Lackawanna-Luzerne
Transportation Study
Metropolitan
Planning
Organization

Lackawanna-Luzerne Long Range Transportation Plan Update

An Update of the Lackawanna-Luzerne Regional Plan

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Prepared for:
Lackawanna-Luzerne Transportation Study MPO

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As adopted and available at
http://www.luzernecounty.org/county/departments_agencies/planning_commission/lackawanna-luzerne-regional-plan

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As adopted and available as noted above

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As adopted and available as noted above

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ADA	Americans with Disabilities Act
ADA	Americans with Disabilities Act of 1990
ADT	Average Daily Traffic
ADTT	Average Daily Truck Traffic
BMP	Best Management Practice
CEDS	Comprehensive Economic Development Strategy
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CO	Carbon Monoxide
COLTS	County of Lackawanna Transit System
CPR	Canadian Pacific Railroad
DBE	Disadvantaged Business Enterprise
DCNR	Department of Conservation and Natural Resources
DEP	Pennsylvania Department of Environmental Protection
DL	Delaware-Lackawanna Railroad Company
DL&W	Delaware, Lackawanna and Western Railroad
E&SPC	Erosion and Sediment Pollution Control
EJ	Environmental Justice
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GIS	Geographic Information System
HPMS	Highway Performance Monitoring System
HPT	Hazleton Public Transit
HSIP	Highway Safety Improvement Program
IRI	International Roughness Index
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation System
JD	Jurisdictional Determination
LCRC	Luzerne County Rail Corporation

Acronyms (continued)

LCTA	Luzerne County Transportation Authority
LPN	Linking Planning and NEPA
LRHT	Lackawanna River Heritage Trail
LRTP	Long-Range Transportation Plan
LS	Luzerne and Susquehanna Railroad Company
MAP-21	Moving Ahead for Progress in the 21st Century Act
MPMS	Multimodal Project Management System
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NEPA	Northeast Pennsylvania Alliance
NHPP	National Highway Performance Program
NHS	National Highway System
NTD	National Transit Database
NSRC	Norfolk Southern Railway Company
NSRR	North Shore Railroad Company
NWI	National Wetlands Inventory
OPI	Overall Pavement Index
PA DEP	Pennsylvania Department of Environmental Protection
PASDA	Pennsylvania Spatial Data Access
PEC	Pennsylvania Environmental Council
PennDOT	Pennsylvania Department of Transportation
PFBC	Pennsylvania Fish and Boat Commission
PM	Particulate Matter
PNRRA	Pennsylvania Northeast Regional Railroad Authority
PTC	Pennsylvania Turnpike Commission
RBMN	Reading, Blue Mountain and Northern Railroad
RMS	Roadway Management System
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SD	Structurally Deficient
SLD	Straight Line Diagram
SLIBCO	Scranton Lackawanna Industrial Building Company
SR	State Route
STP	Surface Transportation Program

Acronyms (continued)

STIP	State Transportation Improvement Program
TA	Transportation Alternatives
TIP	Transportation Improvement Program
TYP	Twelve Year Program
UFAS	Uniform Federal Accessibility Standards
UMT	Urban Mass Transit
USDOT	United States Department of Transportation
VC	volume-to-capacity
WBSIA	Wilkes-Barre/Scranton International Airport
WPAC	Watershed Plan Advisory Committee
WVSA	Wyoming Valley Sanitary Authority
WWVA	Wilkes-Barre Wyoming Valley Airport
YOE	Year of Expenditure

Executive Summary

This document serves as the Long Range Transportation Plan (LRTP) update, which must be provided every five years, for the Lackawