Heritage Park Corridor, which stretches 180 miles across Bucks, Carbon, Lehigh, Luzerne, and Northampton counties.

State Game Lands

Within the two-county area, the Pennsylvania State Game Commission manages 15 individual state game lands totaling over 60,000 acres of land. As shown in ***Table 4.5.2***, Luzerne County contains ten state game lands, totaling about 49,000 acres, and Lackawanna County contains five state game lands, totaling 15,500 acres. Amenities include hunting, fishing, trapping, hiking, bird watching, and snowmobiling.

LAND PRESERVATION

Figure 4.5.1



December 2009
Source: Luzerne/Lackawanna County Open Space Plan, Pennsylvania Conservation Stewardship, Lackawanna Valley Nature Conservancy, North Branch Land Trust, The Pennsylvania Environmental Council & The Pennsylvania Protected Lands Inventory

Table 4.5.2
State Game Lands in the Two-County Area

LACKAWANNA COUNTY		*LUZERNE COUNTY*	
	Acres		Acres
Game Land 91	2,220	Game Land 57	8,319
Game Land 135	3,430	Game Land 91	14,459
Game Land 300	5,709	Game Land 119	7,964
Game Land 307	1,053	Game Land 149	1,989
Game Land 312	190	Game Land 187	7,382
		Game Land 206	1,524
		Game Land 207	2,073
		Game Land 224	342
		Game Land 260	3,116
		Game Land 292	624
Subtotal	12,602	Subtotal	47,792
TOTAL			**60,394**

County Parks

Lackawanna County maintains and operates four parks. The largest county park is McDade Park, a 126-acre closed surface mine site converted to recreation and open space, located in the City of Scranton and Taylor Borough. Covington Park is in the southeastern section of the county and is being developed. Merli-Sarnoski Park is to the north near Carbondale, and Aylesworth Park is located in Archbald Borough. In addition, the 140-acre Montage Ski and Recreation Area, formerly owned by Lackawanna County, is now privately owned.

Three parks are maintained by Luzerne County. Moon Lake Park encompasses 600 acres of fields and forests with adjoining open space lands and has a 68-acre lake. Seven Tubs Natural Area is a 532-acre park that has a unique rock formation. The park is located to the southeast of Wilkes-Barre. Located in Forty Fort is the J. Charles Fields (Luzerne County Sports Complex), which includes a variety of active recreation facilities, comprising 30 acres.

Luzerne County is studying and designing an area known as the West Side Parks as an urban regional park along the west bank of the Susquehanna River. This regional park area is comprised of the riverside area of Kirby Park, Nesbitt Park, and the proposed new Riverbend Park. These three (3) parks form a contiguous area Wilkes-Barre City and Kingston Borough and are owned by Wilkes-Barre City and the Luzerne County through the Luzerne County Flood Protection Authority. The concept for the West Side Parks is to provide active and passive recreational opportunities within the overall objective of open space preservation, flood plain management and wetland protection. The design process is at the stage of getting site development drawings through a Pennsylvania DCNR grant.

Table 4.5.3 lists the seven county parks and recreational facilities located in the study area.

Table 4.5.3
County Parks in the Two-County Area

ACKAWANNA COUNTY		*LUZERNE COUNTY*	
Aylesworth Park	Archbald Borough	Luzerne County Sports Complex	Forty-Fort Borough
Covington Park	Covington Township	Moon Lake Park	Plymouth Township
McDade Park	Scranton City and Taylor Borough	Seven Tubs Natural Area	Wilkes-Barre Township, Laurel Run Borough and Plains Township
Merli-Sarnoski Park	Fell Township		

Open Space

As of 2009, nearly 850,000 acres of the two-county area was open space; roughly 280,000 acres of these lands were in Lackawanna County and 567,000 acres in Luzerne County. A little over 13 percent of these lands, or approximately 110,000 acres, consist of public and private conservation areas. Local land conservancies, including the Lackawanna Valley Conservancy, Countryside Conservancy, North Branch Land Trust, Wildlands Conservancy, along with County Conservation Districts in both counties, are actively working with local property owners to secure property easements aimed at protecting and preserving land from development.

According to the 2004 *Open Space, Greenways, and Outdoor Recreation Plan*, both Luzerne and Lackawanna Counties actively participate in the Pennsylvania Agricultural Conservation Easement Purchase Program. Since its inception in 1991, and its first easement purchase in 1994, the Lackawanna County Agricultural Land Preservation Program has purchased the development rights for 44 parcels of farmland, ensuring that these lands will remain undeveloped and continue to be used for agriculture. As of December 2009, 3,890 acres had been preserved through this program. Luzerne County's Agricultural Preservation Board has preserved 22 farms totaling 2,262 acres in agriculture easements.

Greenways and Trails

The development of greenways and trails requires a regional effort among local trail groups, various levels of government and their respective agencies, conservancies, land trusts, and many others. Rails-to-Trails Conservancy is a major supporter of this effort, especially in the promotion of converting former rail lines into a nationwide network of public trails ***Table 4.5.4*** provides an inventory of trails throughout the two counties.

The Lackawanna Greenway, Lackawanna River Heritage Trail (LRHT) Feasibility Study, and the CNJ Trail Extension Master Site Plan are being developed by The Lackawanna Heritage Valley Authority. These efforts accomplish the following tasks:

- Inventory and assess the cultural, historic, and natural resources of the Lackawanna Greenway;
- Examine the improved section of the LRHT to determine a maintenance plan and future enhancements;
- Study each undeveloped section of the LRHT and propose trail routes, assess acquisition issues, and prepare cost estimates;
- Identify spur trails in the Lackawanna Greenway for possible connection to the LRHT;
- Identify potential interpretive trails such as nature trails and historic sites;
- Outline an action plan for the immediate implementation of the study's recommendations.

Table 4.5.4
County Trails in the Two-County Area
Source: Bi-County Open Space, Greenways, and Outdoor Recreation Master Plan

TWO-COUNTY AREA		
Trail	**Location**	**Acres**
Countryside Trail	Abington	6 Miles
Ashley Planes Heritage Park	Ashley Borough and Hanover Township	*In Development*
Back Mountain Trail	Kingston Township	5 Miles
Black Diamond Trail	White Haven/Wilkes-Barre Twp.	16 Miles
City of Wilkes-Barre Trail/Greenway System	Wilkes-Barre	*In Development*
Countryside Conservancy Trolley Trail	Scranton/Lake Winola/Montrose	*In Development*
D&H Rail Trails	Fell Twp./Vandling	32 Mile
Escarpment Trail	Mocanaqua to Nanticoke	8 miles
Greater Kingston Area Trail/Greenway	Edwardsville/Forty Fort/Larksville/ Luzerne/Kingston/Swoyersville	*In Development*
Greater Hazleton Rails to Trails	Hazleton/Ashmore area	4 Miles
Lackawanna River Heritage Trail	Lackawanna River	*In Development**
Lehigh Gorge Trail	WhiteHaven Borough and Foster Township	20 Miles
Luzerne County Levee Trail System	Hanover/Wilkes-Barre/Kingston/Forty-Fort	12 Miles
Luzerne County National Recreation Trail	Wilkes-Barre City to Duryea Borough	*Segments Open*
Mocanaqua Loop Trail	Conyngham Township	9 Miles
O&W Rail Trail	Fell Township/Vandling	13 Miles
Penobscot Ridge Mountain Bike Trail	Conyngham Township to Plains Township	2 Miles
Route L Spur Bike Trail	White Haven/Wilkes-Barre Twp.	22 Miles
Sugar Notch Trail	Sugar Notch Borough to Hanover Twp.	*In Development*
Susquehanna Warrior Trail	Salem Twp. to Larksville Borough	18.5 Miles
Wapwallopen Creek Greenway/Trail	Wapwallopen Creek/Mountain Top/Crestwood Industrial Park	*In Development*
West Side Trail	Exeter/Wyoming/West Wyoming/West Pittston Boroughs	*Segments Open*

*The Lackawanna River Trail includes two completed segments in Archbald, Blakely and Jessup Boroughs and in the City of Scranton and Taylor Borough. Other segments are in construction and/or development.

4.6 Historic & Cultural Resources Profile

Historic Settlement Patterns

The two-county area has developed with fairly dense residential, commercial, and industrial uses in and around its 6 cities and 53 boroughs. Many of these municipalities formed on or near the Susquehanna and Lackawanna Rivers, including the counties' largest urban centers, Scranton and Wilkes-Barre. Historically, land was predominately in agricultural and mining uses and the counties' 57 townships had minimal development and large areas of agricultural lands.

Colonial Period

Early European settlement in both counties began along the banks of the Susquehanna River and its tributary, the Lackawanna River, during the late seventeenth century. The narrow crescent-shaped depression situated between mountain ranges is referred to as the Wyoming Valley in Luzerne County and the Lackawanna Valley in Lackawanna County. Finding relatively flat and fertile land, Connecticut colonists escaping the high costs of New England farmland saw great potential. The first settlement in what Connecticut designated as Westmoreland County was Wilkes-Barre in 1769.

This same territory granted to Connecticut Governor John Winthrop Jr. by King Charles II of England in 1662 was also granted to William Penn in 1681 in the creation of the Pennsylvania Colony. Jurisdiction disputes soon erupted and quickly turned to violence between the two colonies. Stability in the region would not be reached until after the Revolutionary War. The newly-formed federal government was asked to resolve the jurisdictional dispute. With the Decree of Trenton (December 30, 1782), government control over Westmoreland County was determined as that of Pennsylvania. In 1786 the county was renamed Luzerne County, Pennsylvania, named after the Chevalier de la Lucerne the French minister to the United States during the latter stages of the Revolutionary war.

Over the next sixty years, new counties within Pennsylvania began to secede, forming Bradford, Susquehanna, and Wyoming Counties, drastically changing both the size and boundaries of Luzerne County. As the Susquehanna River was still viewed as a treacherous waterway and with mountains on all sides, Luzerne County and its Wyoming Valley remained rural until the early 1830s.

Early Immigration and Settlement

The richness of the Lackawanna and Wyoming Valleys in anthracite coal and iron ore deposits combined with the completion of the Commonwealth's canal network resulted in the beginning of the mining industry inthe region by the 1830s. The boom of industries brought large numbers of workers and their families to Luzerne County as a result. One of the largest coal fields discovered however, was not within the Wyoming Valley, but rather at the southern edge of the county. This finding in 1818 soon turned the rest-stop village of Hazleton into a thriving city in only two decades.

The Wurtz Brothers were early pioneers in the region, coming to what is now Carbondale from Philadelphia in 1814 and opening a coal mine. Carbondale was the first city incorporated in the anthracite region. The number of European immigrants relocating to major centers of employment including, the cities of Hazleton, Nanticoke, Wilkes-Barre, Pittston, Scranton, and Carbondale, became even larger after the installation of rail service in the 1840s. Before 1850, European immigrants were typically young men who left their families in the old country in pursuit of mining work.

Formation of Lackawanna County

By the mid-nineteenth century, Luzerne County's fastest growing city was Scranton. With its success however, came great pressure for the city to move its municipal services out of Wilkes-Barre and to establish government facilities of its own through the formation of a new county. Having a rich amount of anthracite coal along the Lackawanna River Valley, public officials in Wilkes-Barre were reluctant to approve the secession. On August 13, 1878, after a nearly 40-year power struggle, new statewide voting policies were enacted that enabled the citizens of the Lackawanna Valley to create Lackawanna County through an election. Lackawanna County thus became Pennsylvania's youngest of 67 counties.

Industry's Peak

As anthracite coal fueled the nation's industrial revolution, the two-county area established itself as a major supplier. While growth began in Wilkes-Barre, Kingston, Nanticoke, Plymouth, Pittston, Hazleton, Scranton, and Carbondale, outlying towns and villages now spread throughout the region. Smaller villages privately developed and operated by the mining companies, referred to as "patch towns" or "company towns", were also established in proximity to coal mines.

After a sustained decade of immigration, predominately of young males, a surge in female immigrants followed in the 1850s. New types of labor were introduced into the work force, a result that New York and Philadelphia-based factory owners quickly noticed. Soon dozens of mills and factories in textiles and tobacco began opening along the Susquehanna and Lackawanna Rivers, as well as in Hazleton. The rich mixture of nationalities and rising population provided both counties with a notable cultural heritage that is still very much part of life in the two counties. Many of the region's institutions of higher learning were formed in the latter half of the nineteenth century. By the late 1870s, Scranton was the major city of the region, and in the 1880s, it produced the nation's first electric street car system.

Twentieth Century

Economic success continued into the beginning of the twentieth century. By the 1930s, however, labor strikes, the exploitation of oil discoveries, and the decline of local steelmaking during the Depression, took a large toll on the two counties' economy. Local industrial production increased during World War II, although this trend was short-lived. As the driving forces of the two-county area's economy further ebbed in the 1950s, residential and retail development continued in part due to the popularity of the automobile. New development was now occurring outside of the region's valleys and into its rural townships. Improvements to the transportation system, including completion of the interstate system, furthered this pattern of dispersion of population.

Figure 4.6.1 illustrates the locations of National Historic Landmarks, National Register Eligible sites, and National Register Listed sites in the two-county area. These resources are listed in ***Table 4.6.1***.

HISTORIC FEATURES

Figure 4.6.1

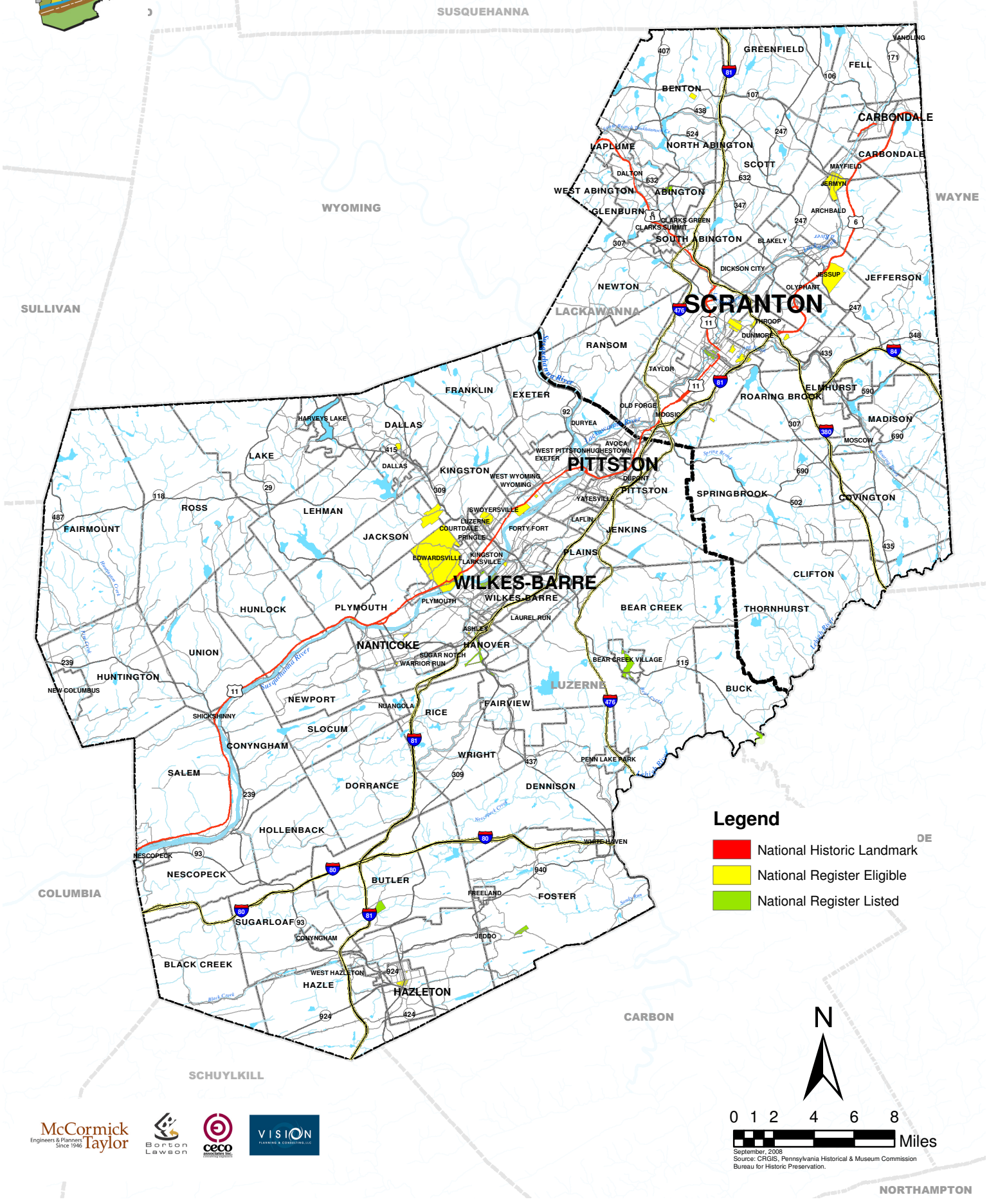


Table 4.6.1 Historic Properties and Districts as of March 23, 2011		
Historical Property Name	**Municipality**	**County**
National Register Eligible		
Waverly Community House	Abington	Lackawanna
Francis Cawley Dam	Archbald	Lackawanna
Conklin Farm	Benton	Lackawanna
Automoble Service Station	Carbondale	Lackawanna
Carbondale U.S. Post Office	Carbondale	Lackawanna
Carbondale YMCA	Carbondale	Lackawanna
Coggins Property	Carbondale	Lackawanna
Drift Mine Entrance	Carbondale	Lackawanna
Dzielak Property	Carbondale	Lackawanna
Evancho, Robert	Carbondale	Lackawanna
First United Methodist Church	Carbondale	Lackawanna
Gentex Corporation	Carbondale	Lackawanna
Hart Property	Carbondale	Lackawanna
Locus 43	Carbondale	Lackawanna
Marci Property	Carbondale	Lackawanna
Miners & Merchants Bank Building	Carbondale	Lackawanna
No. 3 Shaft (Locus 83)	Carbondale	Lackawanna
Skorira Property	Carbondale	Lackawanna
Trinity Episcopal Church	Carbondale	Lackawanna
Villa Street Church/Store	Carbondale	Lackawanna
Clarks Green Historic District	Clarks Green	Lackawanna
Frischkorn House/Moffat Estate	Covington	Lackawanna
Dalton Historic District	Dalton	Lackawanna
Dunmore Cemetery	Dunmore	Lackawanna
Dunmore Reservoir No. 1	Dunmore	Lackawanna
Green Ridge and Sanderson Historic District	Dunmore	Lackawanna
Pennsylvania Oral School for Deaf Mutes	Dunmore	Lackawanna
Temple of Israel	Dunmore	Lackawanna
Jermyn Borough Historic District	Jermyn	Lackawanna
Dolph-Sunnyside Industrial District	Jessup	Lackawanna
Loftus, William, House	Jessup	Lackawanna
Lackawanna Valley Railroad, Laurel Line	Moosic	Lackawanna
D.L.&W. Railroad Station & Freight House	Moscow	Lackawanna
Smith's Pond & Bridge Complex	Moscow	Lackawanna
Newton Ransom School	Newton	Lackawanna
Olyphant Borough Hall	Olyphant	Lackawanna
Olyphant Elementary School	Olyphant	Lackawanna
Accounting House	Scranton	Lackawanna
Casey Parkway	Scranton	Lackawanna
Catlin, George H., House	Scranton	Lackawanna
Central High School	Scranton	Lackawanna
Clark Property	Scranton	Lackawanna

Table 4.6.1 Historic Properties and Districts continued		
Historical Property Name	**Municipality**	**County**
National Register Eligible		
D.L.&W. Railroad Line	Scranton	Lackawanna
Delaware, Lackawanna & Western Arch	Scranton	Lackawanna
District Reservoir No. 5	Scranton	Lackawanna
Eisner & Sons Inc.	Scranton	Lackawanna
Elson Company	Scranton	Lackawanna
Fulton, Robert, School	Scranton	Lackawanna
Goldsmith Bros. Inc.	Scranton	Lackawanna
Green Ridge and Sanderson Historic District	Scranton	Lackawanna
Green Ridge Branch Library	Scranton	Lackawanna
Hadden Craftsmen Building	Scranton	Lackawanna
Harriet Beecher Stowe School	Scranton	Lackawanna
Hill Historic District	Scranton	Lackawanna
Hobart Company	Scranton	Lackawanna
Horowitz, B. & Company	Scranton	Lackawanna
International Correspondence Schools	Scranton	Lackawanna
James Madison School	Scranton	Lackawanna
Lackawanna County Prison	Scranton	Lackawanna
Lackawanna Steam Laundry (Grass-Grossinger Building)	Scranton	Lackawanna
Lackawanna Valley Railroad, Laurel Line	Scranton	Lackawanna
Marine Corps League Museum	Scranton	Lackawanna
Marshall, John, Elementary School	Scranton	Lackawanna
Mercy Hospital School of Nursing	Scranton	Lackawanna
Mertz Hardware	Scranton	Lackawanna
Miller, T.M., Building	Scranton	Lackawanna
N.Y., O&W Railroad	Scranton	Lackawanna
Nay Aug Park	Scranton	Lackawanna
Niagara/Liberty Hose Company	Scranton	Lackawanna
North Scranton Bank & Trust	Scranton	Lackawanna
Peck, F.L., House	Scranton	Lackawanna
Pennsylvania Oral School for Deaf Mutes	Scranton	Lackawanna
Saint Lucy's Church	Scranton	Lackawanna
Sanderson Ave. Bridge	Scranton	Lackawanna
Sanderson Avenue Historic District	Scranton	Lackawanna
Scranton Book Center	Scranton	Lackawanna
Scranton Electric Building	Scranton	Lackawanna
Scranton Estate	Scranton	Lackawanna
Scranton Lace Curtain Company	Scranton	Lackawanna
Scranton Life Building	Scranton	Lackawanna
Scranton Post Office	Scranton	Lackawanna
Scranton Railway Company (Trolley)	Scranton	Lackawanna
Scranton School District Administration Building	Scranton	Lackawanna
Scranton Technical High School	Scranton	Lackawanna
Scranton Tribune Building	Scranton	Lackawanna

Table 4.6.1 Historic Properties and Districts continued		
Historical Property Name	**Municipality**	**County**
National Register Eligible		
Warren Home	Scranton	Lackawanna
Carbon Bridge No. 196.91	Taylor	Lackawanna
Borough Hall	Vandling	Lackawanna
Ashley Street School	Ashley	Luzerne
Engine House (Part of Huber Colliery Complex)	Ashley	Luzerne
Huber Coal Breaker	Ashley	Luzerne
Rudrauff, Peter House	Ashley	Luzerne
Lewis, Albert, House	Bear Creek Village	Luzerne
Mountain Grove School	Black Creek	Luzerne
Bridge No. 54715	Butler	Luzerne
Misericordia University	Dallas	Luzerne
Frantz, Joseph, House	Dallas	Luzerne
Garrahan, Thomas A., House	Dallas	Luzerne
Maslow Property	Dallas	Luzerne
Bridge 178.C	Duryea	Luzerne
School	Duryea	Luzerne
Central Railroad of New Jersey	Fairview	Luzerne
Saint Catherine's Church	Fairview	Luzerne
Forty Fort Borough Building	Forty Fort	Luzerne
Wilkes-Barre Wyoming Valley Airport	Forty Fort	Luzerne
Bridge No. 55501	Foster	Luzerne
Mining & Mechanical Institute	Foster	Luzerne
Concrete City	Hanover	Luzerne
Dundee Shaft	Hanover	Luzerne
Hanover Green Meeting House	Hanover	Luzerne
Lee Park Firehouse	Hanover	Luzerne
Loomis Colliery Superintendent Duplexes	Hanover	Luzerne
Loomis Park	Hanover	Luzerne
Newtown Firehouse	Hanover	Luzerne
Altamont Hotel	Hazleton	Luzerne
American Bank and Trust Company	Hazleton	Luzerne
American Legion Post No. 76	Hazleton	Luzerne
Church Street Historic District	Hazleton	Luzerne
First Presbyterian Church	Hazleton	Luzerne
Gerhardt, Jacob, Inc. Property	Hazleton	Luzerne
Grebey, H.F., School	Hazleton	Luzerne
Harman, D.A., School	Hazleton	Luzerne
Hazleton City Hall	Hazleton	Luzerne
Hazleton High School	Hazleton	Luzerne
Hazleton National Bank Building	Hazleton	Luzerne
Hazleton U.S. Post Office	Hazleton	Luzerne
Liebowitz, S. & Son Shirt Factory	Hazleton	Luzerne
Pioneer Fire Company No. 1	Hazleton	Luzerne

Table 4.6.1 Historic Properties and Districts continued		
Historical Property Name	**Municipality**	**County**
National Register Eligible		
Wagner Brothers Hardware Co, Inc.	Hazleton	Luzerne
Bridge No. 45802	Hollenback	Luzerne
Retreat State Correctional Inst. Entrance Bridge	Hunlock	Luzerne
Bridge No. 16002	Huntington	Luzerne
Bridge No. 16006	Huntington	Luzerne
Bridge No. 16007	Huntington	Luzerne
Bridge No. 46016	Huntington	Luzerne
Bridge No. 46018	Huntington	Luzerne
Hillside Farms	Jackson	Luzerne
Harter, Harry J., Dairy	Kingston	Luzerne
Hillside Farms	Kingston	Luzerne
Hillside Water Treatment Plant	Kingston	Luzerne
Larksville Historic District	Larksville	Luzerne
Loree Colliery	Larksville	Luzerne
Bridge No. 46003	Nescopeck	Luzerne
Retreat State Correctional Inst. Entrance Bridge	Newport	Luzerne
St. Stanislaus Institute	Newport	Luzerne
Borr & Casey Building	Pittston	Luzerne
Gabriel House	Pittston	Luzerne
Lincoln School	Pittston	Luzerne
Lance Colliery Power Plant	Plymouth	Luzerne
Plymouth Twp Canal Locks	Plymouth	Luzerne
Saint Vincent De Paul Church Complex	Plymouth	Luzerne
West Nanticoke Guard Lock, North Branch Pa. Canal	Plymouth	Luzerne
Bridge No. 17009	Ross	Luzerne
Ross Township Bridge	Ross	Luzerne
Bridge No. 57310, Nescopeck Creek Bridge	Sugarloaf	Luzerne
Harry E. Breaker	Swoyersville	Luzerne
Harrison, Joseph Henderson, House	Union	Luzerne
Encke, E.A., Elementary School	West Hazleton	Luzerne
United Charities Home	West Hazleton	Luzerne
Hitchner Biscuit Company Building	West Pittston	Luzerne
Newry, The	West Pittston	Luzerne
Showmaker, Samuel, House	West Wyoming	Luzerne
West Wyoming Borough Hall	West Wyoming	Luzerne
White Haven Public School	White Haven	Luzerne
Adp Center	Wilkes Barre	Luzerne
Dodson Elementary School	Wilkes Barre	Luzerne
Hollenback Cemetery	Wilkes Barre	Luzerne
International Ladies Garment Workers Building	Wilkes Barre	Luzerne
Jones, David C.	Wilkes Barre	Luzerne
Lehigh & Wilkes-Barre Coal Company Building	Wilkes Barre	Luzerne
Lehigh Valley Railroad: Wilkes-Barre Section	Wilkes Barre	Luzerne

Table 4.6.1 Historic Properties and Districts continued		
Historical Property Name	**Municipality**	**County**
National Register Eligible		
Memorial Presbyterian Church	Wilkes Barre	Luzerne
Palmer School	Wilkes Barre	Luzerne
Silk Mill	Wilkes Barre	Luzerne
Soldiers & Sailors Memorial School	Wilkes Barre	Luzerne
Vulcan Iron Works	Wilkes Barre	Luzerne
10th St. Elementary School	Wyoming	Luzerne
First National Bank of Wyoming	Wyoming	Luzerne
Morreale's Auto Sales & Service	Wyoming	Luzerne
Wilkes-Barre Wyoming Valley Airport	Wyoming	Luzerne
Wyoming Borough Hall	Wyoming	Luzerne
National Register Listed		
Waverly Historic District (Act 167)	Abington	Lackawanna
Carbondale City Hall & Courthouse	Carbondale	Lackawanna
Ad-Lin Building	Scranton	Lackawanna
Albright Memorial Building	Scranton	Lackawanna
Central Railroad of New Jersey Freight Station	Scranton	Lackawanna
Century Club of Scranton	Scranton	Lackawanna
Delaware Lackawanna & Western Railroad Station	Scranton	Lackawanna
Delaware, Lackawanna & Western Railroad Yard	Scranton	Lackawanna
Dickson Works	Scranton	Lackawanna
Dime Bank & Trust Company Building	Scranton	Lackawanna
Finch Building	Scranton	Lackawanna
First Church of Christ Scientist	Scranton	Lackawanna
Florence Apartments	Scranton	Lackawanna
Grand Army of the Republic Building	Scranton	Lackawanna
Lackawanna Ave. Commercial Historic District	Scranton	Lackawanna
Lackawanna County Courthouse & John Mitchell Monument	Scranton	Lackawanna
Lackawanna Iron & Coal Company Furnaces	Scranton	Lackawanna
Masonic Temple	Scranton	Lackawanna
Municipal Building & Central Fire Station	Scranton	Lackawanna
North Scranton Junior High School	Scranton	Lackawanna
Saint Peter's Cathedral Complex	Scranton	Lackawanna
Scranton Armory	Scranton	Lackawanna
Silkman House	Scranton	Lackawanna
South Scranton Catholic High School	Scranton	Lackawanna
Steamtown National Historic Site	Scranton	Lackawanna
Tripp Family Homestead	Scranton	Lackawanna
Ashley Planes, The	Ashley	Luzerne
Bear Creek Village Historic District	Bear Creek Village	Luzerne
Stoddartsville Historic District	Buck	Luzerne
Table 4.6.1 Historic Properties and Districts continued		

Historical Property Name	Municipality	County
National Register Listed		
Luzerne County Fresh Air Camp	Butler	Luzerne
Ashley Planes, The	Fairview	Luzerne
Denison House	Forty Fort	Luzerne
Forty Fort Meeting House	Forty Fort	Luzerne
Eckley Historic District	Foster	Luzerne
Ashley Planes, The	Hanover	Luzerne
Markle Bank & Trust Company Building	Hazleton	Luzerne
Pardee, Israel Platt, Mansion	Hazleton	Luzerne
Saint Gabriel's Catholic Parish Complex	Hazleton	Luzerne
Wyoming Seminary	Kingston	Luzerne
Evans, Benjamin, House	Nescopeck	Luzerne
Catlin Hall, Wilkes College	Wilkes-Barre	Luzerne
Central Railroad of New Jersey Station	Wilkes-Barre	Luzerne
F.M. Kirby Center for the Performing Arts	Wilkes-Barre	Luzerne
Franklin Club	Wilkes-Barre	Luzerne
Guthrie, George W. School	Wilkes-Barre	Luzerne
Kingston Armory	Wilkes-Barre	Luzerne
Luzerne County Courthouse	Wilkes-Barre	Luzerne
McClintock Hall	Wilkes-Barre	Luzerne
River Street Historic District	Wilkes-Barre	Luzerne
Saint John the Evangelist Roman Catholic Church & School	Wilkes-Barre	Luzerne
Stegmaier Brewery	Wilkes-Barre	Luzerne
Weiss Hall	Wilkes-Barre	Luzerne
Luzerne Presbyterian Institute	Wyoming	Luzerne
Swetland Homestead	Wyoming	Luzerne
Wyoming Monument	Wyoming	Luzerne
National Historic Landmark		
Powderly, Terence V., House	Scranton	Lackawanna

4.7 Agricultural Resources Profile

In Lackawanna County, the highest concentration of agriculture is located to the west of Bald and Bell Mountains. The highest concentration of agricultural land in Luzerne County is along its western third, abutting the Columbia County line (***Figure 4.7.1***).

The Agricultural Land Cover and Cropland map (***Figure 4.7.2***) shows areas classified as prime farmland, as well as farmland of statewide importance.

While trends nationally, statewide, and regionally since the 1950s have included the dispersion of population from cities and towns into previously-rural areas, the number of farms and acreage in agriculture may not necessarily be in decline. For example, according to the U.S. Department of Agriculture, the number of farms in 2002 was higher than in 1997 for the country as a whole, for Pennsylvania, and for the two-county area (***Table 4.7.1***). Lackawanna County experienced an increase of around 21.4 percent in the number of farms during this five year period. Luzerne County experienced almost the same trend, with a 21.5 percent increase.

Table 4.7.1 Changes in the Number of Farms
United States, Pennsylvania and Bi-County Area
Source: Department of Agriculture; National Agricultural Statistics Service

Area	1997	2002	Change	Percent Change
United States	1,911,859	2,128,982	217,123	11.4%
Pennsylvania	45,457	58,105	12,648	27.8%
Bi-County Area	689	837	148	21.5%
Lackawanna County	238	289	51	21.4%
Luzerne County	451	548	97	21.5%

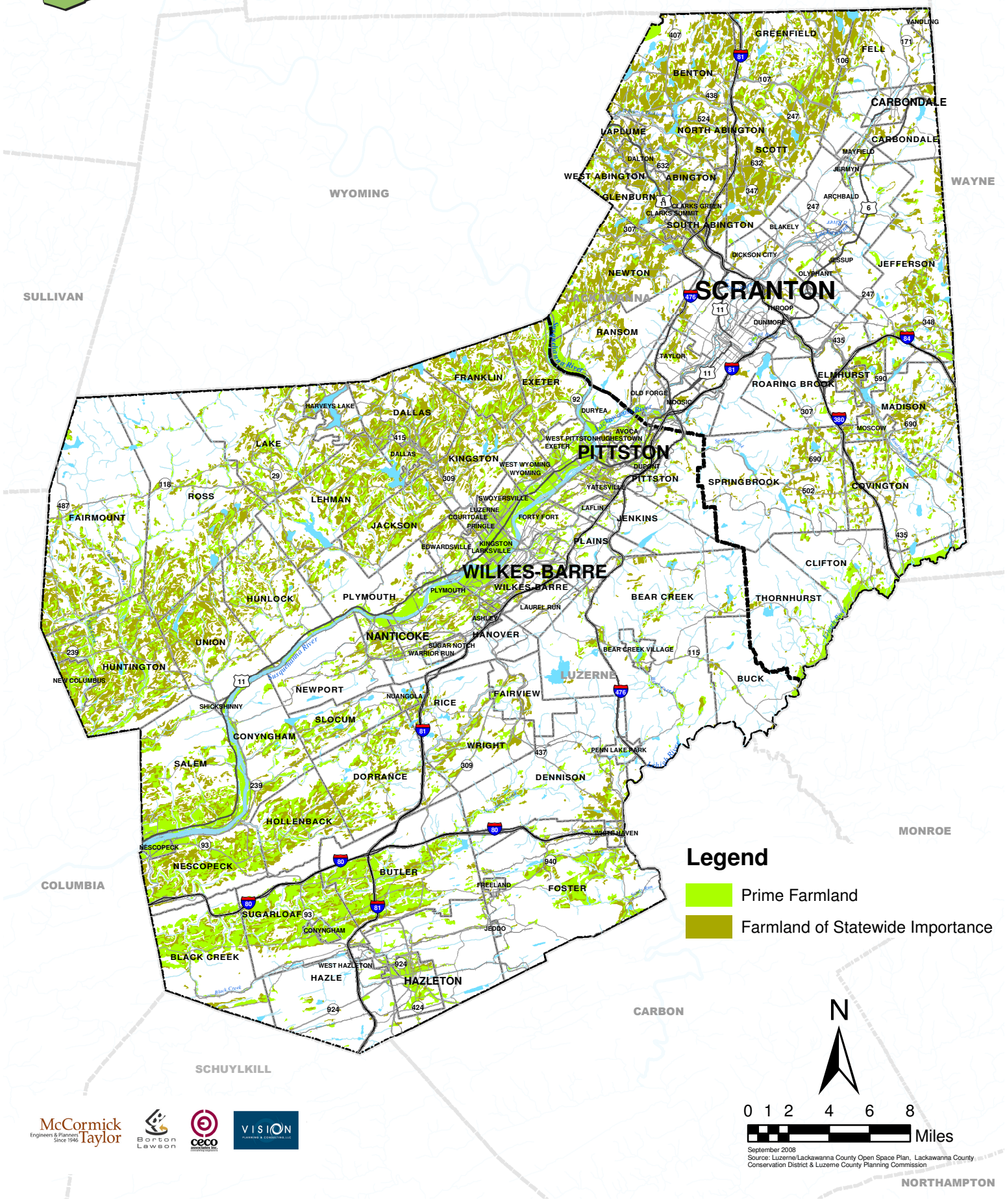
The two-county area also experienced an increase in the amount of acreage in agricultural lands between 1997 and 2002. While this increase nationwide was 0.7 percent, acreage in agricultural lands in Lackawanna County grew by more than 3,400 acres (11.6%) and by nearly 16,000 acres (27.7%) in Luzerne County (***Table 4.7.2***).

Table 4.7.2 Changes **in the Acres of Farmland**
United States, Pennsylvania and Bi-County Area,
Source: Department of Agriculture; National Agricultural Statistics Service

Area	1997	2002	Change	Percent Change
United States	931,795,255	938,279,056	6,483,801	0.7%
Pennsylvania	7,167,906	7,745,336	577,430	8.1%
Bi-County Area	86826	106147	19,321	22.3%
Lackawanna County	29509	32931	3,422	11.6%
Luzerne County	57317	73216	15,899	27.7%

AGRICULTURAL LANDS

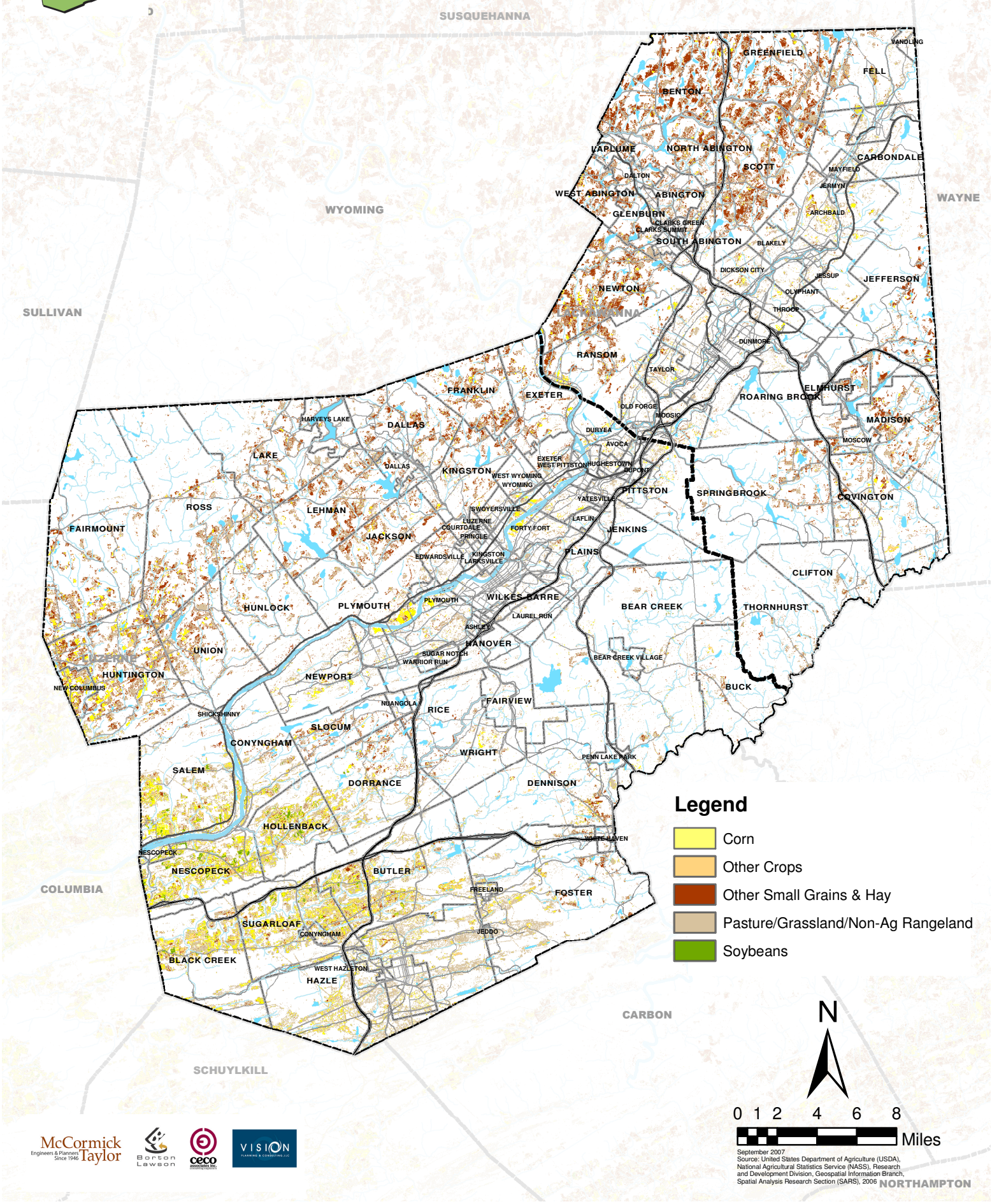
Figure 4.7.1



September 2008
Source: Luzerne/Lackawanna County Open Space Plan, Lackawanna County Conservation District & Luzerne County Planning Commission

AGRICULTURAL LAND COVER AND CROPLAND TYPES

Figure 4.7.2



September 2007
Source: United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS), Research and Development Division, Geospatial Information Branch, Spatial Analysis Research Section (SARS), 2006

4.8 Environmental Resources Profile

The historic pattern of development in the two-county area was strongly influenced by the natural characteristics of the region. Some areas of physical constraints, such as steep slopes, have generally been less likely to be subject to development. Other areas, such as floodplains and wetlands, were subject to development in the 19th century and into the 20th century, although by the late 20th century the risks represented by development in floodplains and wetlands were recognized by legislation at the federal (and the state and local) levels. Natural features, such as floodplains, wetlands and steep slopes, not only remain current constraints for development, but they are also sensitive natural features that can become the focus for conservation and preservation activities.

Peak employment in the two-county area was around the late 1910s when over 180,000 miners were employed in the anthracite mines. Mixed with manufacturing and lumber, industry grew during a period when there were no environmental protections in place. Over the course of the twentieth century, over-timbering, acid mine drainage, mine subsidence, and untreated wastewater flowing directly into the two counties' rivers and streams have left lasting pollution which continues to put the health of the natural environment and inhabitants at risk.

Several analysis maps (**Figures 4.8.1 though 4.8.7)** were prepared delineating these resources. This series of interrelated, interpretive maps has permitted the identification of areas suitable for preservation and/or conservation, and areas available for development.

Hydrology

The Susquehanna River is the major waterway that flows through the two-county area. The Susquehanna River, in its entirety, is the 16th largest river in the United States and is considered "Pennsylvania's River" for its importance as a source of drinking water, recreation, and hydroelectric power to millions of people in its watershed. The Lackawanna River merges with the Susquehanna to the north of Pittston. The City of Wilkes-Barre is situated primarily along the east side of the Susquehanna, although it does include a small land area (Kirby Park) on the west side of the Susquehanna. The City of Scranton lies along both sides of the Lackawanna River. The nearby mountains of Lackawanna and Luzerne Counties contain numerous second and third order tributary streams that flow into the glacial valleys and empty into the Susquehanna (***Table 4.8*** and ***Figure 4.8.1***).

HYDROLOGIC FEATURES

Figure 4.8.1

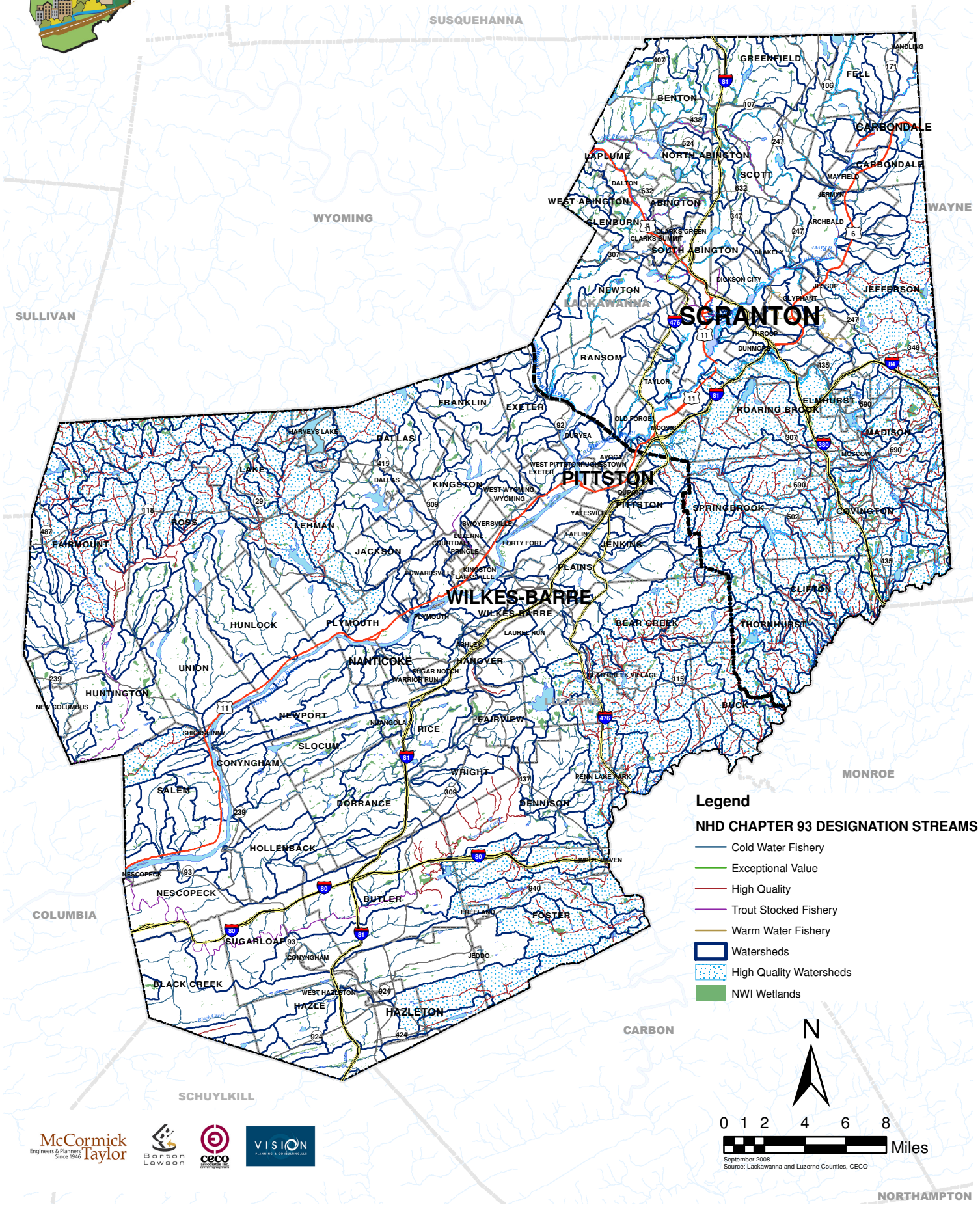


Table 4.8 Major Streams in the Two-County Area,
Source: Bi-County Open Space, Greenways & Outdoor Recreation Master Plan

LACKAWANNA COUNTY	*LUZERNE COUNTY*
Major Streams	**Major Streams**
Tunkhannock Creek	Pikes Creek
Leggetts Creek	Huntington Creek
Rush Brook	Pine Creek
Fall Brook	Bear Creek
Roaring Brook	Wapwallopen Creek/Little Wapwallopen Creek
Strafford Meadow Brook	Nescopeck Creek
Spring Brook	

The two counties are also characterized by many natural and man-made lakes situated along the mountaintops, ridges, and valleys. Many of the manmade lakes serve as reservoirs that are utilized as drinking water supplies for municipalities situated within the Wyoming and Lackawanna Valleys. Lakes and reservoirs located within the two-county area include Harveys Lake, Lackawanna Lake, Lake Silkworth, Moosic Lake, Crystal Lake (there are two Crystal Lakes – one in each county), Lake Scranton, Huntsville Reservoir, Elmhurst Reservoir, Waters Reservoir, Curtis Reservoir, Chapman Lake, Bear Lake, Eagle Lake, Big Bass Lake, Newton Lake, Lake Sheridan, Baylors Lake, and Nesbitt Reservoir. Lake Scranton is the main source of public water in the Scranton Pikes Creek/Ceasetown Dam area, providing a maximum of 33 million gallons of water per day.

Surface waters in the two county region provide many recreational opportunities. The numerous high quality and exceptional value streams and creeks in the region are destinations for fishermen who test their skills against the wild trout. Kayaking, rafting, and tubing can also be enjoyed where the streams and rivers are large enough. These are only a sample of the recreational opportunities that surface waters, including pools, lakes and dams, can provide.

Watersheds

Lackawanna and Luzerne Counties are located in both the Susquehanna River Basin (Susquehanna and Lackawanna Rivers -- eventually draining into the Chesapeake Bay), and the Delaware River Basin (Lehigh River and surrounding southeast portions of the study area). Each river basin is divided into watersheds and is then further divided into sub-watersheds. Each basin is monitored and regulated by the Pennsylvania Department of Environmental Protection (DEP) and the Susquehanna River Basin and Delaware River Basin Commissions, respectively.

Watersheds generally northwest of Nescopeck Mountain, Penobscot Mountain, Wilkes-Barre Mountain, and Moosic Mountain through both counties drain into the Susquehanna and Lackawanna Rivers. Southeast of these ranges, the watersheds drain into the Lehigh River; this forms the southeastern boundary of both counties and eventually drains into the Delaware River, near Allentown.

In consideration of the future for the two-county Area, water drainage patterns are critical in the analysis of stormwater runoff for protection of watersheds as well as in planning for sanitary sewers.

Regional Climate

The Upper/Middle Susquehanna Region has a moderate climate, lacking long periods of extreme hot or cold weather. A majority of the basin has a minimum temperature of 12 to 15 degrees Fahrenheit and a maximum temperature of 78 to 83 degrees Fahrenheit. Average annual precipitation for most of the basin ranges from 34 to 43 inches per year. Normal rainfall amounts are generally enough to support the vast agricultural lands of the region without irrigation. Almost half of the basin's annual precipitation falls during storms between May and September, the primary plant-growing season. The remainder precipitation, including snowmelt during the winter months, infiltrates the ground and recharges groundwater reserves.

Regional Water Use

In the Susquehanna River Basin, an estimated 500 million gallons of water are used every day. Public water supplies account for 200 million gallons a day, with losses resulting from lawn maintenance, car washing, evaporation from swimming pools, as well as leaks in water lines. Thermoelectric plants consume approximately 130 million gallons a day. At a consumption rate of 120 million gallons a day, agricultural operations are the fastest growing water use sector. In addition to the growing number of large animal feedlots, increasing amounts of water are used for irrigation as farmers try to improve the quality and productivity of their crops. Industry consumes about 30 million gallons a day. Hospitals, prisons, institutions, and golf courses account for a combined 60 million gallons of water used every day.

In the Upper/Middle Susquehanna Region, approximately 71 percent of water is used by utility and thermoelectric (power-generating) facilities. Industry uses approximately six percent, while mining, commercial facilities, and agriculture use a combined four percent.

Floodplains

Over the last few decades, Lackawanna and Luzerne Counties have experienced significant flood events that have resulted in lose of life and property. Most notable of these floods was "Agnes" which occurred in 1972, leaving the city of Wilkes-Barre in a disaster condition. Some of the flooding has occurred because communities have developed in the floodplain area, while other causes include poor management of stormwater, mining and agricultural activities.

Urban development in floodplains is now a highly regulated process that is guided by many ordinances and regulations. Two state laws assist with the responsibility of regulating flood plain development: The Pennsylvania Flood Plain Management Act of 1978 (Act 166) and the Pennsylvania Municipalities Planning Code. FEMA has prepared floodplain maps for most communities in Pennsylvania. These are used for floodplain management and regulation of development.

Since floodplains are natural flood controls, altering them can have negative effects. Construction activities can increase stormwater runoff, sedimentation and subsequent stream bank erosion resulting in increased flooding. Floodplains provide an important function during flood events to store flood waters and help protect the surrounding land areas outside the floodplain. Floodplains also allow stormwater to be absorbed, help reduce erosion, and provide habitat for plants and animals. It is because of these, and many other benefits, that they are closely regulated and protected from destruction.

The most extensive floodplains occur in lowland areas, where watercourse gradients are less and landscape profiles are wider.. Floodplains for the tributary creeks tend to be relatively narrow. Floodplain soils are generally found adjacent to the creek network. These soils historically have been eroded, transported, and deposited by floodwaters and generally indicate an area susceptible to flooding. The Hydrologic Features Map (***Figure 4.8.1***) illustrates the location of floodplains associated with the streams and watercourses in the area.

Other hydrologic characteristics contribute strongly to delineating areas that are available for development and those that are constrained for development. Of major concern are flood prone zones adjacent to bodies of water, and wetlands.

Wetlands

Wetlands are areas where water covers the soil or remains at or near the surface for an extended period of the year. These habitats provide a hydrologic link between land and water resources (surface water, groundwater, or both). Wetland types differ according to characteristics such as topography, climate, hydrology, water chemistry and vegetation.

Wetlands are found throughout Lackawanna and Luzerne Counties. Most are associated with streams and stream systems within the Susquehanna Basin. Other wetlands in the region are isolated in topographical depressions associated with glacial activity, mining or damming. Wetlands provide unique habitat to many species of plants and animals and also serve as natural filters to surface and groundwater supplies. Many wetlands in the region have the ability to eliminate contaminants such as nitrates and phosphorus as water flows through the wetland. The vegetation present in the wetland utilizes the excess waste, eliminating it from the water and reducing negative impacts to the environment. Wetlands also have the excellent ability to remove sediment from surface runoff. The vegetation plays a large role in reducing sediment as the sediment particles are captured and slowly removed as the water progresses through the wetland. These traits of wetlands have led some scientists to describe wetlands as “nature’s kidneys”.

State and Federal environmental resource agencies provide information on the region’s wetland habitats – including location, type and status – through the National Wetlands Inventory (NWI). The NWI classifies inland waters according to the amount and type of vegetation present: Open water (rivers and lakes); Emergent/herbaceous (marshes, wet meadows and fens); Scrub-shrub (swamps and bogs); Forested (swamps and bog).

A unique wetland feature in this region is represented by the glacier kettlehole bogs with a series of concentric rings of plant species around an open water pond. These include Potter Creek Bog in Madison Township, Lackawanna County and Dorrance Bog in Dorrance Township, Luzerne County.

Other unique natural features are the ephemeral/fluctuating or vernal pools that fill annually with precipitation, surface water, and/or rising groundwater but dry out through evaporation by late spring or summer. The Edgewood and Briggsville Vernal Pools in Luzerne County are two prime examples. These vernal pools also exist in the grooves between parallel rock outcrops on some ridge tops.

Wetlands provide a natural filter against pollutants and nutrients in stormwater. Many wetlands located in densely populated areas are filled and degraded by urban development. Although regulated by state and federal laws, local steps should be taken protect these wetland areas; allowing them to remain will help protect water quality, reduce flooding and provide habitat for many plants and animals.

Geology

Lackawanna and Luzerne Counties are located primarily within two physiographic provinces, the Appalachian Plateau Province and the Ridge and Valley Province. The Anthracite Valley Section of the Ridge and Valley Province extends through the middle of both counties and includes Lackawanna Valley and Wyoming Valley and the mountains on either side. This Anthracite Valley Section overlays the older geology in these valley areas and bordering mountains which contained the hard anthracite coal the region is famous for and was the mainstay of its economy throughout the 19th and early 20th century.

The region's geology is typically mapped and characterized based on a series of geologic formations (**Figure 4.8.2**). These formations determine soil and bedrock composition and are closely reflected by physical and topographic features such as mountains, valley and ridge tops.

The surface features of this region were modified extensively by the glaciers that covered this region during the Ice Age and ended approximately 12,000 years ago. These glaciers left rock and soil materials that vary in thickness and also created depressions that are now represent the numerous lakes, wetlands, or bogs found throughout the region. Nuangola Lake, Lily Lake, Bear Lake, Archbald Pothole (said to be the world's largest glacial pothole), and Moosic Lake are examples of these glaciated features. Many of these glaciated features (that are not heavily encroached upon by urbanizing development) represent unique ecological communities or wildlife habitats that deserve protection or conservation from future man-made disturbances.

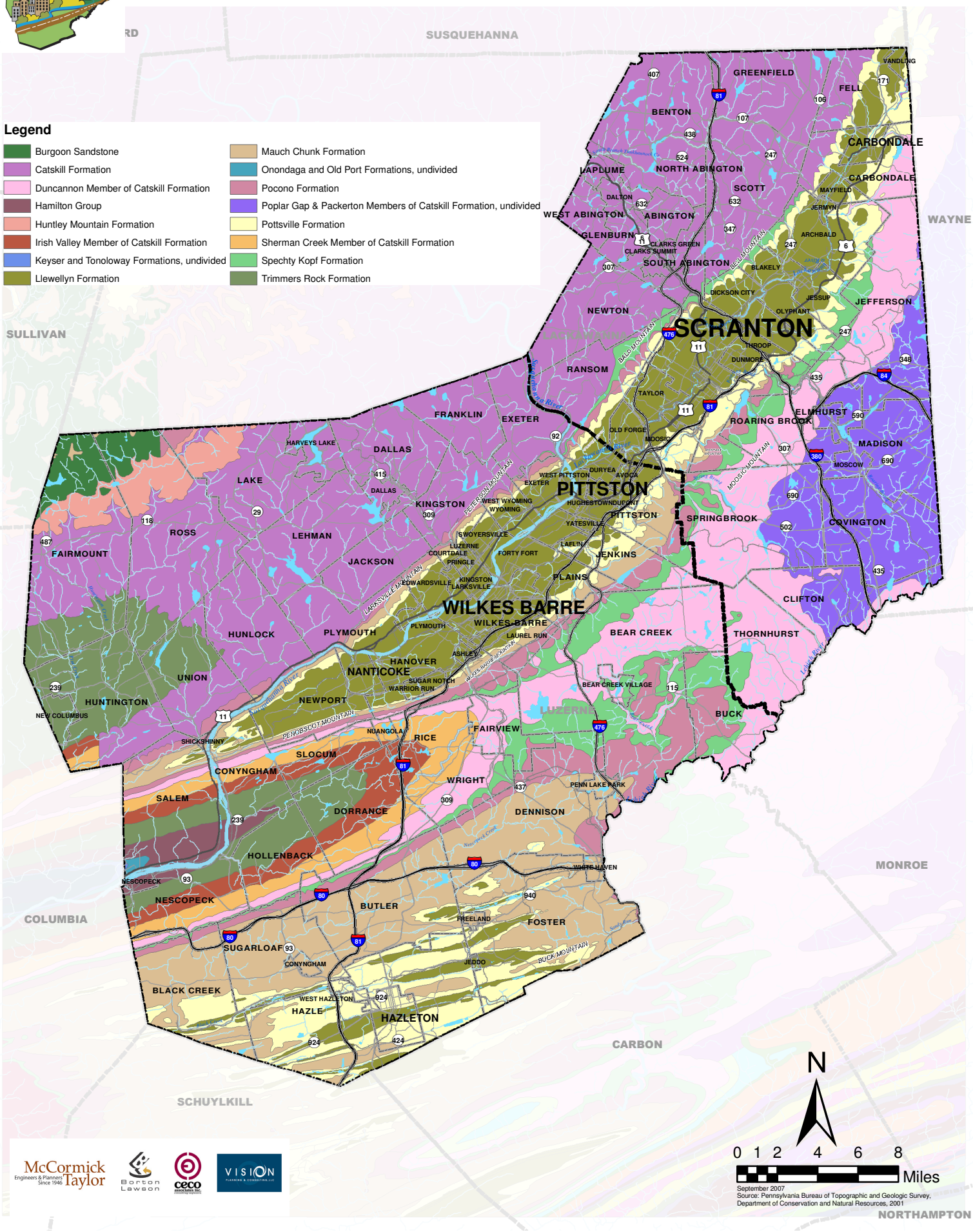
The landscape of both counties is dominated by major river valleys running southwest to northeast through the county and is bordered by a series of mountain ridges and upland areas on either side. The mountains that border these river valleys are significant, with elevations over 2,000 feet above sea level in certain areas (***Figure 4.8.3***). Distinctive ridgelines are visible for miles from the developed valley floor areas but have been marked by residential development taking advantage of panoramic views overlooking the expansive valleys below.

In Lackawanna County, the Moosic Mountains are the dominant feature east of the Lackawanna River, and Bald Mountain is the major mountain range west of the river. As noted in the interviews and public meetings conducted for this Plan, protecting ridge tops

and steep slopes from development was repeatedly expressed as a community interest because of the scenic and ecological value of these resources. In Luzerne County, the most notable mountains and ridge tops include Penobscot Mountain and Wilkes-Barre Mountain east of the Susquehanna River, Shickshinny Mountain, and Larksville Mountain west of the Susquehanna, Nescopeck Mountain in the southern portion of the county, and North Mountain near Ricketts Glen State Park in the northern portion of the county.

GEOLOGY

Figure 4.8.2



Burgoon Sandstone
Buff, medium-grained, crossbedded sandstone; includes shale and coal; in places, contains conglomerate at base; contains plant fossils; equivalent to Pocono Formation of Ridge and Valley province.

Catskill Formation
Grayish-red sandstone, siltstone, shale, and mudstone; locally conglomeratic; contains gray sandstone in upper part; lithologies arranged in fining-upward cycles; equivalent to the Hampshire Formation south of Pennsylvania.

Duncannon Member of Catskill Formation
Grayish-red sandstone, siltstone, and mudstone in fining-upward cycles; conglomerate occurs at base of some cycles.

Hamilton Group
Includes, in descending order, the Mahantango and Marcellus Formations.

Huntley Mountain Formation
Greenish-gray and light-olive-gray, flaggy, fine-grained sandstone, siltstone, and a few red shale interbeds; includes lower "Pocono" plus "Oswayo" of earlier workers. Forms transition between Catskill Formation and Burgoon Sandstone.

Irish Valley Member of Catskill Formation
Nonmarine, grayish-red siltstone and mudstone, and gray and grayish-red sandstone interbedded with minor, thin, light-olive-gray marine siltstone; arranged in fining-upward cycles. Lower part of member has conglomeratic sandstones.

Keyser and Tonoloway Formations, undivided
In descending order: Keyser Formation--medium-gray, crystalline to nodular, fossiliferous limestone; upper part laminated and mud cracked; not present east of Harrisburg; passes into lower Coeymans, Rondout, and Decker Formations in the east. Tonoloway Formation--medium-gray, laminated, mud-cracked limestone containing some medium-dark- or olive-gray shale interbeds; lower part passes into Wills Creek Formation east and south; passes into Bossardville and Poxono Island beds in the east.

Llewellyn Formation
Gray, fine- to coarse-grained sandstone, siltstone, shale, conglomerate, and numerous anthracite coals in repetitive sequences.

Mauch Chunk Formation
Grayish-red shale, siltstone, sandstone, and some conglomerate; some local nonred zones. Includes Loyalhanna Member (crossbedded, sandy limestone) at base in south-central and southwestern Pennsylvania; also includes Greenbrier Limestone Member, and Wymps Gap and Deer Valley Limestones, which are tongues of the Greenbrier. Along Allegheny Front from Blair County to Sullivan County, Loyalhanna Member is greenish-gray, calcareous, crossbedded sandstone.

Onondaga and Old Port Formations, undivided
Includes, in descending order, the Onondaga Formation, Ridgeley Member of Old Port Formation, and Shriver, Mandata, Corriganville, and New Creek Members of Old Port Formation, undivided.

Pocono Formation
Light-gray to buff or light-olive-gray, medium-grained, crossbedded sandstone and minor siltstone; commonly conglomeratic at base and in middle; medial conglomerate, where present, is used to divide into Mount Carbon and Beckville Members; equivalent to Burgoon Sandstone of Allegheny Plateau.

Poplar Gap and Packerton Members of Catskill Formation, undivided
Includes, in descending order, the Poplar Gap and Packerton Members of the Catskill Formation.

Pottsville Formation
Predominantly gray sandstone and conglomerate; also contains thin beds of shale, claystone, limestone, and coal; includes Olean and Sharon conglomerates of northwestern Pennsylvania; thin marine limestones present in Beaver, Lawrence, and Mercer Counties; minable coals and commercially valuable high-alumina clays present locally.

Sherman Creek Member of Catskill Formation
Alternating grayish-red mudstone and siltstone in poorly defined fining-upward cycles, and minor intervals of gray sandstone; laterally equivalent to Berry Run, Sawmill Run, Packerton, and Long Run Members of eastern Pennsylvania.

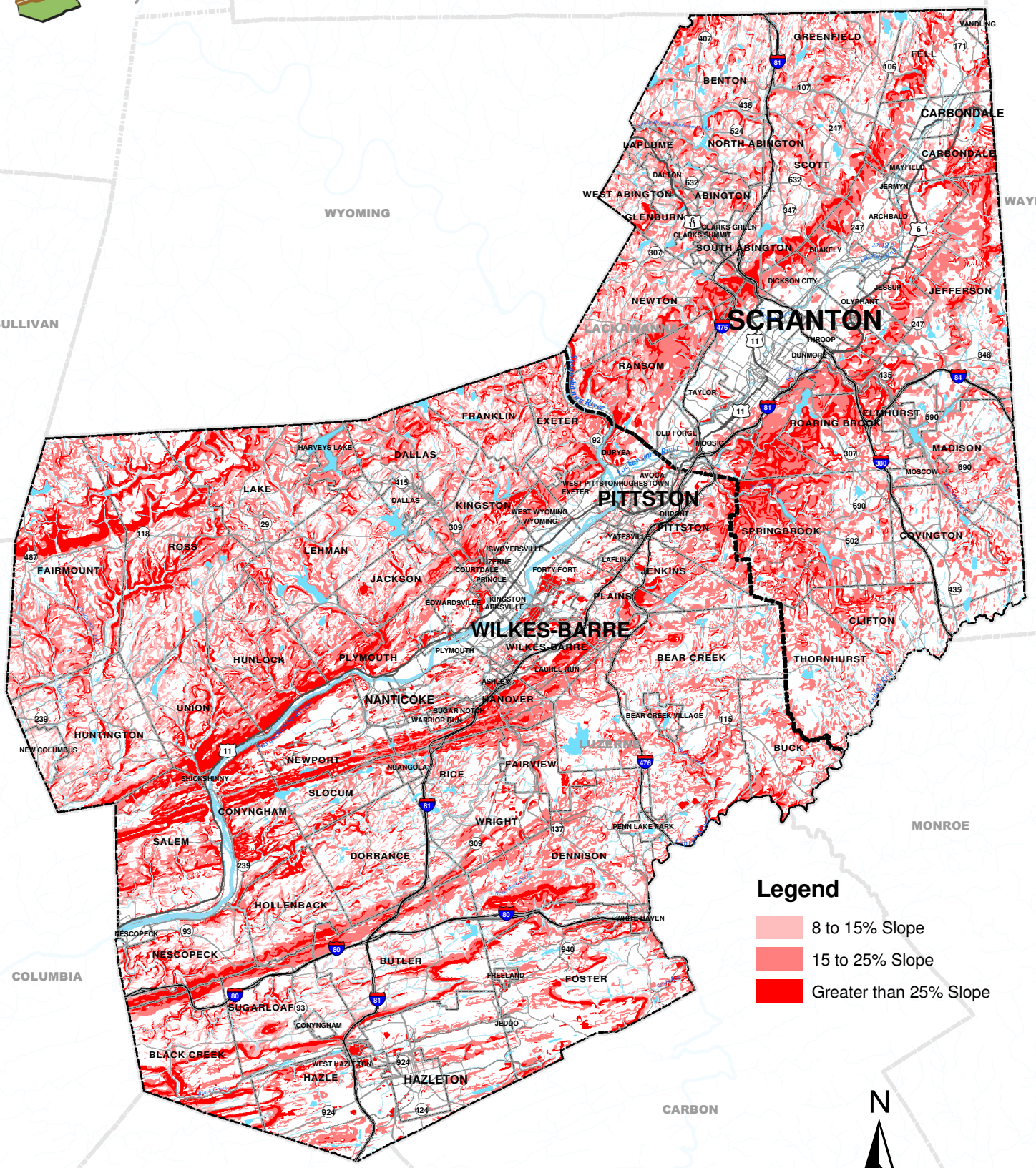
Spechty Kopf Formation
Light- to olive-gray, fine- to medium- grained, crossbedded sandstone, siltstone, and local polymictic diamictite, pebbly mudstone, and laminite; arranged in crude fining-upward cycles in some places; locally has grayish-red shale near top and conglomerate at base and in middle.

Trimmers Rock Formation
Olive-gray siltstone and shale, characterized by graded bedding; marine fossils; some very fine grained sandstone in northeast; black shale of Harrell Formation at base in Susquehanna Valley.

Note: Descriptions modified from 1980, Geologic Map of Pennsylvania, Pennsylvania Geological Survey, 4th ser., Map 1.

STEEP SLOPES

Figure 4.8.3



March 2008
Source: U.S. Department of Agriculture, Natural Resources Conservation Service
Soil Survey Geographic (SSURGO) database

Natural Gas Resources

Another geologic formation found underlying Luzerne and Lackawanna Counties is the Marcellus Formation. Marcellus Shale lies at 4,000 to 8,500 feet below the surface and is made up of sediments high in organic material. As the organic matter decayed, methane gas formed and dispersed throughout pores in the rocks. The pressure of this gas caused fractures to form in the shale. Growing demand for energy and new drilling technologies has made mineral exploration companies interested in tapping the deep gas reserves of the Marcellus Shale. Water fracturing or "fracking" is the key technique in extracting gas from the formation; up to 3 billion gallons of water per well can be required for the drilling process. These large water withdrawals can come from streams, lakes, ponds, rivers, or groundwater and withdrawals can have a significant impact on other water users and uses. Furthermore, the waste water generated by fracking is contaminated and must be handled, treated and disposed of properly. The PADEP, DRBC, and SRBC are considering the possibility of and need for new regulations to protect ground and surface waters in the region.

Methane gas generated at the landfill in Taylor Borough is used as fuel for a facility in Archbald Borough. In the future, other landfill facilities, such as the one in Dunmore, may be used for similar purposes.

Mineral Resources

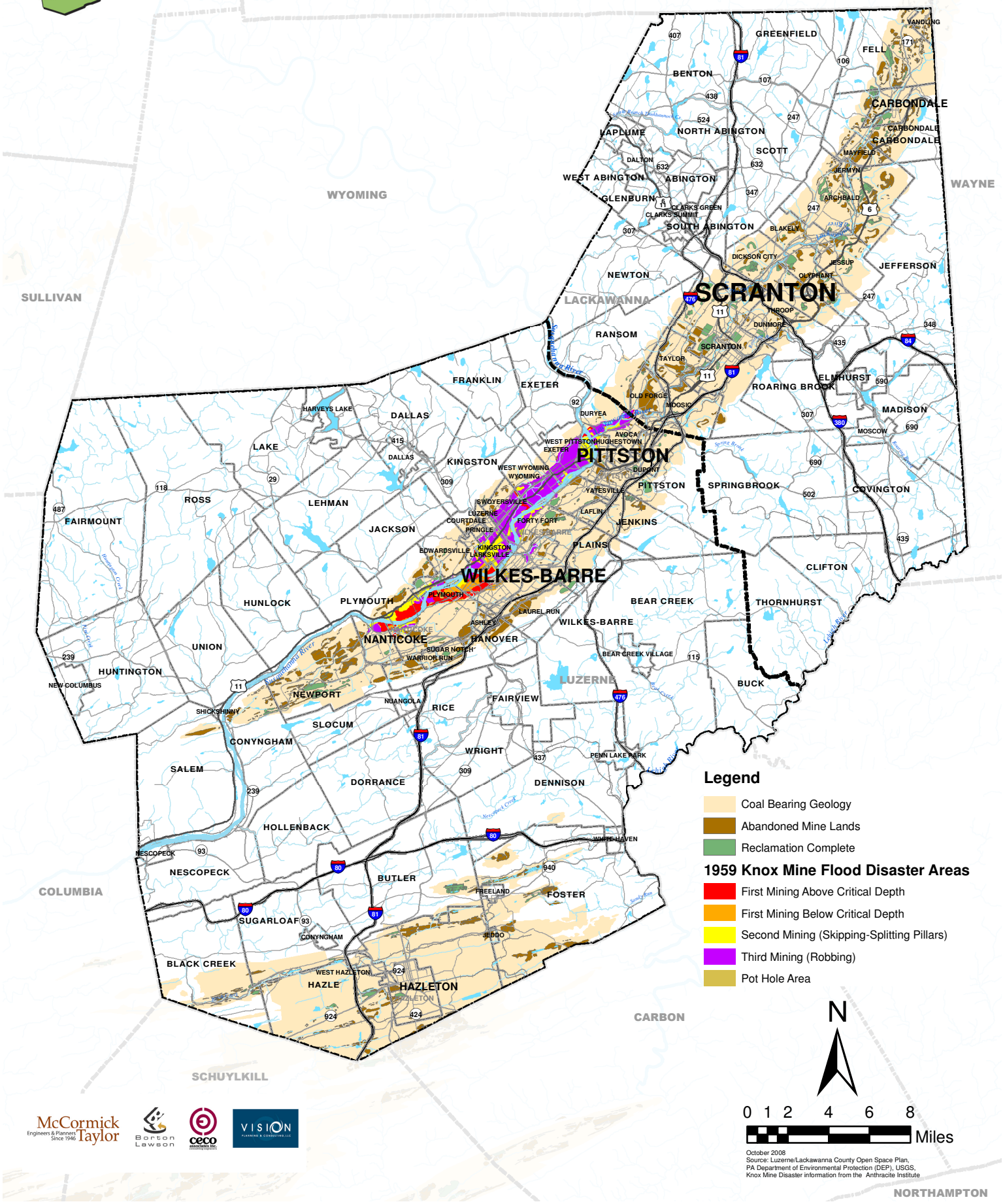
Mineral production within the Upper/Middle Susquehanna Region exists in several areas. Lime and crushed aggregate production occurs in areas located within the Ridge and Valley Province where limestone and carbonate rock are prevalent. Sand and gravel production occurs in the glaciated regions of Luzerne County.

Soils in both counties have been affected by glaciation and in some parts of the region are too stony or wet for cultivation. In the mountainous areas, slopes are steep and the soils are thin. The valley areas have the best soils and have some farming as a traditional activity, but this is increasingly being replaced by commercial, industrial, and residential development. Nescopeck Valley in Luzerne County remains the largest contiguous farming area in both counties and supports a range of dairy and truck farms and orchards. The anthracite coal mining industry had a major effect on the region's landscape that is still evident (***Figure 4.8.4***). The Wyoming and Lackawanna Valleys and surrounding areas have remnant mine openings, spoil piles, culm banks, and acid mine water discharges remaining from past mining activities.

More recently, there have been a number of reclaimed lands, as well as areas designated for reclamation, particularly in Luzerne County by the PADEP Bureau of Abandoned Mine and Reclamation and the Department of Interior's Office of Surface Mining (OSM). Un-reclaimed and reclaimed former mining areas in the upland portions of the study area have open space potential because of their natural hazards, steep topography, and lack of water and sewer availability. However, these same former mining areas located on the flatter land and lower elevations in the valleys are being investigated for industrial and commercial development similar to other Brownfield sites along the East Coast. In Luzerne County, a number of these parcels are under the jurisdiction of the Earth Conservancy, which prepared a long-range land use plan in the mid-1990s to develop a number of these areas, as well as set aside other areas environmentally or economically not suited for development.

MINING LANDS

Figure 4.8.4



October 2008
Source: Luzerne/Lackawanna County Open Space Plan, PA Department of Environmental Protection (DEP), USGS, Knox Mine Disaster information from the Anthracite Institute

Ecological Resources

Forested Areas

The Upper/Middle Susquehanna Region has more forest cover than any other Pennsylvania region. Comprised of the Central Appalachian Ridge and Valley areas, this region supports hardwood forests including pine-oak and oak-hickory forests, as well as coniferous (evergreen) forests, including eastern hemlock. The region consists of 77 percent forested areas. Deciduous forest types dominate the landscape, with 50 percent of the total land area. Mixed and coniferous forests comprise 27 percent of the basin.

The two-county area is covered with two major forest types, reflecting the physiographic conditions and natural and man-made disturbance over time. The Appalachian Oak Forest is generally in the ridge and valley area in the middle of both counties and the Northern Hardwood Forest is at a higher elevation in the northwest and southwest portions of the region (***Figure 4.8.5***). The Appalachian Forest is similar to the traditional Oak-Chestnut Forest found throughout the Mid-Atlantic States. Most of this forest type has historically been cut down; however, second growth now covers much of the upland areas on the sides of the mountain ridges overlooking the valleys.

Wildlife

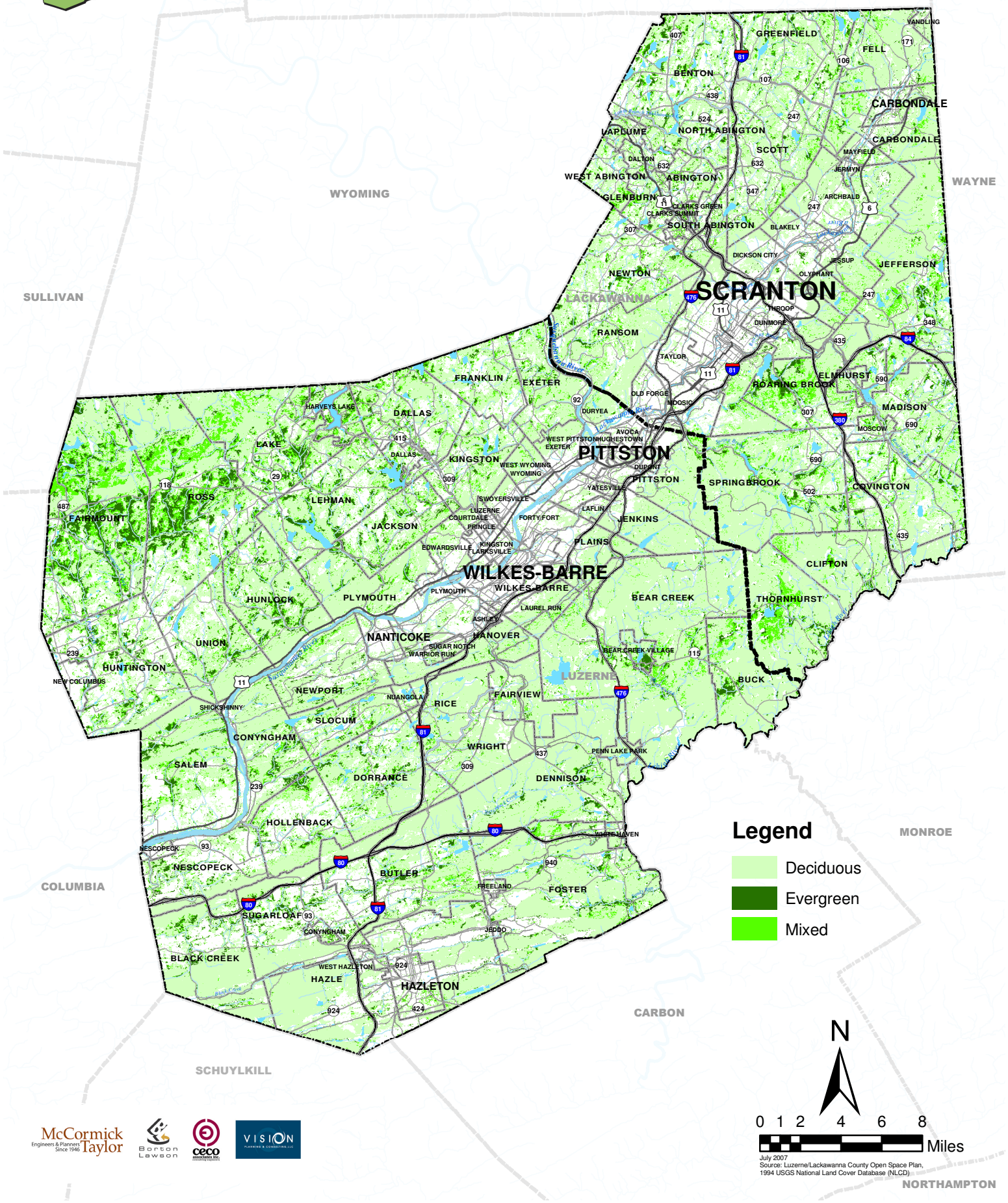
The two-county area also has abundant wildlife, particularly in the mountainous, less-developed areas outside of the Wyoming and Lackawanna Valleys. The area is well known for hunting and fishing and has extensive game lands, as described in *Section 4.5*. The Lackawanna River south of Scranton and the Susquehanna River provide warm water fishery habitat, and the numerous tributaries and streams to the major rivers in the study area provide extensive cold water fishery habitat for trout.

A number of water bodies (including the Susquehanna River, Solomon Creek, and Nanticoke/Newport Creek) have been affected by acid mine drainage, which continues to be a water quality issue in some parts of the region. The Lackawanna River between the headwaters and Blakely Borough provides a better habitat due to acid mine drainage and storm runoff through combined sewer overflows occurring south of the Mid-Valley area. The section of the river running from Archbald through Jessup Boroughs and into Blakely and Olyphant Boroughs is designated by the Pennsylvania Fish and Boat Commission as a Class A Trout stream.

In fact, because of the extensive pollution from mining, those streams and lakes that are pristine with good water quality are particularly valuable for preserving and enhancing aquatic habitats, as well as providing potable water for local municipalities.
Natural Areas Inventories (NAI) conducted by the Nature Conservancy for both counties (1997 for Lackawanna County and 2001 for Luzerne County), provide an excellent compilation of documented unique natural features and areas in each county, including mapped locations of the best natural communities (habitats) and known locations of endangered, threatened, and rare plant and animal species. The inventories include areas designated as having global, federal, and state-wide importance, as well as areas of local significance, which are ranked in terms of their priority for protection.

FORESTED AREAS

Figure 4.8.5



July 2007
Source: Luzerne/Lackawanna County Open Space Plan, 1994 USGS National Land Cover Database (NLCD)

Composite Constraints

The preceding natural resource information was combined and synthesized to illustrate the relative level of development constraints affecting various areas of the two-county region. Lands with very severe constraints are generally precluded from future development due to flooding, while very steep slopes and wetlands pose severe constraints for most development. These areas may be most suitable for natural resource preservation and wildlife habitat. Areas of seasonal high water table (hydric soils), with slopes between ten and twenty percent have moderate constraints for development. The balance of the planning area has only slight development limitations.

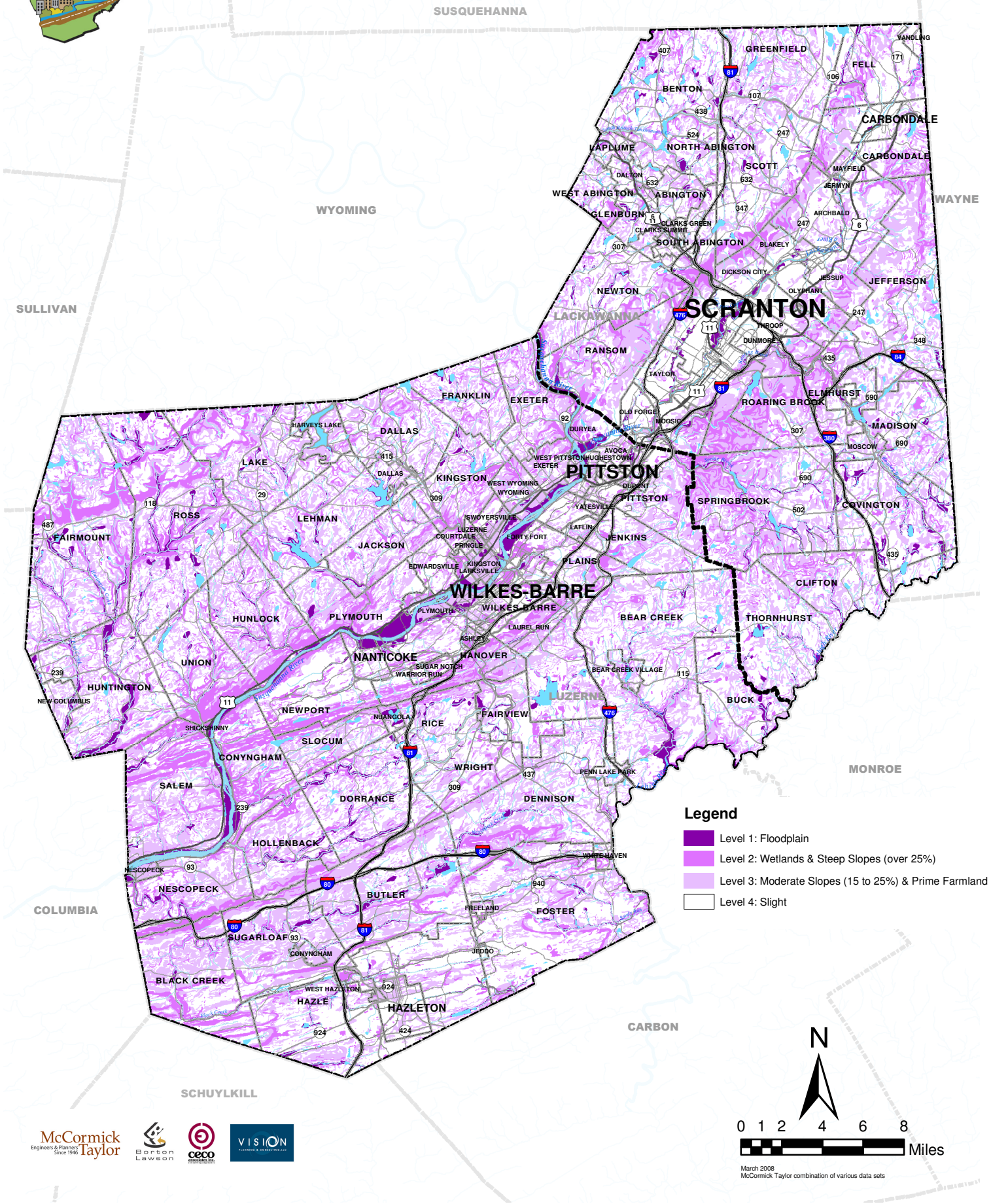
The floodplains associated with the Lackawanna and Susquehanna Rivers, and their tributaries factor most prominently in the delineation of the Composite Constraints map (***Figure 4.8.6***).

Suitability for Development

In the Suitability for Development mapping, (***Figure 4.8.7)*** an analysis of the two counties was undertaken to identify areas with better accessibility by virtue of being near interchanges, urban places, and highways. Places where these factors converge have superior accessibility. Features that positively influence relative suitability of land for development have been combined with composite constraints information from the Composite Constraints mapping. In some ways, the Suitability for Development mapping is a mirror image of the Composite Constraints mapping, with the accessibility factors added. Preserved areas are not available for future development and are excluded from consideration. The prospect of redeveloping already-developed areas means that the advantages that river valley communities and Hazleton have in terms of accessibility and servicing strategy favor these locations for future development.

COMPOSITE CONSTRAINTS

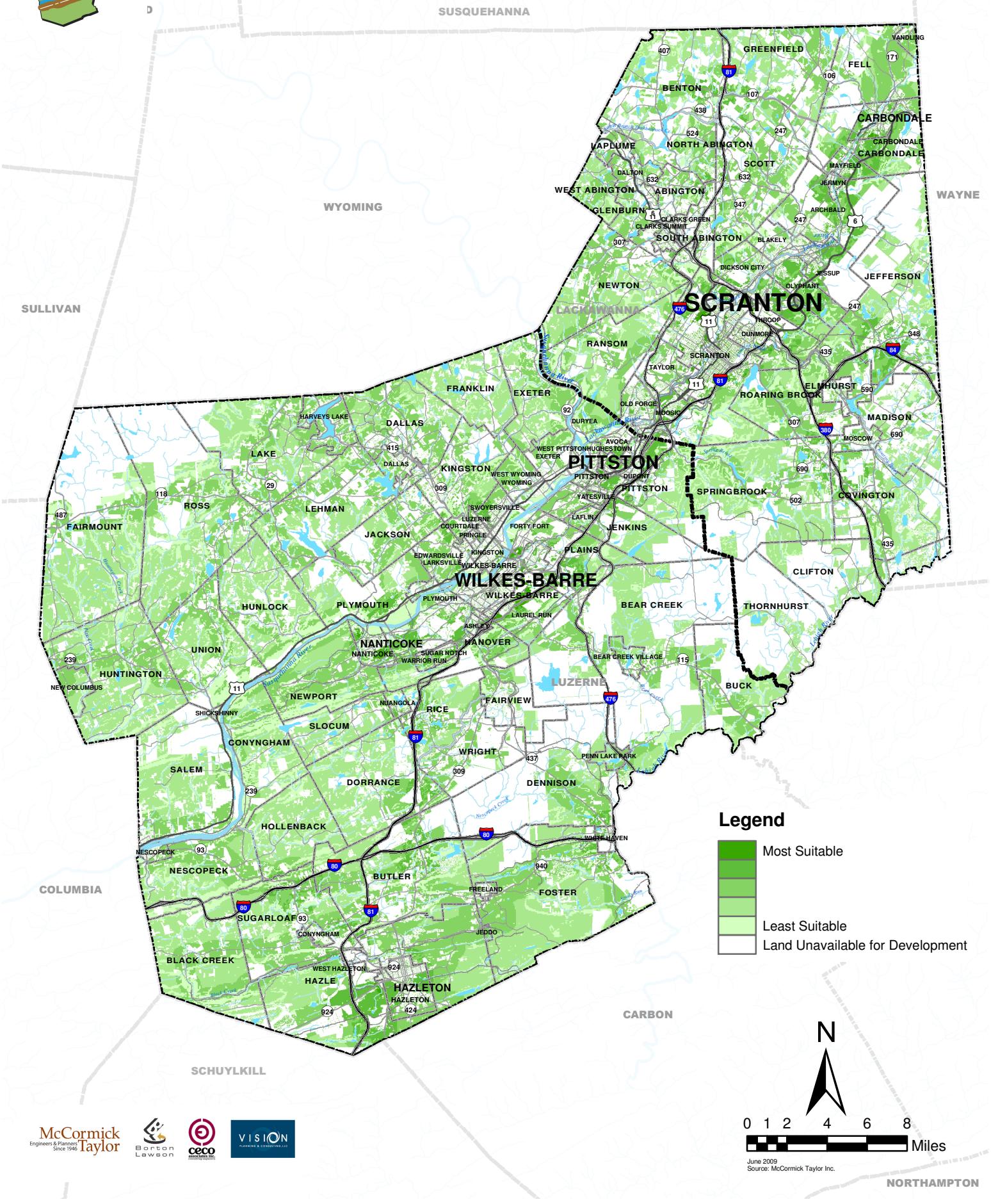
Figure 4.8.6



March 2008
McCormick Taylor combination of various data sets

SUITABILITY FOR DEVELOPMENT

Figure 4.8.7



4.9 Utilities Profile

Water Supply

Public Water

The Lackawanna-Luzerne region has many lakes and reservoirs that provide drinking water, flood control, and recreational uses. Many lakes are maintained by state agencies like DCNR, federal agencies like the U.S. Army Corps of Engineers (ACOE), or the Fish and Boat Commission (FBC). The 198-acre Lackawanna Lake located in Lackawanna County is maintained by DCNR.

The Susquehanna Basin contains many streams and rivers that are utilized for water supply and recreation. Public water supply intakes can also be found along the North and West Branch of the Susquehanna River. Luzerne County withdraws 3.21 million gallons/day (mgal/day) from groundwater and 17.81 mgal/day from surface water. Lackawanna County withdraws 1.99 mgal/day from groundwater and 33.84 mgal/day from surface water (***Table 4.9.1*** and ***Figure 4.9.1***).

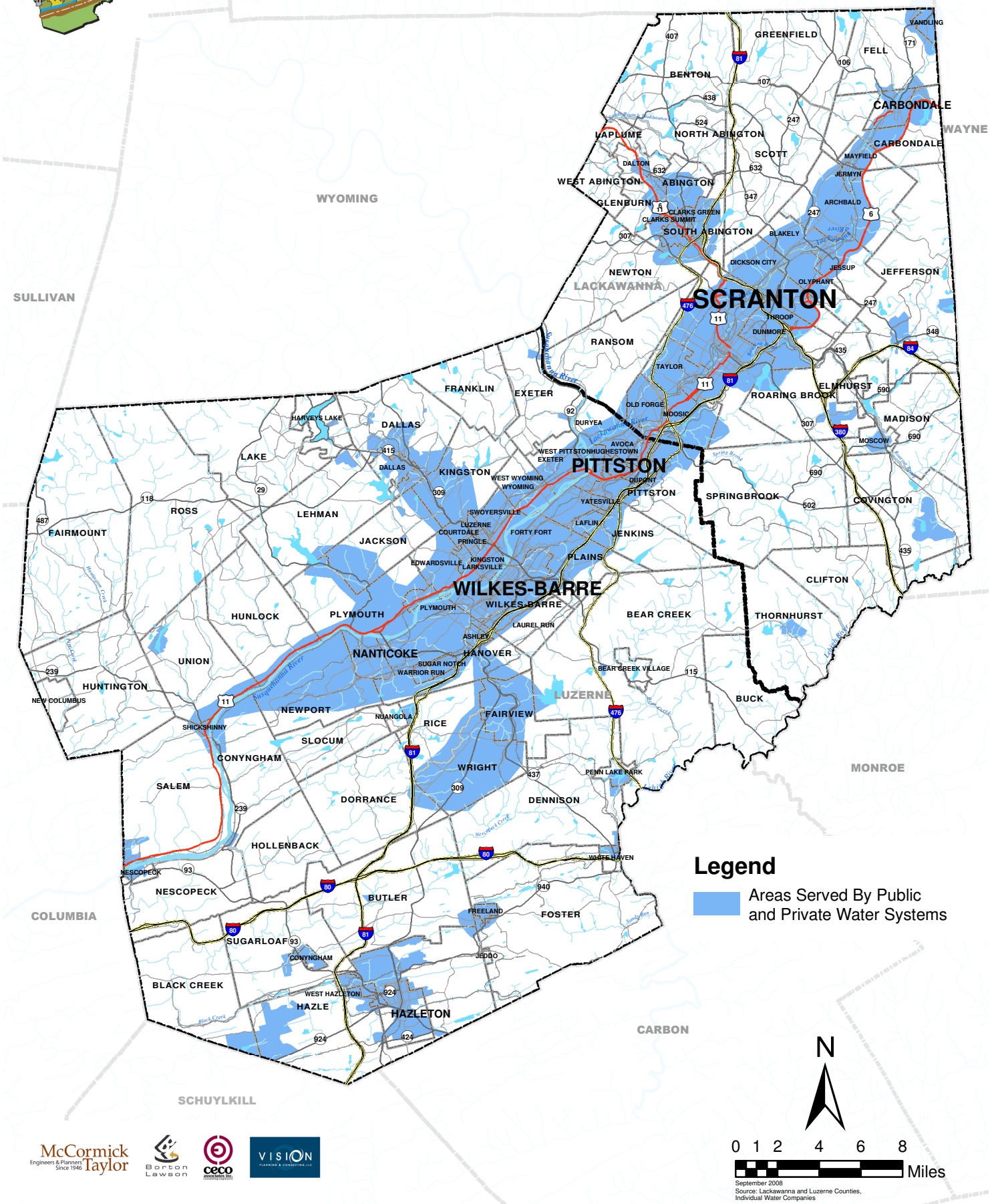
Public water systems treat and distribute water for residential and commercial use throughout the region. Luzerne and Lackawanna Water Suppliers include the following:

- Pennsylvania-American Water Co.
- Hazleton Water Authority
- Hazleton City Authority
- Conyngham Borough Authority
- United Water Pennsylvania
- Aqua Pennsylvania
- Freeland Municipal Authority

In the two-county region, groundwater supplies drinking water to many industries, institutions and residences. Large groundwater withdrawals and community based public drinking water may be supplied by a publicly-owned or privately-owned company. Many individual homes in suburban and rural areas are supplied by an on-site well. In some cases, water supplies require treatment before human consumption. This treatment is done to ensure that harmful materials are removed or minimized so not to adversely affect human health. A recent trend associated with small residential developments is the increased reliance on private water supply systems installed by the developers. This can leave residents vulnerable to water system failure, water quality problems and interruptions in water supply; responsibility for maintenance is unclear and is likely to result in more supply problems in the future.

WATER SUPPLY

Figure 4.9.1



September 2008
Source: Lackawanna and Luzerne Counties, Individual Water Companies

Table 4.9.1
Water Usage in the Two-County Area

County	Homes with Public Water	Homes with Drilled Wells	Homes with Dug Wells	Homes with Springs or Cisterns
Lackawanna	78,982	11,310	745	690
Luzerne	114,062	21,696	1,611	1,355

Much of the urban and suburban population areas of the region are served with public water from the Pennsylvania American Water Company. Pennsylvania American Water Company is the largest regulated water service provider in Pennsylvania, relying primarily on area surface water and reservoirs statically located throughout the region. The water supply infrastructure Pennsylvania American Water Company provides adequate water collection, treatment and distribution of portable water for residential, commercial and industrial users.

Rural areas throughout the region obtain water from private wells. Homeowners with private wells have a variety of options for filtration and water softening systems that remove mineral particles from well water. The system selected usually depends on the amount of water a private residence uses per day as well as the most common types of contaminants necessary to filter from the water source. Individual wells largely go untreated unless there is an obvious odor, color or taste problem. Water quality of individual, private wells remains the responsibility of the homeowner. Information on individual wells and home water quality and probable problems can be obtained from the PADEP.

Wastewater Treatment Facilities

In Luzerne County 14 municipalities comprise the Wyoming Valley Sanitary Authority (WVSA) which operates one of the largest wastewater treatment facilities in the Susquehanna Basin. Currently the WVSA serves about one-quarter of a million people and treats an average of 25 million gallons of wastewater per day. The majority of wastewater treatment facilities in the region are along the lower section of the watershed, as is also the case for public water supply service areas.

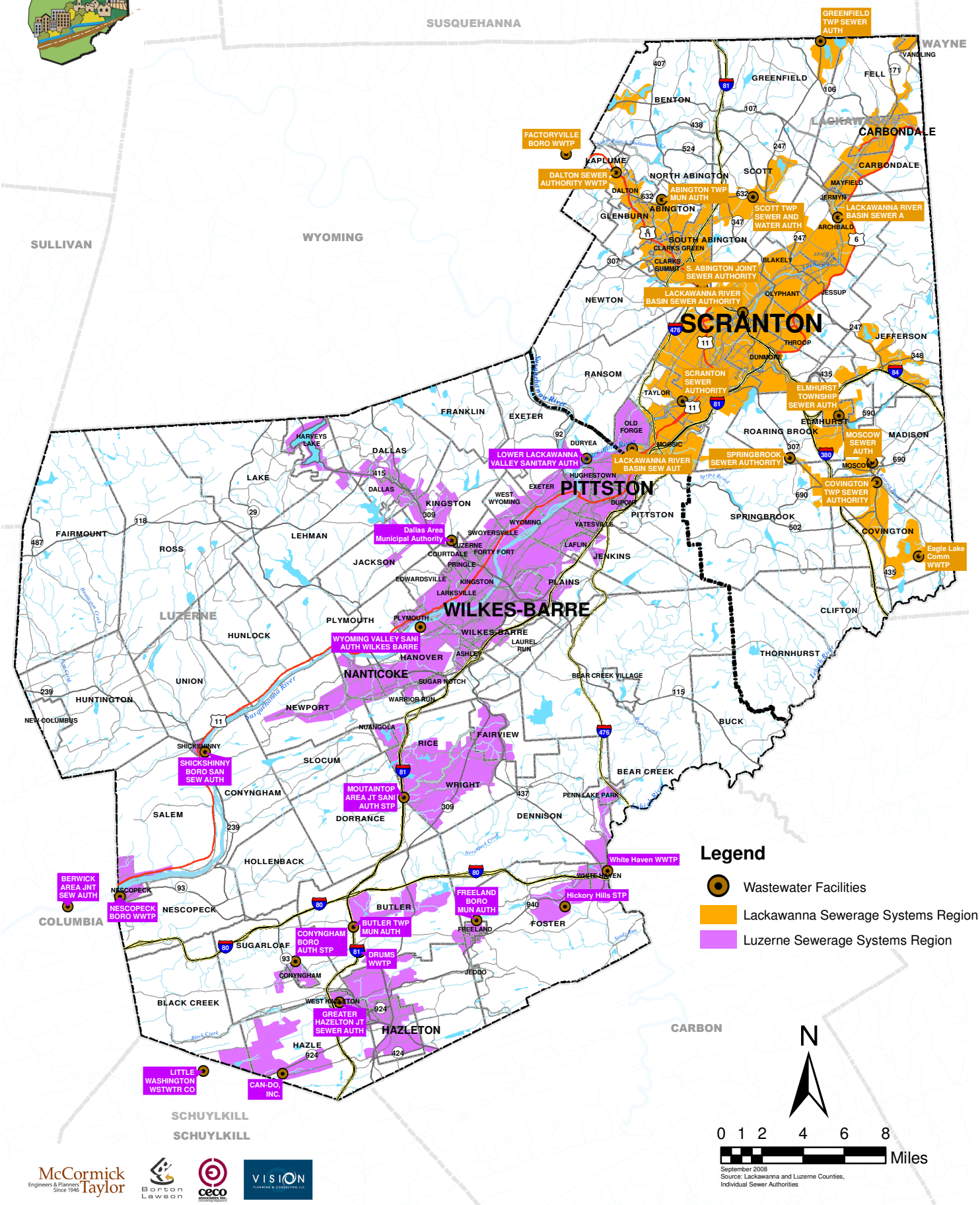
Private residences in some suburban and most rural areas of the region commonly use private septic systems. Typical private septic systems allow for wastewater to flow to an underground tank. Once in the tank, heavy particles fall to the bottom while water can flow out of the top of the tank and into a drain field pipe. Once in the drain field pipe the remaining wastewater is dispersed into a drain field where it slowly permeates down through the soil. Wastewater treatment facilities are shown on **Table 4.9.2 and Figure 4.9.2**

Table 4.9.2 Wastewater Treatment Facilities

Permit #	Facility	Water Source	County
PA0020745	Nescopeck Boro	Nescopeck Creek In Wtrshd 5-D	Luzerne
PA0024716	Freeland Boro Mun Auth	Pond Creek In Watershed 2-A	Luzerne
PA0026107	Wyoming Valley Sanitary Authority	North Branch Susquehanna River	Luzerne
PA0026361	Lower Lackawanna Valley Sanitary Authority	Lackawana River	Luzerne
PA0026921	Greater Hazelton Joint Sewer Authority	Black Creek	Luzerne
PA0042048	Conyngham Boro Auth	Little Nescopeck Creek	Luzerne
PA0045985	Mountaintop Area Joint Sanitary Authority	Big Wapwallopen Creek In Ws 5-B	Luzerne
PA0046388	Butler Township	Nescopeck Creek	Luzerne
PA0060135	Shickshinny Borough Sewer Authority	Susquehanna River	Luzerne
PA0026492	Scranton Sewer Authority	Lackawanna River	Lackawanna
PA0027065	Lackawanna River Basin Sewer Authority	Lackawanna River	Lackawanna
PA0027090	Lackawanna River Basin Sewer Authority	Lackawanna River	Lackawanna
PA0028576	Clarks Summit/South Abington Joint Sewer Authority	Leggetts Creek	Lackawanna
PA0061034	Abington Twp Mun Auth	Unt To Ackerly Creek In Wtrshd 5-A	Lackawanna
PA0061123	Moscow Sewer Authority	Roaring Brook Creek	Lackawanna
PA0061131	Dalton Sew Auth	Ackerly Creek In Wtrshd 4-F	Lackawanna
PA0061450	Elmhurst Twp Sew Auth	Roaring Brook Creek	Lackawanna
PA0061671	Greenfield Twp Sew Auth Lackawanna	Unt To Dundaff Creek	Lackawanna
PA0062103	Spring Brook Twp Sew Auth	Green Run 5A	Lackawanna
PA0062405	Scott Twp Sewer & Water Auth	Unt To South Br Tunkhannock Creek	Lackawanna
PA0062570	Covington Twp Sew Auth	Roaring Brook Creek	Lackawanna

SEWER SERVICE

Figure 4.9.2



Stormwater Management

Stormwater and stormwater management has become a major focus throughout Pennsylvania at the Federal, State, regional and local level. Similarly, stormwater is now recognized as a major contributor of water quality degradation and increased flooding across many watersheds including those in the Lackawanna and Luzerne County region. Every rainfall event generates stormwater runoff. As more land areas are cleared, paved and developed, more rainwater is prevented from infiltrating into the ground and ends up as runoff entering area streams, lakes and rivers. This runoff water carries pollutants and sediment with it from paved areas, parking lots, driveways and roads as it flows through the watershed. The volume and speed of runoff from each storm also increases. This increased velocity tends to erode hill sides and stream banks further adding to the problem. As streams and rivers fill up with soil and sediment, they can not carry as much water and this contributes to increased flooding. That flooding can damage property and endanger life in communities wherever they are vulnerable.

Recognizing these problems and increasing threats, many stormwater regulations have been put in place at the State level. Act 167, also known as the Pennsylvania Stormwater Management Act, was passed in 1978. Under Act 167, counties in the Commonwealth were to develop comprehensive stormwater management plans for each watershed within the county. The planning process is done with input from a Watershed Plan Advisory Committee (WPAC) and once approved by the Department of Environmental Protection (DEP), municipalities are required to implement the plan through local ordinances.

A Stormwater Management Plan has been developed for Luzerne County to comply with the Pennsylvania Stormwater Management Act, Act 167. This Plan is the initial county-wide Stormwater Management Plan for Luzerne County, and serves as a Plan Update for the portions or all of six (6) watershed-based previously approved Act 167 Plans including: Bowman's Creek (portion located in Luzerne County), Lackawanna River (portion located in Luzerne County), Mill Creek, Solomon's Creek, Toby Creek, and Wapwallopen Creek. This report is developed to document the reasoning, methodologies, and requirements necessary to implement the Plan. The Plan covers legal, engineering, and municipal government topics which, combined, form the basis for implementation of a Stormwater Management Plan. It is the responsibility of the individual municipalities located within the County to adopt this Plan and the associated Ordinance to provide a consistent methodology for the management of stormwater throughout the County.

In Lackawanna County, a stormwater management ordinance has been developed and adopted at the municipal level to carry out the goals of the stormwater management plan. The purpose of this Ordinance is to promote the public health, safety and welfare within the Lackawanna River Watershed by minimizing the damages described in Section 101(A) of this Ordinance by provisions designed to:

- Control accelerated runoff and erosion and sedimentation problems at their source by regulating activities which cause such problems.
- Utilize and preserve the desirable existing natural drainage systems.
- Encourage recharge of ground waters where appropriate.

- Maintain the existing flows and quality of streams and water courses in [municipality] and the Commonwealth.
- Preserve and restore the flood carrying capacity of streams.
- Provide for proper maintenance of all permanent stormwater management structures which are constructed in each municipality.

The practice of stormwater management has evolved as new information, technologies, and improved understanding of the relationship between human activity and the impacts of stormwater runoff have become available. Best Management Practices (BMPs) have evolved to include new strategies to reduce runoff at its source. These “green stormwater strategies” include pervious pavement, bio-retention basins, rain gardens, tree pits and other non-traditional designs. These designs are getting recognized for their combined community benefits and incorporated into plan and regulatory programs for stormwater management.

Energy & Telecommunication Services

Energy

Energy utilities in the two-county area include a combination of nuclear (Salem Township), coal, and natural gas. Major energy utilities include the following entities:

- **PPL Electric Utilities** markets and delivers energy to nearly 6 million customers throughout the United States, Canada, the United Kingdom, and Latin America. PPL services 1.3 million people in Pennsylvania alone.

- **UGI Utilities, Inc.**, **Electric Division (UGI)** provides electrical service to more than 60,000 customers in Northeastern Pennsylvania. UGI's Gas Division provides natural gas service to 272,000 customers in 14 counties in Northeastern Pennsylvania.

- **UGI Penn Natural Gas**, headquartered in Wilkes-Barre, Pennsylvania, is northeastern and central Pennsylvania's largest natural gas distribution company. UGI-PNG serves approximately 158,000 customers in 13 counties through Pennsylvania, including the cities of Scranton, Wilkes-Barre, and Williamsport and employs nearly 420 people.

The Northeastern Pennsylvania Alliance (NEPA) operates an Energy Assistance Program that sets out to help local governments, schools, and hospitals reduce their operating costs and energy consumption through education, training, and service delivery focused on conventional energy demand reduction.

Although limited, non-traditional and clean energy sources are growing in popularity and public acceptance throughout the region. Solar and wind energy technologies are expected to grow and comprise a greater share of the total energy production. The construction and siting of these facilities, such as wind turbines on area ridge tops, has created some debate about aesthetic and other impacts. As traditional energy costs increase and concerns about Greenhouse Gas (GHG) emission grow, alternative energy sources can be expected to become more cost effective and popular.

Telecommunications

Several telecommunication companies provide telephone, cable and internet services in the two-county area. Major companies include:

- Verizon Communications
- Frontier Communications
- Service Electric
- Comcast

There are other telecommunication providers active in the area, including Northwestern and South Canaan Telephone companies, which service small portions of Lackawanna County.

4.10 Pattern of Change

In this section, data for both recent private and public developments, as well as pending and proposed projects, are presented in narrative and mapped form. This information was then analyzed in tandem with existing housing and demographic trends indentified in *Section 4.3* of this chapter.

Trends in development present numerous challenges to the region, especially in terms of municipal fiscal health, mobility, environmental quality, and community quality-of-life. Recent trends are likely to continue over the next twenty years if actions to alter the course of development are not taken.

Since the mid-twentieth century, a steady encroachment of development into rural areas has been occurring. The trend reflects a basic population shift in the region, with older settlements losing population and new housing construction taking place in outlying communities. The effects of this shift can be seen on the landscape, with development occurring in formerly agricultural and wooded areas.

Dispersion of residences and businesses brings with it a number of potential cost and impacts, including new demand for public services in rural areas, dependence on the auto for mobility, a decline of local business centers, and loss of the strong social fabric inherent in city, borough, and village communities. Scattered urban uses also represent potential threats to environmentally-sensitive resources, visual intrusions into the countryside, and threats to the agricultural economy and lifestyle.

Recent Development and Public Improvements

Between 1995 and 2008, approximately 21,000 acres of land throughout the two-county region has been developed. Of this total, over 67 percent constitutes residential use, nearly 9 percent is commercial use, and roughly 24 percent is industrial (***Figure 4.10.1***).

Public improvements also occurred over the same period (***Figure 4.10.2***). They include additional recreational and protected lands such as new municipal and county parklands and trails, new institutional facilities (including municipal buildings), and infrastructure improvements and expansions (including rail freight and roadways).

Residential Use

Approximately 14,000 new housing units have been constructed on more than 16,800 acres between 1995 and 2008 in Lackawanna and Luzerne Counties. Average residential density for this new construction has been 1.2 acres per unit.

Demand for new residential units in Lackawanna and Luzerne Counties is being met mostly outside of urban areas, typically on previously-undeveloped lands. This pattern is largely unplanned, with low density, single family detached units being constructed along existing rural roads or in new subdivisions.

Commercial Use

Over the same 1995 and 2008 period, roughly 2,000 acres or 9 percent of recently developed lands in the two-county area became new commercial office, retail, and/or mixed-use development. These uses were focused closer to more urbanized areas when compared to the pattern of residential construction. In some cases, there has been a close intermingling of residential construction with commercial development, especially along major roadways.

Industrial Use

Over 6,000 acres of additional industrial development was built from 1995 to 2008 in both counties. Recent industrial development has taken place primarily in four locations, with industrial development generally relying on major regional highway connectivity as well as freight rail. The Hazleton area experienced expansions to the Humboldt Industrial and Valmont Industrial Parks, as well as new development near Interstate 80 by the Can Do company. A second area of concentration has been within the central valleys of the Susquehanna and Lackawanna Rivers, between Nanticoke and Carbondale. The Grimes Industrial Park in Pittston Twp is one of the largest recently-completed sites in this area. Across northwestern Lackawanna County, a series of light industrial facilities have been built, such as at Scott Technology Park. This park's development is ongoing under the management from the Scranton Lackawanna Industrial Building Company (SLIBCO). In addition Covington Park in southern Lackawanna County has over 2 million square feet of industrial buildings on site.

Pending and Proposed Development

Pending and Proposed Development includes development proposals that have either been approved, but not built, or are at some stage within the subdivision and land development process (***Figure 4.10.3***). In 2008, more than 12,500 acres of Lackawanna and Luzerne Counties were anticipated to receive additional construction of new residential, commercial, industrial, as well as institutional uses.

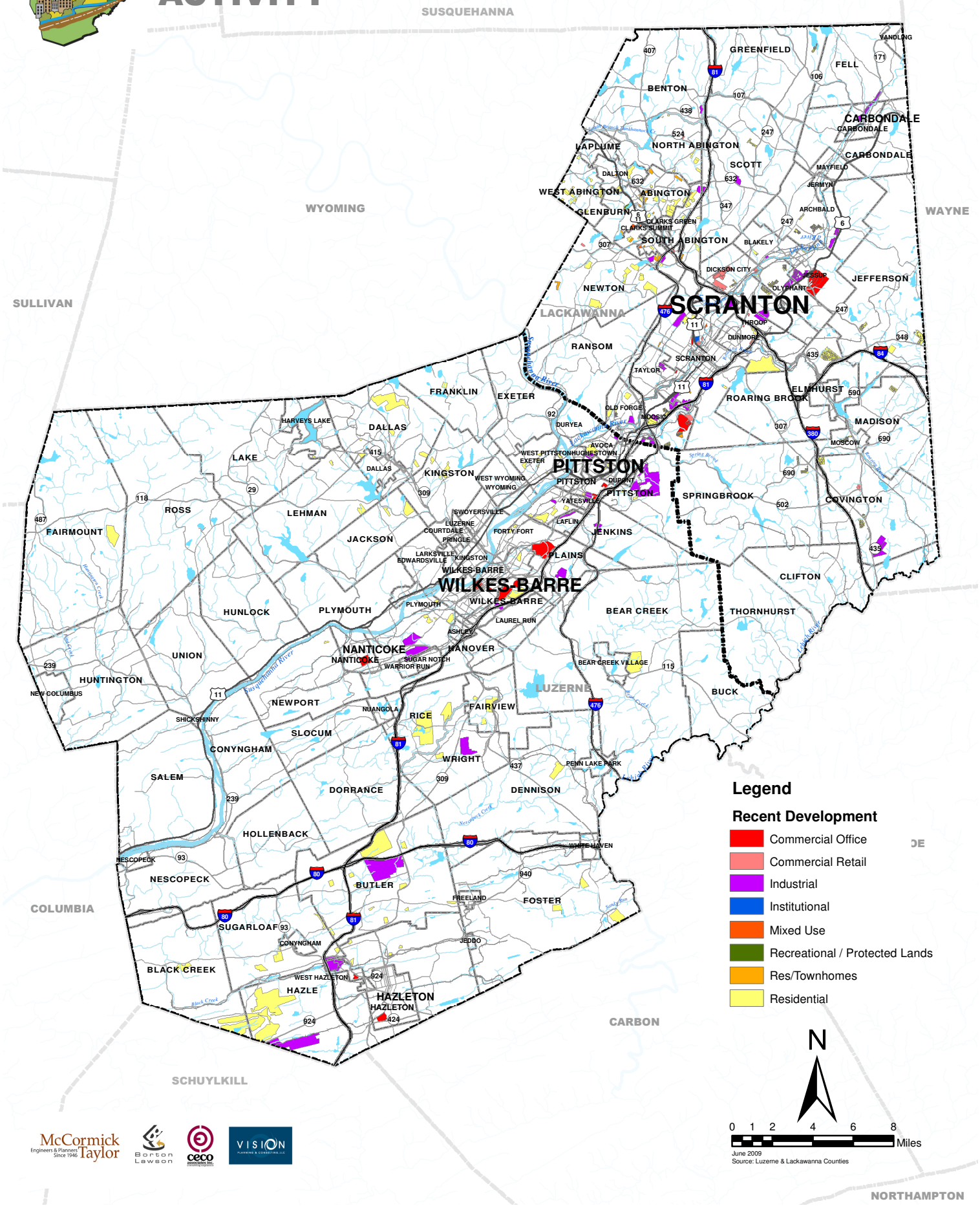
Pending and proposed residential development amounted to the highest acreage of anticipated development. With more than 7,000 acres of potential new dwelling units, sites are scattered throughout the region's more rural settings. Potential tracts are in proximity to Interstates 80, 81, and 380 (Covington Township's Glen Meadows) or have access to natural amenities such as lakes, high elevation, or rural settings (Lehman Township's proposed Hayfield Farms). The largest pending site, as of 2008, was Penn Ridge within Foster, Dennison, and Butler Townships.

Approximately 215 acres of commercial use is expected to be constructed throughout Lackawanna and Luzerne Counties. These uses include office, retail, as well as 109-room and 60-room hotels. An additional 700 acres are planned commercial mixed-use developments, including Cranberry Creek Gateway Park in Hazle Township. Mixed-use developments not only include mixes of commercial uses like office and retail, but may also include mixes of residential and commercial uses as well.

Pending and proposed industrial development amounted to the second-highest acreage of anticipated development, with over 4,600 acres planned. These future industrial lands are clustered around the Pittston area as well as the Humboldt Industrial area near Hazleton (***Figure 4.10.3***). Additional sites are found in Salem Township and Archbald Borough.

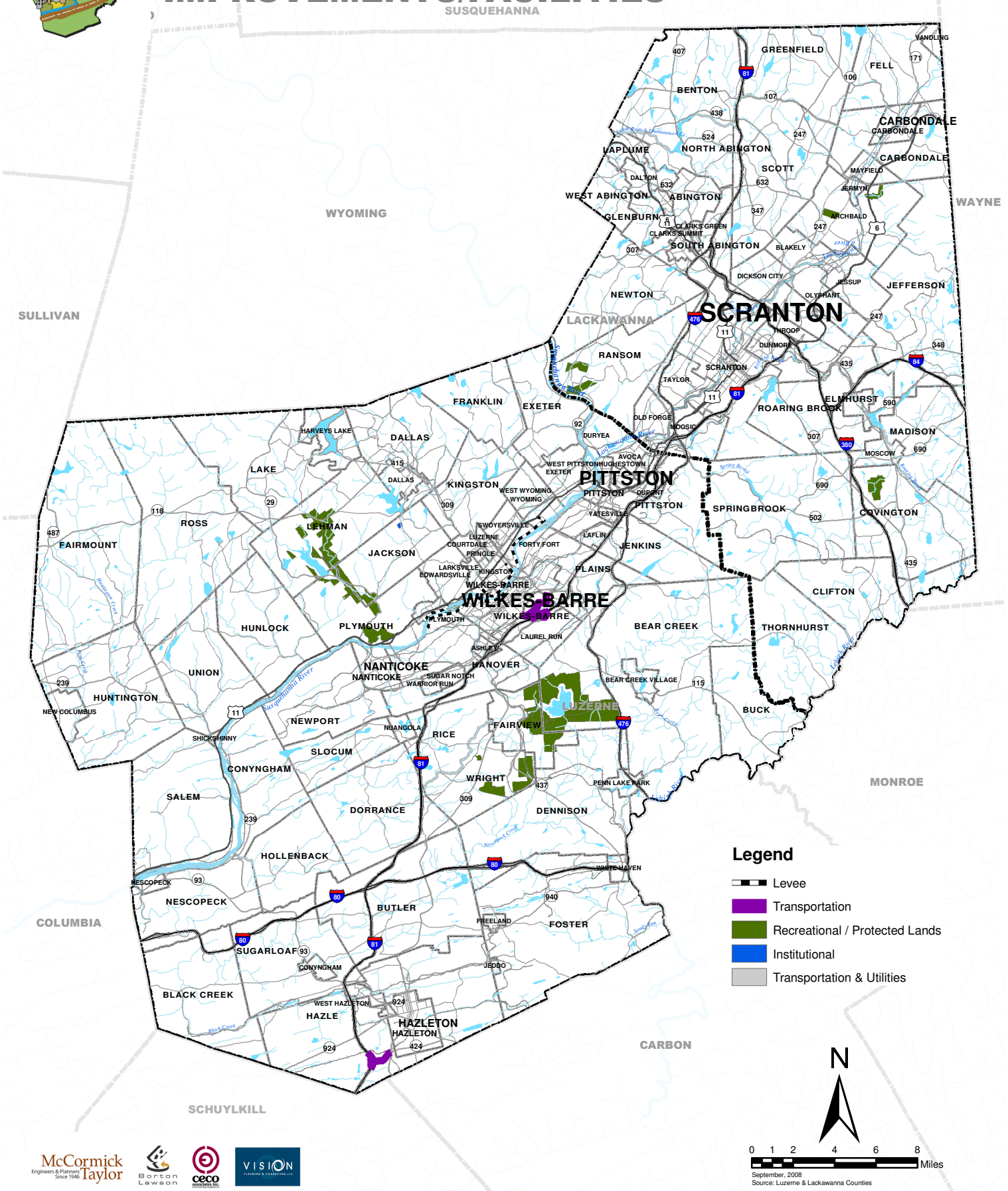
RECENT PRIVATE DEVELOPMENT ACTIVITY

Figure 4.10.1



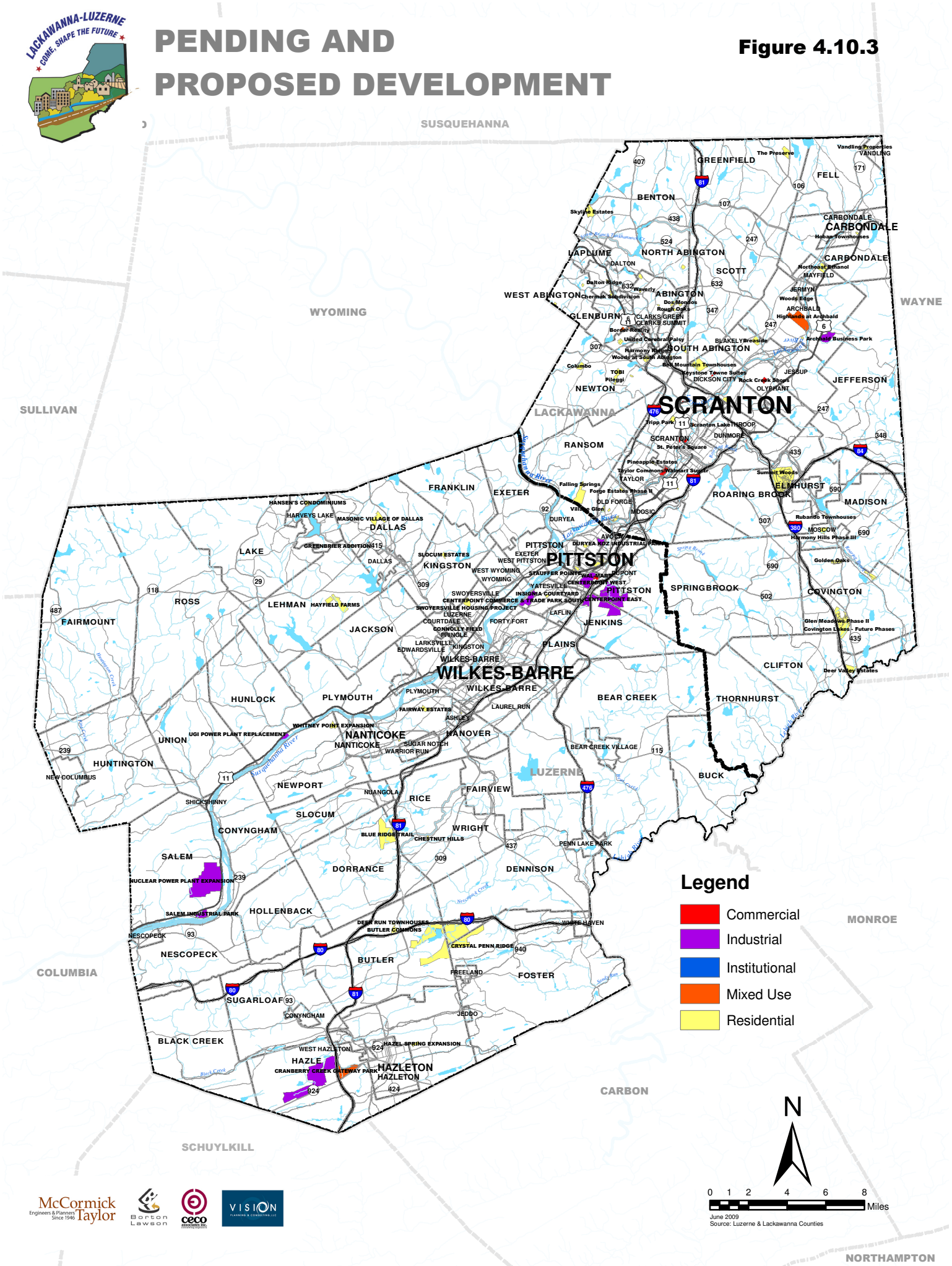
RECENT PUBLIC IMPROVEMENTS/FACILITIES

Figure 4.10.2



PENDING AND PROPOSED DEVELOPMENT

Figure 4.10.3



4.11 – Scenario Analysis & Transportation Program Development

Implications of the Trend Scenario

As a lead into the Visioning phase of Plan preparation, a Trend Scenario was developed. The Trend Scenario represented a possible picture of the future, assuming that current development trends and current land development regulations and policies (or lack thereof) would continue in force for the foreseeable future. Amounts and locations of new residential units, commercial and mixed-use development, and industrial development to the Year 2030 were determined and their impacts were assessed. Amounts and locations of abandoned residential units were also determined.

The Trend Scenario, when mapped, showed a general dispersing of new development to “greenfield” sites away from the Lackawanna and Wyoming Valleys and Hazleton City. New development occurred in a manner likely to translate into the need for new roads and utility systems.

Evaluation of the Trend Scenario showed that continued development in the region similar to what has occurred in the past will be detrimental to the mobility of travelers. This analysis was presented to stakeholders and all stakeholders agreed that it was not the most desirable solution for the two-county area. Building on that analysis, residential and employment trips were generated based on the land use expected in the region. With no travel demand model in the region, future trips were developed based on Institute of Transportation Engineers (ITE) trip generation rates and the corridor travel zones illustrated in ***Figure 4.11.1.***

Table 4.11.1 shows that immense development pressure will be added to several of the major corridors in the region resulting in unacceptable mobility in the future. The trend land use scenario is shown in ***Figure 4.11.2***.

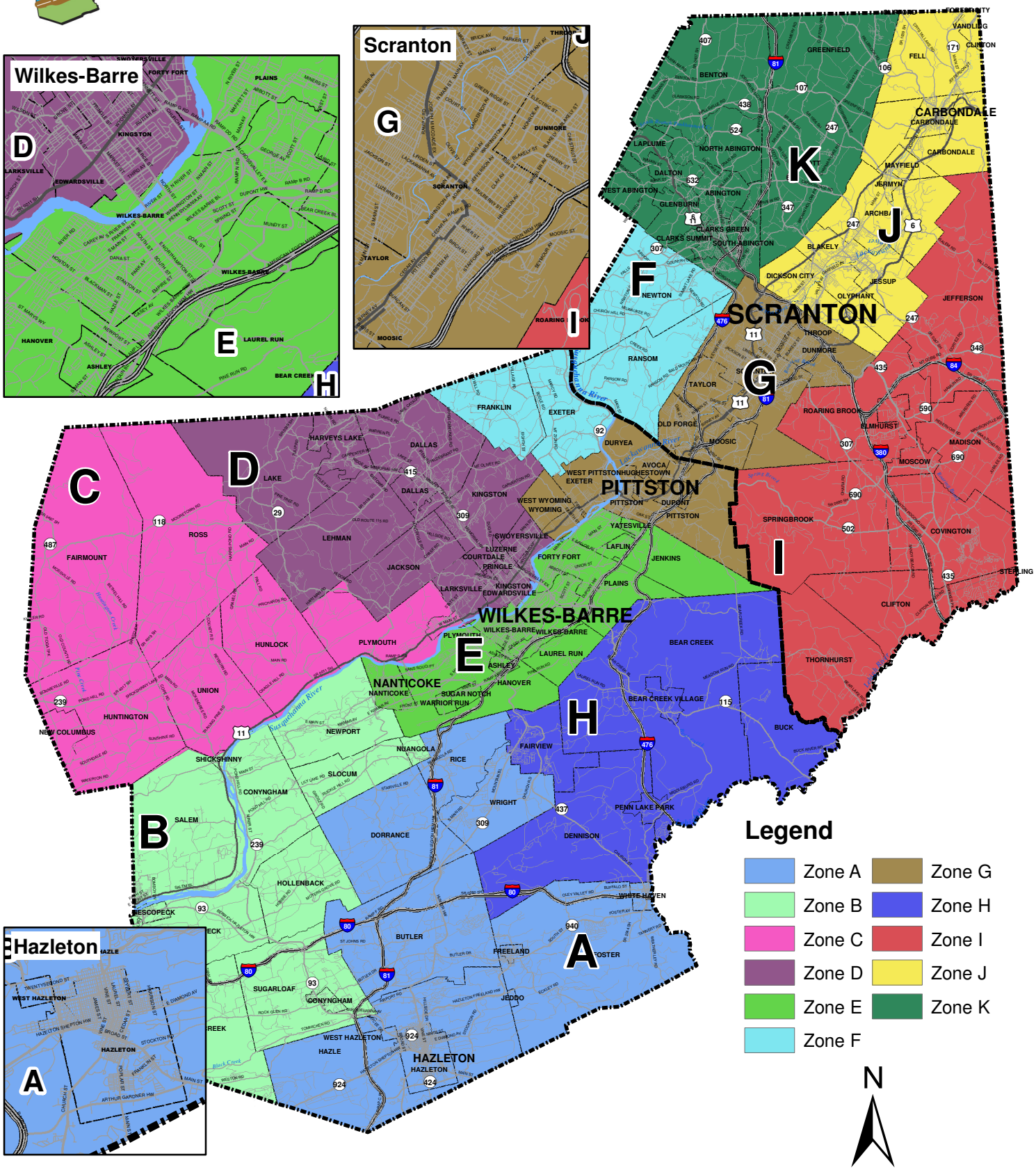
The scenario analysis described in the following tables shows that the land development patterns in the Lackawanna Luzerne region are not sustainable and should be modified to a less transportation intensive pattern. The three land use scenarios described and developed in cooperation with the stakeholders of the region show that the most balanced scenario is the Valley Nodes scenario. That being said, a combination of the Valley Nodes and Cross Valley Corridors is the scenario which has been documented and described in the final plan. This exercise illustrates the impact of land use on the transportation system of the region.

Table 4.11.1
Forecasted Travel Demand

Table 4.11.1 - TRIPS PER DAY – TREND SCENARIO			
Traffic Shed	Residential Trips	Employment Trips	Difference
A	59,170	47,355	-11,815
B	5,190	22,301	17,111
C	2,410	684	-1,726
D	32,300	0	-32,300
E	7,890	75,315	67,425
F	19,780	0	-19,780
G	11,072	65,766	54,694
H	19,600	366	-19,234
I	45,338	17,545	-27,793
J	29,196	47,117	17,921
K	30,676	11,476	-19,200
	262,622	**287,924**	**25,302**

Figure 4.11.1

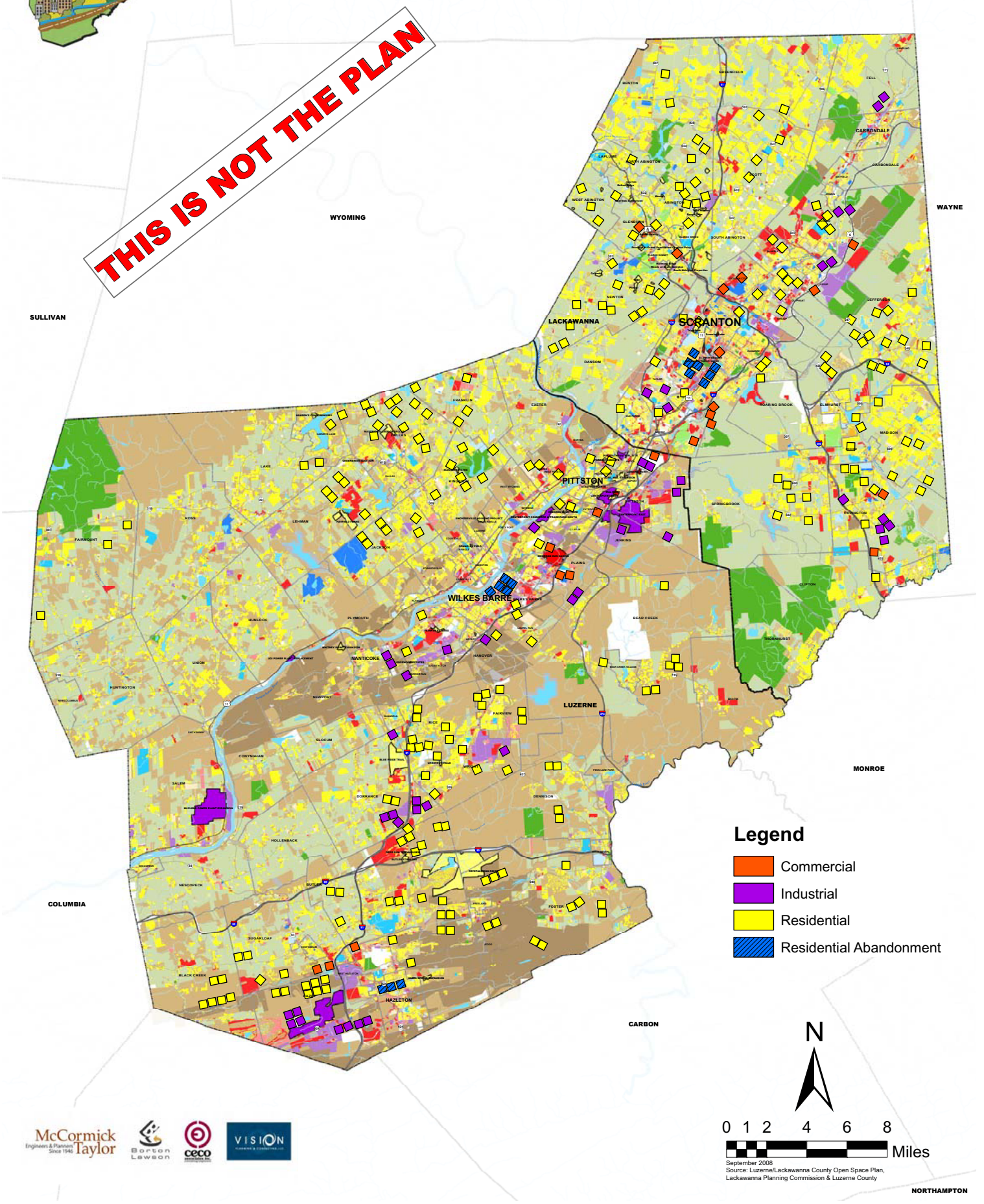
CORRIDOR TRAVEL ZONES



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Figure 4.11.2

TREND SCENARIO, 2008 - 2030



September 2008
Source: Luzerne/Lackawanna County Open Space Plan, Lackawanna Planning Commission & Luzerne County

Several public meetings and stakeholders meetings were held to review the Trend Scenario and develop three alternate land use scenarios described below. This scenario analysis illustrated that the most beneficial land use scenario for the region would focus development and create more urban centers and valley nodes within the region. Two land use scenarios resulted in the most balanced trip making characteristics and were most acceptable to the steering committee and the public. The trip making characteristics of each of the three land use scenarios are shown in ***Tables 4.11.2, 4.11.3,*** and ***4.11.4***. ***Figures 4.11.3, 4.11.4,*** and ***4.11.5*** are used to illustrate the three land use scenarios. The final plan resulted from modifications of these three scenarios and comments from the steering committee and the public.

Table 4.11.2 - TRIPS PER DAY – Cross Valley Corridors

Traffic Shed	Residential Trips	Employment Trips	Balance
A	38,570	35,781	-2,789
B	1,980	25,256	23,276
C	0	684	684
D	41,040	30,500	-10,540
E	34,660	56,114	21,454
F	2,890	0	-2,890
G	29,070	41,159	12,089
H	12,260	17,500	5,240
I	46,868	24,000	-22,868
J	18,746	18,042	-704
K	32,226	17,450	-14,776
TOTAL	**258,310**	**266,487**	**8,177**

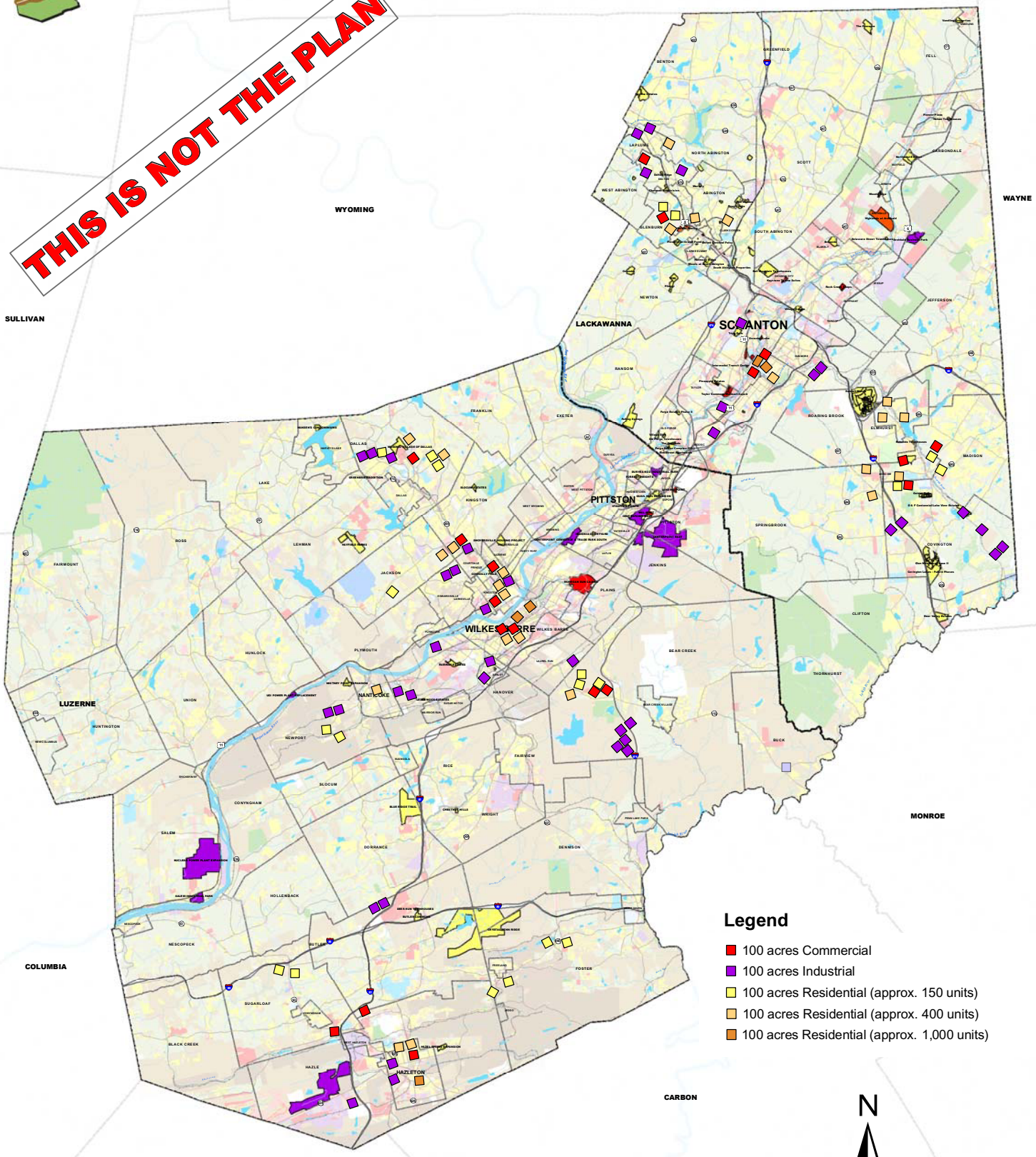
Table 4.11.3 - TRIPS PER DAY – Valley Nodes			
Traffic Shed	Residential Trips	Employment Trips	Difference
A	40,170	29,781	-10,389
B	9,980	26,756	16,776
C	0	3,684	3,684
D	15,440	5,000	-10,440
E	20,060	65,614	45,554
F	5,290	0	-5,290
G	45,870	49,159	3,289
H	5,860	0	-5,860
I	15,668	0	-15,668
J	46,946	40,542	-6,404
K	17,026	1,450	-15,576
	222,310	**221,987**	**-323**

Table 4.11.4 - TRIPS PER DAY – Urban Centers			
Traffic Shed	Residential Trips	Employment Trips	Balance
A	47,570	32,781	-14,789
B	380	22,256	21,876
C	0	684	684
D	17,040	1,500	-15,540
E	28,260	65,614	37,354
F	4,490	0	-4,490
G	43,470	49,159	5,689
H	5,860	0	-5,860
I	18,868	0	-18,868
J	24,346	24,542	196
K	13,026	1,450	-11,576
	203,310	**197,987**	**-5,323**

Figure 4.11.3

CROSS-VALLEY CORRIDORS ALTERNATIVE, 2008 - 2030

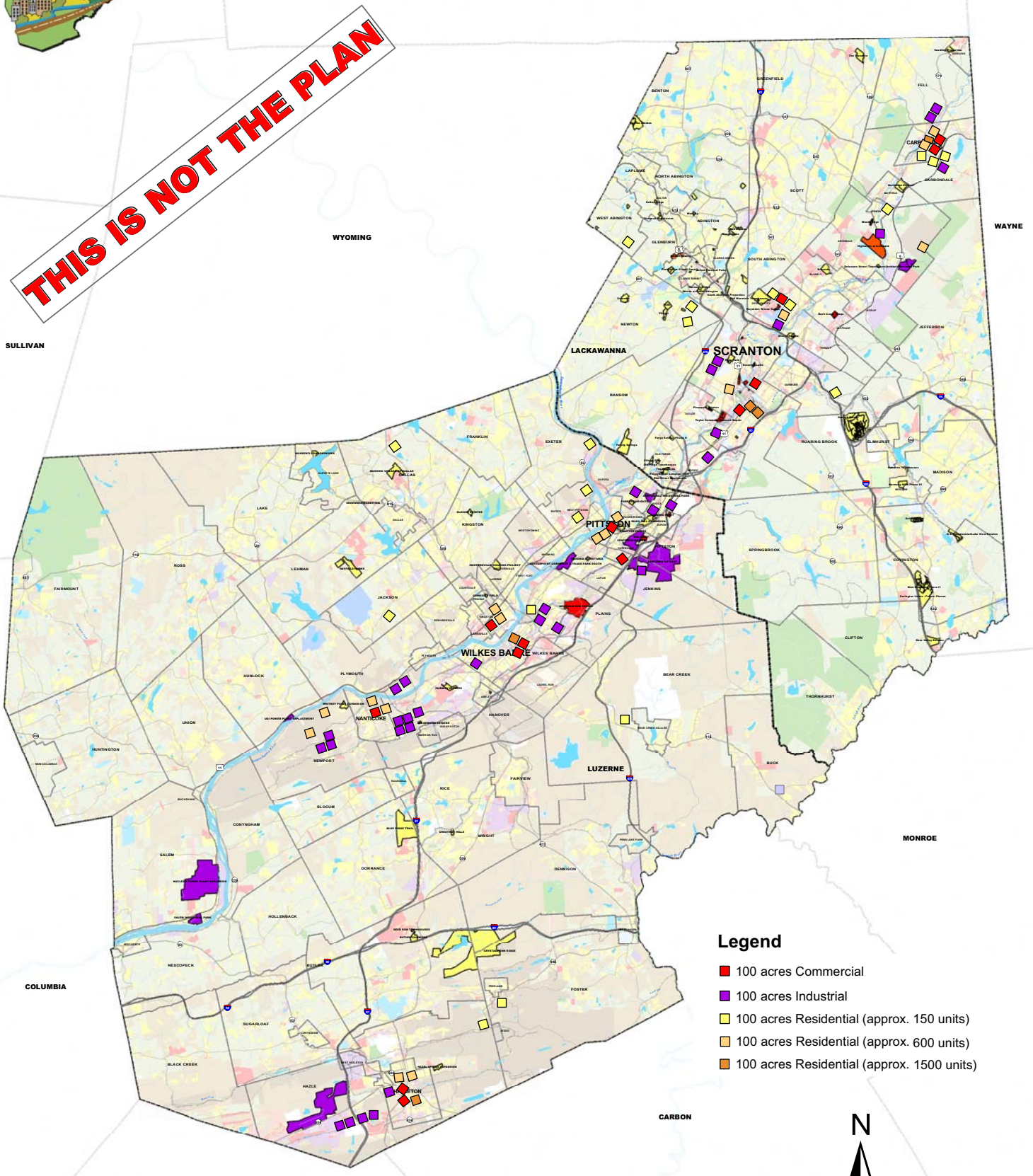
THIS IS NOT THE PLAN



November 2008
Source: Luzerne/Lackawanna County Open Space Plan, Lackawanna Planning Commission & Luzerne County

Figure 4.11.4

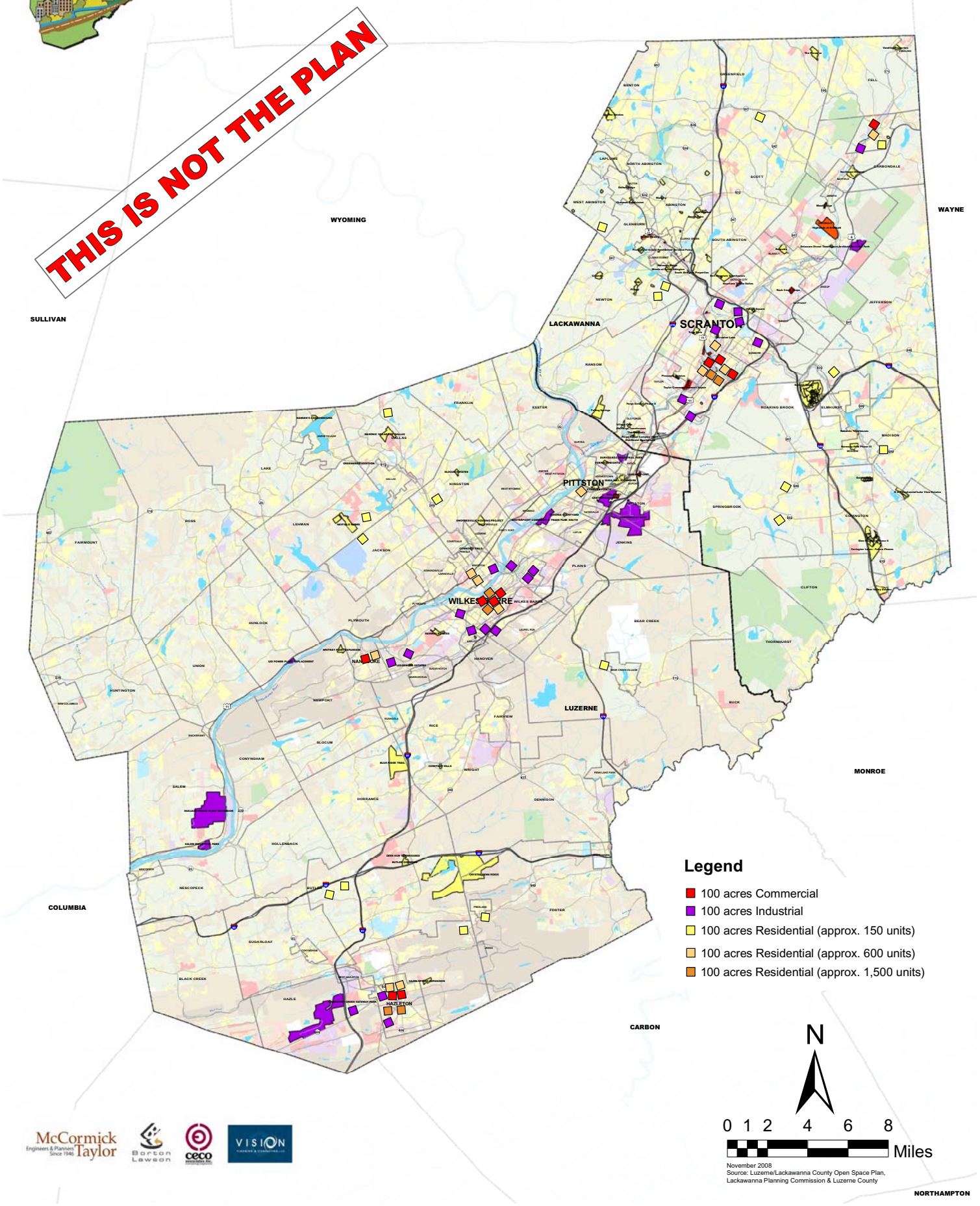
VALLEY NODES ALTERNATIVE, 2008 - 2030



November 2008
Source: Luzerne/Lackawanna County Open Space Plan, Lackawanna Planning Commission & Luzerne County

Figure 4.11.5

URBAN CENTERS ALTERNATIVE, 2008 - 2030



Transportation Needs Assessment

The Lackawanna Luzerne MPO has developed an asset management focus to its project selection and deployment scheme to be consistent with recent directives from the Governor and Transportation Secretary and reports from various funding commissions. The first critical piece of that focus was the development of the total need in the region to maintain the existing system. With the uncertainty of current funding targets and development of differing asset management guidelines for long range transportation plans underway, a range of line items were utilized in the development of the plan. It should also be noted that the first six years of projects were identified in the development of the plan and line items for asset management related tasks were established for years beyond six. To develop the dollar values for these line items, three different methodologies were compared:

One used the Transportation Funding and Reform Commission report which illustrated a need of $536 million per year for preservation only of the existing system. Assuming that Lackawanna Luzerne MPO is approximately 3% of the entire state, in terms of transportation revenue, this methodology would indicate an annual need of $25 million per year to address preservation activities, only.

A second was developed by the roadway and bridge staff at PennDOT District 4-0 and used historic bridge expenditures of $20 million per year for future estimates and a roadway assessment of $33 million per year to maintain the condition of the existing system.

A third was developed using the draft methodology for establishing asset management planning guidelines for long range plans being developed by the Program Center.

These tables have been included as ***Table 4.11.5*** and ***Table 4.11.6***. Table 4.11.5 summarized the total asset planning need for the region. Table 4.11.6 summarizes specific investment to meet the state SD Bridge goals in the region. Table 4.11.6 includes the current assessment of the number of bridges in the region that are structurally deficient, their deck areas, and the investment required to reach the current state SD bridge goals.

Table 4.11.5: Assets Management – SPLIT Steady State Capitol, Backlog Capitol and Steady State Maintenance

Asset Management - SPLIT Steady State Capitol, Backlog Capitol and Steady State Maintenance					
County Name	CO. No.	Pavement			
		Steady State Capitol	Backlog Capitol	Steady State Maintenance	Total Annual Costs
Lackawanna	35	$35,136,000	$12,904,290	$2,058,400	$50,098,690
Luzerne	40	$47,426,000	$13,121,910	$3,096,300	$63,644,210
		Bridge			
Lackawanna	35	$23,549,515	$6,200,119		$29,749,634
Luzerne	40	$31,591,173	$7,991,956		$39,583,129
		Retaining Walls			
Lackawanna	35	$0	$0		$0
Luzerne	40	$100,000	$0		$100,000
		Signals			
Lackawanna	35	$3,648,663			$3,648,663
Luzerne	40	$5,071,500			$5,071,500
		RPMs			
Lackawanna	35	$82,251			$82,251
Luzerne	40	$99,086			$99,086
		Paint Lines			
Lackawanna	35			$403,629	$403,629
Luzerne	40			$362,735	$362,735
		Traffic Management			
Lackawanna	35				$0
Luzerne	40				$0
		Signs			
Lackawanna	35	$264,425			$264,425
Luzerne	40	$271,075			$271,075
		Guide rail			
Lackawanna	35			$450,207	$450,207
Luzerne	40			$916,466	$916,466
		Drainage			
Lackawanna	35			$962,816	$962,816
Luzerne	40			$1,533,778	$1,533,778
		TOTAL			
Lackawanna	35	$62,680,854	$19,104,409	$3,471,423	$85,256,686
Luzerne	40	$84,558,834	$21,113,866	$5,546,544	$111,219,244

Steady State Capitol and Backlog Capitol are anticipated expenditures from TIP funds based on current condition of transportation assets to maintain them in a state of good repair. Steady State Maintenance is the required expenditures from the District Maintenance allocation.

Table 4.11.6: Specific investment to meet the state SD Bridge goals

Asset Management - Required Annual Bridge Work to Manage Existing Bridge Network

Lackawanna

State or Local	BPN	Count	Total Deck Area (Msf)	Aver. Bridge DA (sf)	Struct. Deficient Count	% SD by Count	SD-Deck Area (Msf)	% SD by Deck Area	Total Annual Bridge Work required to Reach SD Goals: Annual SD Bridge Improve. (count)	Annual SD Bridge Improve. (DA - msf)	Annual Non SD Bridge Rehab. (count)	Annual Non SD Bridge Rehab. (DA - msf)	Annual Non-SD Preserv. (millions)	Total Annual Funding Need for Bridges ($M)
State≥8'	1	100	0.9476	9,476	9	9.00%	0.1012	10.67%	1	0.0125	1	0.0065	$1.48	$9.60
State≥8'	2	54	0.3563	6,598	6	11.11%	0.0267	7.50%	1	0.0036	1	0.0036	$0.58	$4.32
State≥8'	3	147	0.5988	4,074	27	18.37%	0.1087	18.16%	3	0.0124	0	0.0000	$0.86	$8.90
State≥8'	4	112	0.2177	1,944	25	22.32%	0.0615	28.26%	2	0.0047	0	0.0000	$0.27	$3.33
Local≥20'		65	0.1790	2,754	30	46.15%	0.0789	44.08%	2	0.0047	0	0.0000	$0.18	$3.20
*Local<20'		33	0.0165	500					0	0.0002	0	0.0001	$0.03	$0.22
Total		**511**	**2.3160**		**97**		**0.3771**		**10**	**0.0380**	**1**	**0.0101**	**$3.39**	**$29.57**

* Assumed Value, based on ratio of state bridges <20'/state bridges >20' in county and average 500 sf deck area per bridge

Luzerne

State or Local	BPN	Count	Total Deck Area (Msf)	Aver. Bridge DA (sf)	Struct. Deficient Count	% SD by Count	SD-Deck Area (Msf)	% SD by Deck Area	Total Annual Bridge Work required to Reach SD Goals: Annual SD Bridge Improve. (count)	Annual SD Bridge Improve. (DA - msf)	Annual Non SD Bridge Rehab. (count)	Annual Non SD Bridge Rehab. (DA - msf)	Annual Non-SD Preserv. (millions)	Total Annual Funding Need for Bridges ($M)
State≥8'	1	108	0.6160	5,704	17	15.74%	0.1037	16.84%	2	0.0115	0	0.0008	$0.90	$8.39
State≥8'	2	36	0.7590	21,085	5	13.89%	0.0703	9.26%	0	0.0089	0	0.0063	$1.21	$9.51
State≥8'	3	228	1.2217	5,358	45	19.74%	0.1730	14.16%	4	0.0204	1	0.0041	$1.84	$16.70
State≥8'	4	190	0.2411	1,269	46	24.21%	0.0268	11.10%	3	0.0033	1	0.0015	$0.38	$3.12
Local≥20'		101	0.2348	2,324	47	46.53%	0.1200	51.13%	3	0.0065	0	0.0000	$0.20	$4.44
*Local<20'		70	0.0350	500					1	0.0005	0	0.0002	$0.06	$0.47
Total		**733**	**3.1076**		**160**		**0.4938**		**13**	**0.0511**	**3**	**0.0128**	**$4.57**	**$42.64**

* Assumed Value, based on ratio of state bridges <20'/state bridges >20' in county and average 500 sf deck area per bridge

The result of this analysis determined the asset management planning need for the long range plan. Projects have been defined for the first six years of the program and line items have been defined in the plan for the last 14 years of the plan.

Identifying Potential Transportation Problems and Projects

In addition to the asset management assessment that was completed, a transportation system assessment and public solicitation was completed as part of the plan development. Projects were solicited in a number of ways for consideration and prioritization in terms of the goals and objectives established by the MPO.

Current TIP and Long-Range Transportation Plan

The planning effort started with the list of projects from the current Draft TIP and the past Long-Range Transportation Plan. This list was cross classified with information from MPMS and PennDOT 4-0 relative to projects which had been completed or had a let date after June 2010.

System Evaluation & Transportation Problems

Specific areas and problems were identified from the analysis and assessment that was completed and described earlier in this Chapter. These problems were also spatially compared to each other and to existing projects already funded on the TIP to determine if any problems would be solved by a current project, or if problems could be grouped together into one more asset friendly project which would address a safety issue, a bridge issue and a roadway issue at the same time.

Transportation Segments of Importance

Additionally, an analysis was completed that attempted to group transportation segments (As defined by PennDOT) of importance or areas of the transportation system that needed public investment. This map (**Figure 4.11.6)** was created to identify segments or areas that may be targeted for public investment. These segments would not only address multiple transportation problems but would also help meet land use goals of the Plan. The methodology is described ***Table 4.11.7*** and the results of the analysis is described in ***Table 4.11.8*** and ***Figure 4.11.6***. This methodology allows us to look at critical transportation segments rather than looking at types of projects (i.e. Bridge, Roadway, CMAQ, Enhancement, etc.) ***Table 4.11.8*** and ***Figure 4.11.6*** illustrate the transportation network segments which met a specific number of criteria. The more criteria a certain segment met, the more important it would be for future investment.

Table 4.11.7
Criteria and Selection Summary for Segments of Importance

Criteria	Selection Summary
Segment includes a Structurally Deficient (SD) Bridge	176 total SD bridges in Two-County Area (i.e., SUFF_RATE < 50.00). • 97 SD bridges are on state roadway segments; 95 state roadway segments with SD Bridges were selected. • 79 SD bridges are on local roadways, and these bridges themselves are given a 7000-series SR number and a segment. However, these segments are generally not included in the State Routes Segment shape file. The exceptions include PA Turnpike roadways.
Segment has a crash rate that is more than 5 times the state average for similar segments	153 total segments in Two-County area with a crash rate more than 5 times the state average for similar segments (i.e., DELTA3 > 5.00). • 53 segments in Lackawanna County. • 100 segments in Luzerne County.
Segment includes a Crash Hot Spot	154 total segments in the Two-County Area overlap with a Crash Hot Spot. • 63 segments in Lackawanna County. • 91 segments in Luzerne County.
Segment with surface pavement that is more than 20 years old	248 total segments in the Two-County Area have surface pavement that is more than 20 years old (i.e., YR_RESURF < 1990). • About 20% of segments in the Two-County Area (more than 900 segments) have no documentation for the last resurfacing date.
Segment with an International Roughness Index (IRI) that is classified as "Poor"	367 total segments in the Two-County Area have an IRI rating of "Poor" (i.e., IRI_RANGE = "poor") • About 25% of segments in the Two-County Area (more than 1200 segments) have no documentation of IRI rating.
Segment that is within or crosses the boundary of a "Priority Infill Area" on the Land Use Plan	680 total segments in the Two-County Area are within, cross the boundary of, or provide primary transportation access to a "Priority Infill Area" on the Land Use Plan.

Source: : PennDOT, 2008; PennDOT District 4-0, 2008.

Table 4.11.8
Segments of Importance by Number of Criteria Met

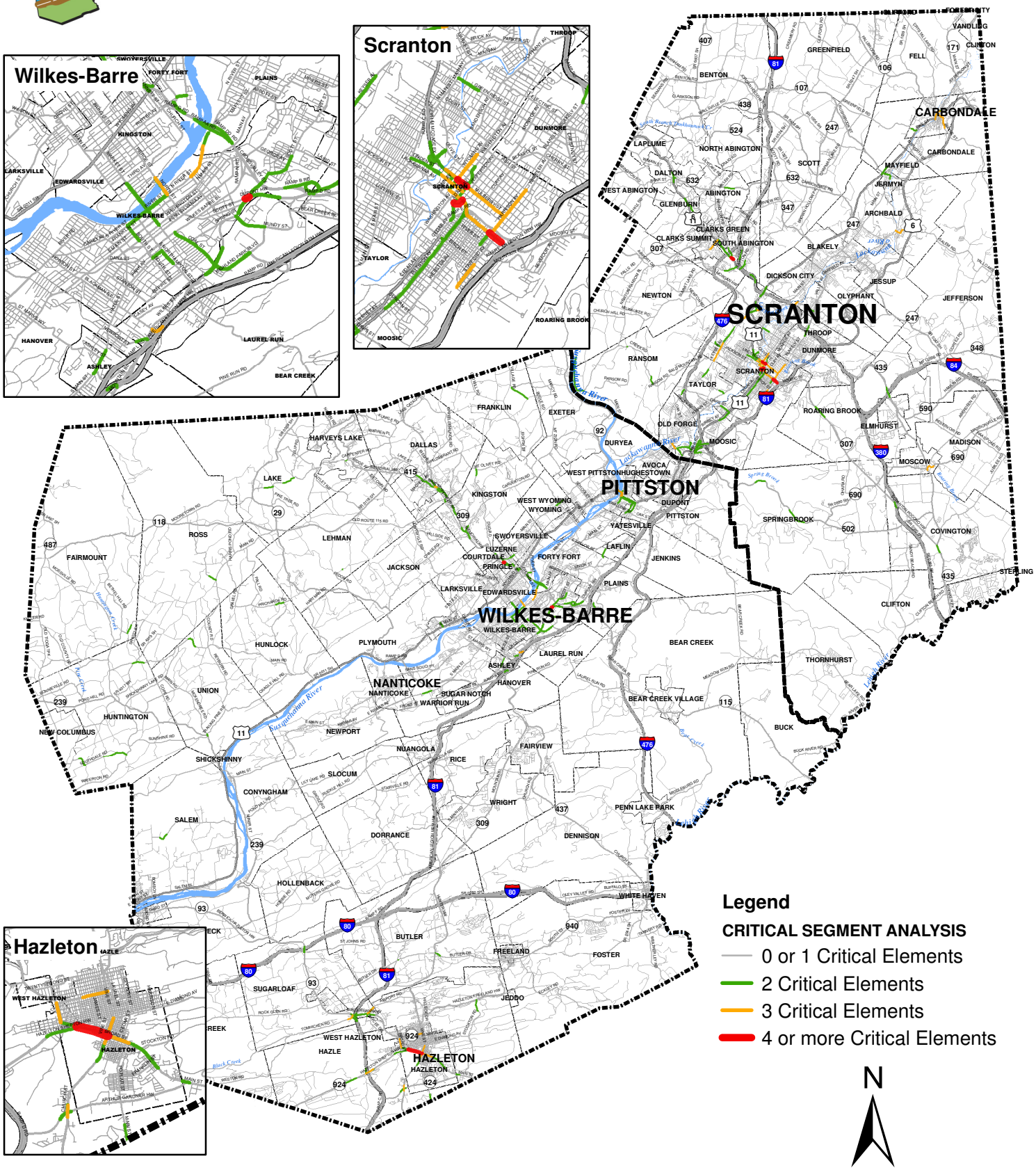
Number of Criteria Met	Number of Roadway Segments
0	3,396
1	1,101
2	208
3	46
4	28
5	2
6	0
Total Segments	**4,761**

Source: : PennDOT, 2008; PennDOT District 4-0,

LACKAWANNA-LUZERNE
COME, SHAPE THE FUTURE

CRITICAL SEGMENTS

Figure 4.11.6



June 2010
Source: Lackawanna & Luzerne Counties, PennDOT District 4-0, McCormick Taylor, Inc.

Solicitation for Other Transportation Projects

In addition to those problem areas and projects, the MPO committees were surveyed to identify any potential transportation problem areas. The survey and survey results are included in an appendix to this report.

Finally, local governments, the public and other stakeholders were asked to submit any candidate problems or projects for consideration in the plan.

Project Evaluation and Prioritization

In accordance with the goals and objectives of the long range plan steering committee and the goals and objectives of SAFETEA-LU and the Mobility Plan, all suggested problems or projects were evaluated using a project ranking criteria and GIS data and GIS analysis. This analysis has been documented in the GIS data book and included as an appendix to this document.

Using the GIS layers and representatives for the MPO, each candidate problem or project was evaluated in a series of meetings and discussions. The following six criteria (Goals described in Chapter 2) were utilized to place all candidate projects in a priority order for potential programming on the TIP. Once projects had been prioritized, funding levels and matching funds would enable projects to be selected from that list.

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency by increasing the accessibility and mobility options available to people and goods.

High Impact Projects - 3 Points	
• Improves access to existing regional activity centers which retain jobs	• On the Agricultural Access Network, Priority Commercial Network, Industrial/Commercial Access Network, or the PA Core Highway Network
• Improves access to airports in the county	• On interstate, arterial, or collector roads where total vehicle traffic is high: AADT > 10,000 vehicles/day
• Improves rail or vehicular access to existing freight distribution facilities or major industrial districts	• On interstate, arterial, or collector roads where heavy truck traffic is high: ADTT > 1,500 trucks/day
• New access to regional activity centers or abandoned/ undersized/ idle industrial or commercial centers which creates new jobs	
Medium Impact Projects - 2 Points	
• Transportation demand management strategies, programs, and incentives	• On arterial or collector roads where total vehicle traffic is high: AADT = 5,000 to 10,000 vehicles/day
	• On arterial or collector roads where heavy truck traffic is medium: ADTT = 700 to 1,500 trucks/day
Low Impact Projects - 1 Points	
• Supports mobility needs of business and industry that is not in an activity center	• Rehabilitation of existing access facilities
Not Applicable - 0 Points	
• Project Does Not Meet Characteristics or Criteria	

2. Increase the safety and security of the transportation system for motorized and non-motorized users.

High Impact Projects - 3 Points	
• Creates a new and appropriate evacuation route to a facility in the hazard mitigation plan	• Reduces crashes at interchanges, intersections, and/or roadway segments with crash rates more than double the statewide average: DELTA > 2.00
• Meets a Homeland Security Goal	• Bridge safety improvements on structurally deficient bridges: Sufficiency Rating < 50.0
• Creates security surrounding a transit facility	• Reduces crashes at intersections with pedestrian crashes
Medium Impact Projects - 2 Points	
• Updates or improves an existing evacuation route	• Reduces crashes at interchanges, intersections, and/or roadway segments with crash rates greater than the statewide average: DELTA of 1.01 to 2.00
• Partially meets a Homeland Security Goal	• Bridge safety improvements on bridges with medium sufficiency: Sufficiency Rating of 50.1 to 80.0
• Updates or improves security surrounding a transit facility	• On an Interstate diversion route
Low Impact Projects – 1 Points	
• Reduces crashes at interchanges, intersections, and/or roadway segments with crash rates less than the statewide average: DELTA < 1.00	• Bridge safety improvements on bridges with high sufficiency: Sufficiency Rating > 80.0
Not Applicable - 0 Points	
• Project Does Not Meet Characteristics or Criteria	

DELTA is the measure of how far a segment crash rate is over the statewide average for similar type of facility.

3. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and county planned growth and economic development patterns

High Impact Projects - 3 Points	
• Traffic calming (as appropriate by roadway class) within established neighborhood or activity center	• Preservation of wetlands
• Directly promotes shift from single-occupancy vehicles (SOV) with transit	• Preservation of existing greenway corridors
• Bus Replacement for vehicles beyond useful life – Transit bus = 12 years or 500,000 miles – Van = 4 years or 100,000 miles	• Bicycle/pedestrian facilities serving primarily transportation use
	• Significant reduction in the quantity and improvement to the quality of water runoff
	• Clean fuel buses/vehicles – alternative fuel infrastructure
• Detour length > 10 miles	• In "Priority" development area
Medium Impact Projects - 2 Points	
• Traffic calming (as appropriate by roadway class)	• Signal updating and interconnections
• Enhances efficiency of transit operators	• Wetlands banking/mitigation
• Minimal reduction in the quantity and improvement to the quality of water runoff	• Preservation of historic structures in national or state register, or of significant local interest
• Rehabilitation or reconstruction of transit vehicles or facilities that increases riders	• Bicycle/pedestrian facility within an established neighborhood or activity center
• Parking management	• Intersection channelization resulting in the reduction of stop and go traffic
• Detour length of 2 to 9 miles	• Park and ride lots
	• In "Mixed-Density Infill" development area
Low Impact Projects - 1 Points	
• New signal projects	• Noise barrier projects
• Performance/condition improvement of transit vehicles or facilities	• No significant change in quantity/quality of water runoff
• Detour length of < 2 miles	• In "Low-Density Infill" development area
Not Applicable - 0 Points	
• Project Does Not Meet Characteristics or Criteria	

4. Enhance integration and connectivity of the transportation system across and between modes, for people and freight, in an effort to promote efficiency in system management and operation.

High Impact Projects - 3 Points	
• Encourages Right of Way preservation in major regional corridors	• Park and Ride lots that are located more than 5 miles outside the urbanized area served and are served by transit
• Eliminates or overcomes major barrier in existing major regional corridor	• Bicycle/pedestrian facilities making intermodal linkages or regional connections, particularly in areas with a significant traditionally underserved population
• Provides gap closure in major regional corridor	• Development of intermodal transportation centers
• Intermodal transfer projects	
Medium Impact Projects - 2 Points	
• Encourages Right of Way preservation in minor regional corridor	• Park and Ride lots that are located up to 5 miles outside the urbanized area served
• Eliminates or overcomes minor barriers in an existing major regional corridor	• Transportation demand management strategies, programs, and incentives
• Provides gap closure in minor regional corridor	• Rehabilitation of intermodal transportation centers
Low Impact Projects - 1 Points	
• Eliminates or overcomes minor barriers in a minor regional corridor	• Park and ride lots located within the urbanized area served
• Provides gap closure in local corridor	
Not Applicable - 0 Points	
• Project Does Not Meet Characteristics or Criteria	

5. Emphasize preservation and connectivity of the existing transportation system (all modes).

High Impact Projects - 3 Points	
• Interstate with IRI Rating of "Poor" or "Fair" • National Highway System (NHS) Routes with IRI Rating of "Poor" • Any roadway with > 2,000 ADT and IRI Rating of "Poor"	• Identified as a high priority bridge project by PennDOT or municipality (local bridge) • Bridge safety improvements on structurally deficient bridges: Sufficiency Rating < 50.0
• Reconstruction or resurfacing of arterial highways	• Upgrade of a traffic signal system or corridor with more than 10 signals
• Existing transit facility replacement/rehab that prolongs useful life of assets (improves "substandard" or "poor" condition ratings)	• Transit vehicle replacement/rehab consistent with Federal Transit Administration (FTA) standards – Transit bus = 12 years or 500,000 miles – Vans = 4 years or 100,000 miles
• Maintains/preserves bicycle and pedestrian facilities particularly in the urban core	• Improvement/replacement of railroad grade crossings, including repair/replacement of warning signals or control devices
Medium Impact Projects - 2 Points	
• Interstate with IRI Rating of "Good" • National Highway System (NHS) Routes with IRI Rating of "Fair" or "Good" • Any roadway with > 2,000 ADT and IRI Rating of "Fair"	• Identified as a medium priority bridge project by PennDOT, or the municipality (local bridge) • Bridge safety improvements on bridges with medium sufficiency: Sufficiency Rating of 50.1 to 80.0
• Reconstruction of collector highways	• Upgrade of a traffic signal system, installation of a new traffic signal system, or realignment of an roadway/intersection that specifically enhances network connectivity
• Existing transit facility replacement/rehab that prolongs useful life of assets (improves "adequate" condition ratings)	• Roadway and bridge support infrastructure improvements (drainage, retaining, signal)
Low Impact Projects - 1 Points	
• Interstate with IRI Rating of "Excellent" • National Highway System (NHS) Routes with IRI Rating of "Excellent" • Any roadway with > 2,000 ADT and IRI Rating of "Good" or "Excellent"	• Bridge safety improvements on bridges with high sufficiency: Sufficiency Rating > 80.0
Not Applicable - 0 Points	
• Project Does Not Meet Characteristics or Criteria	

6. Ensure consistency with the fundamental principles of Title VI and Environmental Justice.

High Impact Projects - 3 Points	
• Address safety problems	• Located in a community with a high concentration of low-income and minority populations that exceed the Two-County averages
• Result in reduced truck traffic	
• Result in reduced noise impacts or the installation of noise walls	
• Improve accessibility to employment	
• Deliver safety and community enhancing benefits (e.g., sidewalks, safe routes to school, bicycle/pedestrian network improvements, congestion mitigation and air quality improvements)	
Medium Impact Projects - 2 Points	
• Avoids right-of-way acquisition	• Located in a community with a high concentration of low-income or minority population that exceeds the Two-County average
Low Impact Projects - 1 Points	
• Repairs roadways or bridges, unless the project would result in bringing more traffic into the neighborhood	• Located in a community with a high concentration of low-income or minority or other traditionally underserved population that exceeds the Two-County average
Not Applicable - 0 Points	
• Project Does Not Meet Characteristics or Criteria	

Project Candidate's Summary & Tracking

After projects were evaluated and ranked, project summary sheets were created for each candidate project for summarization and tracking purposes. Project sheets will remain with the MPO for use in future updates of the TIP and Long-Range plan. A sample project summary sheet is included as ***Figure 4.11.7.***

Each summary sheet contains project specific information, a description and specific information related to Traffic, Facility, Environment, and Community. Each project summary sheet also contains a map of the candidate project as well as priority ranking and cost/programming information where available. These sheets can be used for future planning and discussions with stakeholders and decision makers.

Figure 4.11.7 Sample Project Summary Sheet

MPMS#	**158**		
PROJECT:	**SR 2008 Bridges**		
COUNTY:	**Luzerne**	*CATEGORY:*	**BRIDGE**
MUNICIPALITY:	**Hanover**	*FUNCTIONAL CLASS:*	**16**
S.R.: **2008**	*Segment:* **0084**	*NHS:*	**No**

DESCRIPTION: Steel Girder bridges over PA 29

PROJECT NEED:

TRAFFIC		*FACILITY*		*ENVIRONMENT*		*COMMUNITY*		*PROJECT PRIORITY*	
AADT:	**8897**	*Bridges Affected:*	**1**	*Wetland:*	**Yes**	*Comp Plan Zone:*	**MDIA**	*Criteria 1:*	**2**
AATT:	**289**	*SD Bridge Present?*	**No**	*Streams:*	**No**	*Transit:*	**Yes**	*Criteria 2:*	**2**
Truck %:	**4**	*Min Sufficiency Rating:*	**69.8**	*Flood Plain:*	**No**	*EJ Pop:*	**Yes**	*Criteria 3:*	**2**
2009 V/C:	**0.26**	*Max Detour Length (miles):*	**1**	*Historic:*	**No**	*TUP Pop:*	**Yes**	*Criteria 4:*	**1**
2030 V/C:	**0.34**	*Min. IRI:*	**1**	*Section 4F:*	**No**			*Criteria 5:*	**3**
Crash DELTA:	**-9**	*Signals Affected:*	**0**	*Note:*				*Criteria 6:*	**2**
								TOTAL:	**12**
								RANK:	**98**

FUNDING SUMMARY

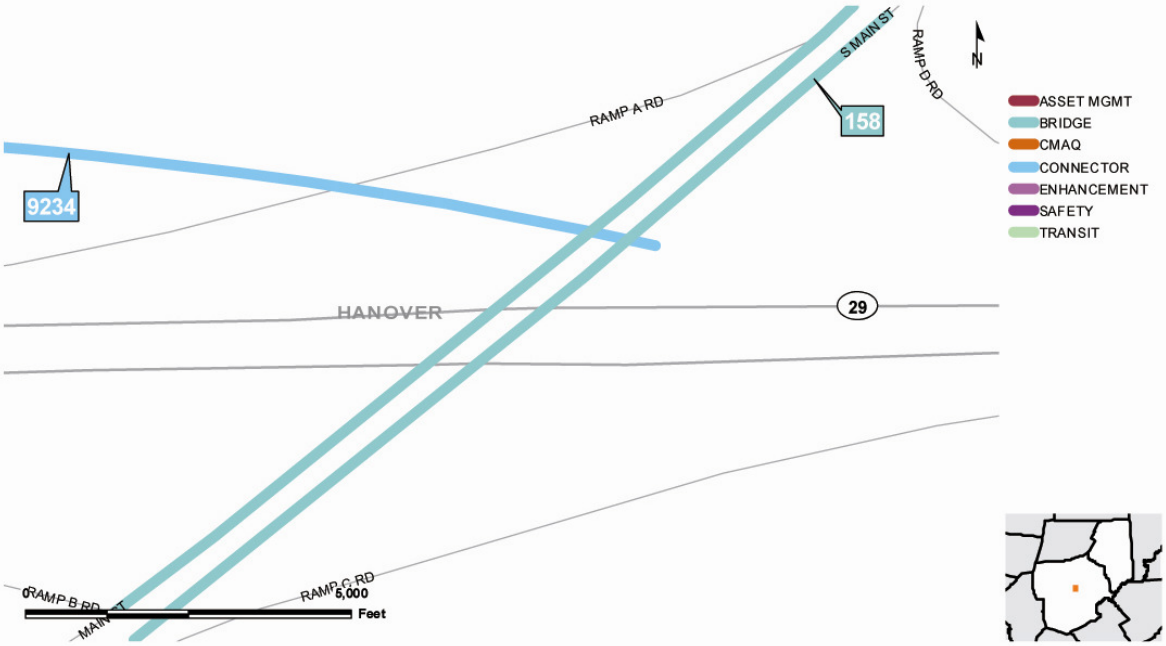
2011-2014 TIP	*2015-2016*	*2017-2018*	*2019-2022*	*2023-2030*	*TOTAL*
$0.00	**$3,458,000.00**	**$0.00**	**$0.00**	**$0.00**	**$3,458,000.00**

ESTIMATED DATES

Let:

Completion:

LOCATION



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Total Project Costs

In addition to the evaluation of projects/problems described above, the plan contains cost estimates for each project that had a scope defined that incorporated year of expenditure expectations as well as total project cost information as described in ***Figure 4.11.8.***

Figure 4.11.8
Sample Project Cost Estimate

Microsoft Excel - 200-US11-Keyser-Bus6 safety study

File Edit View Insert Format Tools Data Window Help

F47 =SUM(F30:F45)

	A	B	C	D	E	F
1					Base Year	2008
2	200-Safety study and improvements along US 11, Keyser Avenue, and Business				Build Year	2016
3	6 (interchanges & intersections) - 3 hot spots, high crash rates, ped crashes				Percent Increase	3.00%
4						
5		Existing Cross Section		Widening Cross Section		
6	EB Approach	Length		Length		No. of Lanes (total)
7		Width		Width		5
8	Description of work:					
9						
26		Mill/Overlay (SY)	0	Widening (SY)	0	
27						
28	Description			Quantity	Unit Cost	Total Cost
29	Clearing and Grubbing			1	$6,333.85	$6,333.85
37	Curb(LF)			0	$31.67	$0.00
38	Structures (SF)			0	$278.69	$0.00
39	Signalization (Level)			4	$190,015.51	$1,140,093.07
40	Pavement Markings(LF)			0	$6.71	$0.00
41	Signing (LS)			1	$6,333.85	$6,333.85
44	Survey and Construction Inspection			1	$19,001.55	$19,001.55
45	Maintenance and Protection of Traffic (LS) - 8%			2	$94,247.69	$188,495.39
46						
47			SUBTOTAL			$1,360,257.71
48			4% MOBILIZATION			$54,410.31
49			25% CONTINGENCY			$340,064.43
50			15% CONSTRUCTION ENGINEERING INSPECTION			$204,038.66
51			SUBTOTAL			$1,958,771.11
52			10% DESIGN COSTS			$195,877.11
53			UTILITIES			$300,000.00
54			RIGHT-OF-WAY ESTIMATE			$100,000.00
55			TOTAL			$2,554,648.22
56						

2008 Unit Prices / Signals / Clearing and Grubbing / Stormwater Management / Survey and Constr. Inspection

Ready

Air-Quality Conformity Analysis

The Environmental Protection Agency (EPA) has established health-based standards for six criteria air pollutants, referred to as the National Ambient Air Quality Standards (NAAQS). Air Quality in the Lackawanna-Luzerne MPO region meets the standards for all of these criteria.

The Clean Air Act requires Lackawanna-Luzerne MPO to demonstrate that the transportation projects contained in the TIPs and Plan contribute to the region's air quality improvement goals. The process of this demonstration is referred to as transportation conformity and applies to regions that do not meet or previously have not met air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide. The consultation group reviews the list of transportation projects, agrees on the planning assumptions, such as population and employment forecasts, and agrees on the emission model inputs before the conformity analysis is conducted.

Lackawanna-Luzerne MPO has successfully demonstrated the air quality conformity of the Plan and the TIPs in accordance with the state implementation plan and Clean Air Act requirements.

4.12 Transportation Funding Challenges

A key component of any Metropolitan Planning Organization's long-range plan is a vision for how the region will invest in transportation over the life of the plan. Federal regulations require that regional long-range transportation plans be fiscally constrained. This means that total transportation expenditures identified in a long-range plan must not exceed the total revenues reasonably expected to be available for the region over the life of the Plan.

The Lackawanna-Luzerne MPO worked in consultation with its federal, state, local, transit, and operating authority partners to develop the financial plan and set of transportation investments. This plan identifies the level of expenditure for all transportation infrastructure that is needed to achieve and maintain a state of good repair without considering fiscal constraint to be aligned with current FHWA, PennDOT and transit agency policies. Additionally, this plan assumes an asset management focus and accordingly, more funding on maintaining the existing roadway and transit networks. The goal is to achieve and maintain a state of good repair for existing transportation infrastructure before undertaking significant expansions to the system. Any new capacity adding projects will be focused on making key circulation connections and will be consistent with the two county land use goals set forth in this document.

To estimate revenue for the Plan, all federal and state funding sources were identified through the year 2035. Reasonably expected revenues were then allocated to the different expenditure categories based on policy and identified need. Need is much greater than available revenue. The funding deficit will be much greater if the full need for system expansion is also considered. Federal requirements dictate that fiscal constraint be determined using year-of- expenditure (YOE) dollars so that inflation is accounted for when determining project costs. A projected inflationary factor converts current year dollars to YOE dollars by using a compound annual inflation rate.

To assure better fiscal alignment between the current Transportation Improvement Program (TIP) and the fiscally constrained long range transportation plan, the following time periods were established. The four years of the draft TIP (2011-2014) are developed in one year time periods. The next four years of the TYP are allocated in two, two year periods (2015-2016 and 2017-2018). The last four years of the TYP is included in the 2019-2022 time period. The final thirteen years of the LRTP are included in the 2023-2035 time frame.

Revenue Assumptions and Estimates

Preparation of this financial plan revenue estimate included a review of historical data and trends, including the statewide 2011 Program Update Financial Guidance Documents from Pennsylvania, previous statewide transportation improvement programs (STIPs) information from state DOTs and transit agencies, FHWA SAFETEA-LU planning guidance, and other relevant materials. All planning principles and financial assumptions in identifying federal and state financial resources are developed with and reviewed by federal, state, and transit partners.

Revenue Assumptions

Revenue estimates are for capital project expenditures only and do not include any operating funds. All revenue amounts are in YOE dollars, as required by federal regulations. No new or undefined funding sources are recognized in the fiscally constrained Plan.(i.e. tolls on existing facilities, public private partnerships)

Federal Funding

For the funding scenario for the Lackawanna Luzerne Regional Plan a four percent per year increase in federal funding and an assumption that I-80 will not be tolled has been included. Based on financial guidance distributed by the Program Center a three percent YOE was used for all project estimates

The current federal transportation bill, SAFETEA-LU, expired in September 2009. This bill allocated $294 billion in federal transportation dollars over a six-year period from FY 2004 to FY 2009. The next transportation act was scheduled for October 2009; but has not been acted on to date by Congress. The proposed transportation reauthorization seems to indicate a dramatic increase in federal funding with the next federal reauthorization and more flexibility for the States. With this uncertainty, no increase in funding has been assumed but a substantial list of potential projects has been identified to keep the plan as fluid and responsive as possible.

Additionally, new funding categories have been proposed at the federal level to reduce the current divisions of federal funding into four less complicated categories. The following is excerpted from the Committee on Transportation and Infrastructure, “A Blueprint for Investment and Reform.”

Consolidate and Simplify Programs

To ensure that the national objectives and priorities are best addressed, the draft Surface Transportation Authorization Act consolidates or terminates more than **75** programs. Most highway funding will be provided under four, core formula categories:

- **Critical Asset Investment** – Consolidates the existing Interstate Maintenance program, National Highway System program, and Highway Bridge program into one streamlined, outcome-based Critical Asset Investment program whose goal is to bring the highways and bridges on the NHS (including the Interstate System) to a state of good repair and maintain that condition.
- **Highway Safety Improvement** – Restructures the Highway Safety Improvement program to focus on reducing motor vehicle crash fatalities and injuries on the nation’s highways, grade-crossings, and rural roads by investing in improvements to remove or lessen roadway safety hazards

- **Surface Transportation** – Provides States with surface transportation funding through a flexible program that enables States and metropolitan regions to address state-specific needs, including new highway and transit capacity. The program is intended to facilitate local decision-making and participation by increasing the role of communities.
- **Congestion Mitigation and Air Quality Improvement (CMAQ)** – Restructures the CMAQ program to fund projects that improve air quality, reduce congestion, and improve public health and the livability of communities.

Similar consolidations are being proposed for programs in the Federal Transit Administration (FTA), National Highway Traffic Safety Administration (NHTSA), and the Federal Motor Carrier Safety Administration (FMCSA). Establishing core categories with specific performance objectives will simplify Federal surface transportation programs, and provide States, metropolitan regions, and public transit agencies with flexibility to identify the best approach to achieve the specific national performance objectives.

State Funding

In July 2007, the Commonwealth of Pennsylvania passed Act 44, which dramatically increased transportation funding in the Commonwealth. Act 44 established for the first time ever an inflation sensitive, long-term funding stream to address Pennsylvania's transportation funding crisis. Based on traffic and revenue forecasts, the Act provides minimum payments to PennDOT of **$83.3 billion over a 50-year period** for transportation maintenance and improvements in Pennsylvania by:

- Increasing existing Mainline Turnpike Tolls,
- Converting I-80 to a tolled facility, and
- Issuing Monetization Bonds based on future I-80 toll revenues.

Adding tolls to I-80 required FHWA approval and the Commonwealth's application was rejected. Without I-80 tolling, increased funding levels are capped at $250 million per year for transit and $200 million per year for roads and bridges beginning in FY 2011.

This plan's revenue assumptions are based on the guaranteed funding levels in Act 44 that occur without tolling. New Act 44 funds, based on the turnpike lease agreement with the PTC, are capped at $450 million. There are no annual increases on the lease payment amounts in the current legislation. Existing, non-Act 44 Commonwealth of Pennsylvania funding levels are estimated to grow at a rate of three percent compounded annually.

Act 44 also created a new Public Transit Trust Fund (PTTF), which receives funding from the state sales tax, lottery revenues, payments from the PTC, and other tax monies. The turnpike lease provides funds for the Section 1514 Transit Capital Asset Management program of Act 44. These are state discretionary funds with guaranteed levels of $50 million in FY 2008, $100 million in FY 2009, and $150 million in FY 2010. In FY 2011, this program will not be funded. The state also grants $125 million in annual transit bond funds under Section 1514. Section 1517 Transit Capital Improvements Program funds come from the 4.4 percent of the state sales tax that is dedicated to transit.

Estimated Revenue for the Plan

Federal and state funding allocation formulas, along with anticipated local match requirements, were used to develop the revenue estimates for the Plan. The Plan anticipates $1.5 billion YOE dollars in total federal and state. Revenue assumptions are shown in ***Table 4.12.1*** allocation of that revenue is shown in ***Table 4.12.2***

Table 4.12.1 Revenue

FUNDING	%	2011	2012	2013	2014	2015-2016	2017-2018	2019-2022	2023-2035	TOTALS
BRIDGE PROJECTS		91,001,421				39,658,396	14,934,000	5,759,358	17,278,073	168,631,247
CMAQ PROJECTS		31,141,867				14,950,915	17,091,000	17,880,000	0	81,063,782
ENHANCEMENT PROJECTS		3,862,000				0	850,000	0	0	4,712,000
INTERSTATE PROJECTS		500,000				25,000,000	25,000,000	0	30,000,000	80,500,000
ITS PROJECTS		648,960				2,250,000	3,800,000	2,350,000	0	9,048,960
ASSET MGMT PROJECTS		39,441,767				17,752,764	17,752,764	0	0	74,947,295
SAFETY PROJECTS		58,573,163				3,044,999	6,244,999	2,100,000	0	69,963,160
CONNECTOR PROJECTS		27,132,544				15,059,474	14,859,474	5,250,000	31,750,000	94,051,492
BRIDGE RESERVE		0				0	22,000,000	99,000,000	350,000,000	471,000,000
CMAQ RESERVE		0				0	0	8,500,000	170,000,000	178,500,000
ENHANCEMENT RESERVE		0				1,500,000	1,200,000	5,000,000	20,000,000	27,700,000
INTERSTATE RESERVE		0				0	0	0	100,000,000	100,000,000
ITS RESERVE		0				0	0	0	40,000,000	40,000,000
ASSET MGMT RESERVE		0				10,000,000	20,000,000	150,000,000	450,000,000	630,000,000
SAFETY RESERVE		0				0	0	8,000,000	85,000,000	93,000,000
CONNECTOR RESERVE		0				0	0	0	65,000,000	65,000,000
TOTAL PROJECTS		252,301,722				117,716,548	100,532,237	33,339,358	79,028,073	582,917,936
TOTAL RESERVE		0				11,500,000	43,200,000	270,500,000	1,280,000,000	1,605,200,000
TOTAL PROJECTS + RESERVE		252,301,722				129,216,548	143,732,237	303,839,358	1,359,028,073	2,188,117,936
		112.4%				105.8%	108.8%	102.1%	99.7%	
TOTAL ALLOCATION		224,449,000				122,180,822	132,150,778	297,531,999	1,362,853,733	2,139,166,332

Note: Base Allocation is the assumed Highway and Bridge base allocation for the region.

Table 4.12.2 Expenditures

FUNDING	%	2011	2012	2013	2014	2015-2016	2017-2018	2019-2022	2023-2035	TOTALS
BRIDGE PROJECTS		91,001,421				39,658,396	14,934,000	5,759,358	17,278,073	168,631,247
CMAQ PROJECTS		31,141,867				14,950,915	17,091,000	17,880,000	0	81,063,782
ENHANCEMENT PROJECTS		3,862,000				0	850,000	0	0	4,712,000
INTERSTATE PROJECTS		500,000				25,000,000	25,000,000	0	30,000,000	80,500,000
ITS PROJECTS		648,960				2,250,000	3,800,000	2,350,000	0	9,048,960
ASSET MGMT PROJECTS		39,441,767				17,752,764	17,752,764	0	0	74,947,295
SAFETY PROJECTS		58,573,163				3,044,999	6,244,999	2,100,000	0	69,963,160
CONNECTOR PROJECTS		27,132,544				15,059,474	14,859,474	5,250,000	31,750,000	94,051,492
BRIDGE RESERVE		0				0	22,000,000	99,000,000	350,000,000	471,000,000
CMAQ RESERVE		0				0	0	8,500,000	170,000,000	178,500,000
ENHANCEMENT RESERVE		0				1,500,000	1,200,000	5,000,000	20,000,000	27,700,000
INTERSTATE RESERVE		0				0	0	0	100,000,000	100,000,000
ITS RESERVE		0				0	0	0	40,000,000	40,000,000
ASSET MGMT RESERVE		0				10,000,000	20,000,000	150,000,000	450,000,000	630,000,000
SAFETY RESERVE		0				0	0	8,000,000	85,000,000	93,000,000
CONNECTOR RESERVE		0				0	0	0	65,000,000	65,000,000
TOTAL PROJECTS		252,301,722				117,716,548	100,532,237	33,339,358	79,028,073	582,917,936
TOTAL RESERVE		0				11,500,000	43,200,000	270,500,000	1,280,000,000	1,605,200,000
TOTAL PROJECTS + RESERVE		252,301,722				129,216,548	143,732,237	303,839,358	1,359,028,073	2,188,117,936
		112.4%				105.8%	108.8%	102.1%	99.7%	
TOTAL ALLOCATION		224,449,000				122,180,822	132,150,778	297,531,999	1,362,853,733	2,139,166,332
TRANSIT PROJECTS		87,973,474				29,600,000	31,400,000	69,000,000	153,000,000	370,973,474
TRANSIT RESERVE		0				0	0	0	110,000,000	
TOTAL TRANSIT PROJECTS +RESERVE		87,973,474				29,600,000	31,400,000	69,000,000	263,000,000	480,973,474
		165.2%				106.9%	107.5%	109.1%	101.9%	
TOTAL TRANSIT ALLOCATION		53,244,000				27,697,700	29,196,503	63,218,221	258,176,162	431,532,586

CHAPTER 5

OUTREACH AND COORDINATION

Introduction

Involving stakeholders in the development of a regional planning project is essential. If any community planning effort is to be successful, those who live, work and recreate in the community must be engaged in a dialogue with planners. It is important to learn what the stakeholders' value, what challenges exist, and their overall vision for the future.

The *Lackawanna-Luzerne Regional Plan* project team employed a public outreach program comprised of strategies to glean valuable information from stakeholders and to educate the public as to the importance of planning. In addition to an ongoing dialogue with the public, consistent coordination with government regulatory agencies involved in the planning and transportation development process provided the project teams with important information and guidance through each required step of the undertaking.

Throughout the development of the Regional Plan, the two counties weaved public outreach into the planning activities to ensure the final documents reflect a shared view for the future of the region.

Detailed here is information regarding the public outreach and agency coordination program for both the Comprehensive Plan and the Long-Range Transportation Plan components of the *Lackawanna-Luzerne Regional Plan*.

Components of the Public Outreach Program

The Public Outreach Program was designed to be integrated throughout the Plan development – from the project initiation through implementation. The program was both universal in its engagement of the community throughout the planning process, and included elements unique to each component plan to ensure federal compliance with Environmental Justice/Title VI outreach requirements.

The overall Public Outreach Program followed a multi-fold approach for community engagement and dialogue. First, the two counties established working committees that were comprised of technical staff; state, county and municipal agency and resource personnel; elected officials; community leaders; educational institutions; business organizations; media outlets; local and regional stakeholders; and special interest groups. These committees met regularly throughout the planning process, and provided the counties support and guidance regarding development of the Comprehensive Plan and the Long-Range Transportation Plan components of the *Lackawanna-Luzerne Regional Plan.* (Public outreach for the preparation of the Hazard Mitigation Plan also occurred as part of this Public Outreach Program).

Public Involvement Program Elements

Dissemination of Information

Focus Group Sessions

Committee Meetings & Workshops

Targeted Public Coordination

Public Information Meetings

Another facet of the outreach effort included the preparation and dissemination of information throughout the two counties. Several communication methods were used, including printed materials such as fact sheets, press releases and mapping, as well as electronic media, including a one-stop website for the two counties' planning activities, PowerPoint presentations, and narrated videos. A significant component of the outreach program included direct dialogue with citizens in the two counties through tailored public coordination activities. This dialogue occurred during initial stakeholder focus group sessions, at regularly-scheduled working committee meetings, at regularly-scheduled public information meetings, during ongoing field views, as well as through targeted phone calls and e-mails.

Dissemination of Information

County officials engaged citizens throughout the two counties through a series of electronic and printed materials, designed to foster awareness and understanding of the planning process, and encourage input and feedback. It was crucial that the outreach include all facets of the population, including underserved and potentially vulnerable populations, such as the elderly, low-income and minority populations.

A project website was established under the link www.lackawanna-luzerneplans.com. This website address was included on all outreach materials and press releases for public consumption. The website served as a portal for information on the Regional Plan. As planning activities progressed, the site was regularly updated to include the latest information and activities, including: the Work Program Schedule for the Regional Plan; copies of draft reports; links to public meeting videos and PowerPoint Presentations; news articles; committee members; maps; technical documents and contact information. A dialogue box was also established to ensure residents and site visitors could leave comments, request information or become added to the general mailing list. In addition, materials consistent with the website text and information were prepared for distribution via PowerPoint presentations, videos, fact sheets, comments forms, press releases and in letters to local officials. Planning team members regularly reviewed these materials, and made updates as necessary. A screen shot of the website is shown below.

Public Outreach and the Work Program Schedule

The three-fold approach to the Public Outreach Program was integrated into all four phases of Plan development. Outreach and coordination activities began at the inception of the planning process, and specific public involvement tools were employed at key milestones within each phase. These included:

Phase A – Data Collection

The Data Collection Phase consisted of two Comprehensive Plan Committee meetings, Stakeholder Focus Group sessions, presentations to the MPO's Coordinating and Technical Committees; and one round of three Public Information Meetings.

Phase B – Visioning

The Visioning Phase consisted of one Comprehensive Plan Committee meeting, one combination Comprehensive Plan Committee meeting/Visioning workshop, one presentation to the MPO's Coordinating and Technical Committees; one round of three Public Information Meetings; and two Transportation Project Ranking meetings.

Phase C – Draft Plan

The Draft Plan Phase consisted of two Comprehensive Plan Committee meetings, presentations to the MPO's Coordinating and Technical Committees; and one round of three Public Information Meetings.

Phase D – Final Plan

The Final Plan Phase consisted of one presentation to the MPO's Coordinating and Technical Committees and one Joint County Public Hearing.

Comprehensive Plan Committee Meetings and Visioning Workshop

To assist in the development of the Regional Plan, a Comprehensive Plan Committee was formed to hold regular workshops throughout plan preparation and development. The Committee met at key milestones during the planning process, and was charged with reviewing draft materials and providing comments back to the team. Committee members participated in all phases of Plan development for the two-county area.

Comprised of representatives of community and professional organizations, government agencies, and public, the Comprehensive Plan Committee provided vital input throughout development of the Plan. The first Committee meeting, held on November 1, 2007, was attended by approximately 60 people from the two-county area. These participants represented various interest groups, including representatives from EJ and Title VI populations.

The second Comprehensive Plan Committee meeting for Phase A was held on September 23, 2008. This meeting marked the conclusion of the data collection phase and solicited input on the trend scenario and alternate development ideas for land use and transportation as the process began to move into Phase B – Visioning.

A December 3, 2008 event was both the third Comprehensive Plan Committee Meeting and a Visioning Workshop. Attendees focused on the revitalization of the downtowns and with a renewed emphasis on transit, all which would be beneficial to EJ and Title VI populations. Based on input received at this workshop, the Plan evolved into comprehensive and long-range transportation plans more focused on a multimodal approach and sustainable future. This was the first move toward adjusting goals and objectives and incorporating selection criteria for project prioritization that would focus on rehabilitating existing infrastructure and look to facilitate multimodal investment and connections.

At the fourth Comprehensive Plan Committee Meeting held on June 9, 2009, the team presented the draft preliminary land use plan and multimodal concept that focused on Bus Rapid Transit (BRT) and transit service investment in the two-county area. Emphasized here, was the need for reinvestment in the core areas and the detailed review of development areas for future transportation and development investment.

The 88 organizations serving on the Steering Committee included the following entities:

- Abington Heights School District
- Anthracite Region Center for Independent Living, Ltd. (ARCIL)
- Anthracite Scenic Trails Association
- Area Agency on Aging
- Bear Creek Township
- Bethel AME Church
- Butler Enterprises, Inc.
- Butler Township
- Can-DO, Inc.
- Century 21 Sherlock Holmes
- City of Carbondale
- City of Hazleton
- City of Nanticoke
- City of Pittston
- City of Scranton
- City of Wilkes-Barre
- Countryside Conservancy
- Covington Township
- Crestwood School District
- Dallas Borough
- Diversified Information Technology
- Dunmore Borough
- Earth Conservancy
- Exeter Borough
- Greater Wilkes-Barre Chamber of Business & Industry
- Great Valley Technology Alliance
- Greater Hazleton Area Civic Partnership
- Greater Hazleton Chamber of Commerce
- Greater Pittston Chamber of Commerce
- Greater Wilkes-Barre Chamber of Business & Industry
- Greco Holdings
- Hanover Township
- Hazle Township
- Hazleton Area School District
- Jenkins Township
- Jermyn Borough
- Jessup Borough
- Joint Urban Studies Coalition
- Kingston Borough
- Ken Pollock Apartments

- Lackawanna College
- Lackawanna County Conservation District
- Lackawanna County Council on Education & Culture
- Lackawanna County Emergency Management Agency
- Lackawanna County Heritage Valley Authority
- Lackawanna County Regional Planning Commission
- Lackawanna County Visitors Bureau
- Lackawanna River Corridor Association
- Luzerne Conservation District
- Luzerne County Agricultural Board
- Luzerne County Community College
- Luzerne County Convention & Visitors Bureau
- Luzerne County Historical Society
- Luzerne County Housing Partnership
- Luzerne County Penn State Extension Service
- Luzerne County Planning Commission
- Marywood University
- Mericle Commercial Real Estate
- Mountain Council of Governments
- NEPA Pennsylvania Environmental Council
- Nescopeck Township
- Newton Township
- North Branch Land Trust
- North Pocono Council of Governments
- North Pocono School District
- Northeast Counseling Services
- Northeastern Pennsylvania Alliance (NEPA)
- Northeastern Pennsylvania Technology Institute
- PA Society of Professional Engineers - Luzerne County Chapter
- Penn State Cooperative Extension
- Penn State University - Wilkes-Barre
- PennStar Bank
- Plains Township
- PROUD - People Regardless Of Our Disabilities
- Rice Township
- Scranton Chamber of Commerce / SLIBCO
- Scranton School District
- Scranton-Abingtons Planning Association
- Sierra Club
- Taylor Borough
- The Lands at Hillside Farms
- The Nature Conservancy Northeast PA Office
- Spring Brook Township
- University of Scranton
- Valley View School District
- Wilkes University
- Wilkes-Barre Chapter NAACP
- Wright Township

In addition to the organizations listed above, the Pennsylvania Department of Community and Economic Development (DCED), the Pennsylvania Department of Conservation and Natural Resources (DCNR), the Pennsylvania Department of Transportation (PennDOT) and the Pennsylvania Emergency Management Agency (PEMA) were invited to all Comprehensive Plan Committee meetings (***Table 5.1.1***).

Table 5.1.1
Comprehensive Plan Committee Meetings

	Date	Time	Location
Meeting No. 1	November 1, 2007	6 to 9 p.m.	Tribeca Center (Quality Inn & Suites), Pittston, PA
Meeting No. 2	September 23, 2008	6 to 9 p.m.	Tribeca Center (Quality Inn & Suites), Pittston, PA
Meeting No. 3	December 3, 2008	6 to 9 p.m.	Tribeca Center (Quality Inn & Suites), Pittston, PA
Meeting No. 4	June 9, 2009	6 to 9 p.m.	Tribeca Center (Quality Inn & Suites), Pittston, PA

Stakeholder Focus Groups

After an initial review of relevant reports and other materials, Lackawanna and Luzerne Counties facilitated a series of focus group sessions with local stakeholders comprised of residents, business owners, and local officials for in-depth discussions of relevant issues, perceptions, and conditions in the region. These stakeholder focus groups occurred during the early part of the planning process as part of the planning team's examination of existing conditions in the counties. The stakeholder focus groups examined a variety of topics for inclusion in the Plan, such as traffic, historic preservation, land development, open space, and conservation issues.

Stakeholder focus group sessions were held in January 2008 at the Scranton Cultural Center and at the Luzerne County Emergency Management Agency Building (***Table 5.1.2***). Focus group categories included Transportation, Utilities, Land Development & Housing, Historic Preservation, Economic Revitalization, and Natural Resource Protection & Open Space Conservation.

During the focus group discussions, planning team members presented the planning process underway and asked participants to offer comment on existing conditions in the two-county area, including opportunities for improvement and community-defined goals and objectives. Focus group discussions also included an overview of the next steps in the planning process, including how information gathered during the focus group discussions will be integrated into the Plan.

Focus group participants included representatives from the following organizations and agencies:

- AAA NorthPenn
- Abington Heights School District
- Agriculture in West Abington
- Alliance Landfill / Waste Management
- Architectural Heritage Association
- Butler Enterprises Inc.
- City of Carbondale
- City of Hazleton
- Civic Partnership
- Commission on Economic Opportunity
- Countryside Conservancy
- County of Lackawanna Transit System (COLTS)
- Department of Community and Economic Development
- Department of Conservation and Natural Resources - NE Regional Office
- Department of Environmental Protection
- Earth Conservancy
- Eastern PA Coalition for Abandoned Mine Reclamation
- Friends of the Nescopeck Watershed
- Greater Hazleton Chamber of Commerce
- Hazleton Public Transportation
- Hinerfield Realty
- Joint Urban Studies Coalition
- Keystone College
- Lackawanna County Conservation District
- Lackawanna County Regional Planning Commission
- Lackawanna Heritage Valley Authority (LHVA)
- Lackawanna River Basin Sewer Authority
- Lackawanna River Corridor Association
- Lackawanna State Park
- Luzerne Conservation District
- Luzerne County Agricultural Preservation Board
- Luzerne County Flood Mitigation
- Luzerne County Historical Society
- Luzerne County of Pheasants Forever
- Luzerne County Planning Commission
- Luzerne County Rail Authority
- Luzerne County Recreation Department
- Luzerne County Redevelopment Authority
- Luzerne County Transportation Department
- Meals on Wheels
- Mericle Development Corp.
- NE Chapter of the PA Society of Land Surveyors
- NEPA Alliance
- Nescopeck Township
- Normandy Holdings
- North Branch Land Trust
- North Pocono C.A.R.E.
- PA DCNR Bureau of Forestry
- PA Dept of Environmental Resources Bureau of Abandoned Mine Reclamation
- PA Northeast Railroad Authority
- Penn State Cooperative Extension - Luzerne County
- PennDOT District 4-0
- Pennsylvania Environmental Council
- Plains Township
- Rice Township
- Sanofi Pasteur
- Scranton Area Foundation
- Scranton Chamber of Commerce
- Scranton Historical Architectural Review Board (HARB)
- Scranton Sewer Authority
- Scranton Tomorrow
- Scranton-Abingtons Planning Association
- Senator Bob Mellow
- Shalom Community Development Corporation
- Sierra Club

- South Valley Partnership
- State Rep. Chris Carney
- Taylor Borough
- The Lands at Hillside Farms
- The Nature Conservancy
- UGI Electric
- United Methodist Church – Scranton
- United Neighborhood Centers of NEPA
- Valley View School District
- Waverly Historic District
- West Pittston Historical Society
- Wilkes University
- Wyoming Valley Sewer Authority

Table 5.1.2
Stakeholder Focus Group Sessions

	Date	Time	Location
Session 1 – Transportation	January 15, 2008	9 a.m. to 11 a.m.	Scranton Cultural Center 420 N Washington Ave Scranton, PA 18503
Session 2 – Land Development & Housing	January 15, 2008	11:30 a.m. to 1:30 p.m.	Scranton Cultural Center 420 N Washington Ave Scranton, PA 18503
Session 3 – Economic Revitalization	January 15, 2008	2 p.m. to 4 p.m.	Scranton Cultural Center 420 N Washington Ave Scranton, PA 18503
Session 4 – Utilities	January 16, 2008	9 a.m. to 11 a.m.	Luzerne County Emergency Management Agency Building 185 Water Street Wilkes-Barre, PA
Session 5 – Historic Preservation	January 16, 2008	11:30 a.m. to 1:30 p.m.	Luzerne County Emergency Management Agency Building 185 Water Street Wilkes-Barre, PA
Session 6 – Natural Resources & Open Space Conservation	January 16, 2008	2 p.m. to 4 p.m.	Luzerne County Emergency Management Agency Building 185 Water Street Wilkes-Barre, PA

MPO Outreach Goals & Objectives

Officials from the Lackawanna-Luzerne Metropolitan Planning Organization developed a comprehensive and all-inclusive public outreach program for the Regional Plan that adheres to the goals and objectives outlined in its adopted Public Participation Plan (July 2004, as amended May 2005 and October 2007), as follows:

Goals:

- To involve all segments of the public in the transportation planning process, in particular minority and low-income citizens according to the regulations included in the 1964 Civil Rights Act, Title VI and Executive Order 12898 regarding Environmental Justice (EJ) procedures;

- To make the transportation planning process easily-accessible and understandable to all segments of the population.

Objectives:

- Conduct outreach to the general public and minority/low income segments of the population and related advocate groups through the local media, correspondence with municipalities and personal contact regarding the transportation planning process;

- Broaden the locations where transportation planning documents are placed for public comment, including the new MPO web page, and investigate the possibility of having those documents available in languages other than English should the need arise.

As part of any development or update to a Long-Range Transportation Plan, all Metropolitan Planning Organizations (MPO) are required to provide opportunities for public participation and comment prior to adoption. For Lackawanna and Luzerne Counties, a comprehensive public outreach approach was designed to consider public opinions and input for both component elements of the Regional Plan.

MPO Coordinating and Technical Committees Meetings

Two presentations were made to the MPO's Coordinating and Technical Committees during Phase A. The first presentation on December 11, 2007, included a thorough discussion on the background of the Long-Range Transportation Plan, the determination of the steps to be taken throughout the four phase work plan, and the Metropolitan Planning Organization's role in the project development.

The second meeting and presentation to the MPO's Coordinating and Technical Committees was held on May 5, 2008. At this time, participants reviewed existing conditions documents, assessed vital information gathered to date and examined the project schedule.

A third presentation was made to the MPO's Coordinating and Technical Committees on March 31, 2009. Attendees reviewed additional assessment information, including all layers in the GIS of existing conditions data as well as developments consistent with the Trend Scenario and those consistent with a focus on a more multimodal future. In addition, the presentation included a detailed review of the EJ and Title 6 mapping, including the identification of in poverty and minority populations as they related to the existing TIP projects, a detailed discussion on why the EJ and Title 6 concerns were important to the transportation planning process, and a review of the initial draft project ranking criteria.

Transportation Project Ranking Meetings

Transportation project ranking meetings, held on August 20 and 24, 2009, were staffed by both counties and PennDOT District 4-0. These meetings included discussions of the project ranking criteria to be used for all projects on the current TIP and Long-Range Transportation Plan and incorporation of EJ-Title VI themes within those criteria. Evolving from these meetings was the final project ranking criteria, which were further discussed with a focus group of individuals from within traditionally underserved populations.

Public Information Meetings

The first public information meeting was held at the culmination of Phase A – Identifying Opportunities. The meeting provided attendees an overview of data collection activities to date, including a summary of all local and regional assets, constraints, and opportunities. It also addressed the potential for the future of these communities if local land use and transportation policies remain unchanged.

Using the assets, constraints, and opportunities information to begin dialogue with local residents, planning team members worked with meeting attendees to begin identifying alternative themes that would be more in line with a desired vision of the future. The goal of this meeting was to ensure the planning team had developed an accurate picture of existing conditions and demonstrated an understanding of a publicly-held positive future for the two counties. The feedback gathered at this first meeting helped guide the alternatives development and analysis conducted in Phase B.

The second public information meeting was held during the exploration of alternatives, as the framework for the future evolution of the two-county area was being developed. The meeting included a review of information previously presented to the Comprehensive Plan Committee on June 9, 2009. A video presentation, which summarized EJ/Title VI concerns and identification of the populations, was featured. Participants also viewed mapping that illustrated the location of the populations.

This second meeting unveiled preliminary goals, objectives, and potential actions for the Lackawanna-Luzerne Regional Plan. The meeting also demonstrated how the planning team had drawn on the existing conditions analysis, opportunities, and community-defined goals and objectives to develop a range of alternatives that would ultimately be used for a draft framework of the primary land use, transportation, and conservation components of the Plan.

Public feedback during this second public information meeting informed the accuracy, prioritization, and effectiveness of these preliminary recommendations and actions.

Finally, the syntheses of these efforts were brought together during the third public information meeting. At this meeting, planning team members reviewed the draft component comprehensive and long-range transportation plans. Team members solicited feedback from attendees to ensure the emerging Regional Plan accurately represented the vision, goals, objectives, and actions desired by citizens in the two counties. The planning team revised the Draft Plan according to the feedback received at the third public information meeting and prepared a Final Draft for the Public Hearing. ***Table 5.1.3*** provides a listing of the public meetings.

Table 5.1.3
Public Information Meetings

	Date	Time	Location
Meeting 1	October 14, 2008	6 p.m. to 9 p.m.	Luzerne County Community College Education Conference Center – Room 132 1333 South Prospect Street Nanticoke, PA 18634
	October 15, 2008	6 p.m. to 9 p.m.	Hazleton Area High School 1601 West 23rd Street Hazleton, PA 18202
	October 16, 2008	6 p.m. to 9 p.m.	Lackawanna County EMA 30 Valley View Business Park Jessup, PA 18434
Meeting 2	June 16, 2009	6 p.m. to 9 p.m.	Luzerne County Community College Education Conference Center – Room 132 1333 South Prospect Street Nanticoke, PA 18634
	June 17, 2009	6 p.m. to 9 p.m.	Hazleton Area School District Administration Building (Across from Hazleton Area High School) 1515 West 23rd Street Hazleton, PA 18202
	June 18, 2009	6 p.m. to 9 p.m.	University of Scranton Brennan Hall – Pearn Auditorium 320 Madison Avenue Scranton, PA 18510
Meeting 3	December 1, 2009	6 p.m. to 9 p.m.	Hazleton Area School District Administration Building (Across from Hazleton Area High School) 1515 West 23rd Street Hazleton, PA 18202
	December 2, 2009	6 p.m. to 9 p.m.	University of Scranton Brennan Hall – Pearn Auditorium 320 Madison Avenue Scranton, PA 18510
	December 3, 2009	6 p.m. to 9 p.m.	Luzerne County Community College Education Conference Center – Room 132 1333 South Prospect Street Nanticoke, PA 18634

Special Purpose Meeting

As a complement to the larger outreach effort, Lackawanna and Luzerne County officials held an Environmental Justice/ Title VI Special Purpose Meeting for organizations representing underserved and potentially vulnerable populations, such as the elderly, low-income and minorities. The purpose of the meeting was to provide local EJ/ Title VI organizations an opportunity to offer guidance and input regarding local and regional transportation deficiencies for the Long-Range Transportation Plan. These deficiencies would include access to jobs and housing, as well as suggested improvements to various transportation modes (busing, pedestrian access, auto, etc.).

Over 40 organizations were invited to participate in this meeting by phone, letter, and e-mail, including those that represent Indian, African-American, and Hispanic/Latino populations, English as a Second Language, Low Income, and Multi-Cultural groups, and Senior/Disabled populations. Participants were asked to provide comments and input on a range of topics, including access to jobs and housing, the availability of local and regional services, and economic development. Attendees included representatives of the following organizations and agencies:

- AARP
- City of Carbondale Office of Community Development
- Commission on Economic Opportunity
- Community Counseling Services
- Lackawanna County Housing Authority
- Lackawanna County Planning Commission
- Luzerne County Planning Commission
- PA CareerLink
- PennDOT District 4
- United Way of Greater Hazleton
- Vision, Inc.

Public Hearing

Upon completion of the Final Draft Plan, the governing bodies of Lackawanna and Luzerne Counties held a Joint Public Hearing accepting public comments on the Regional Plan.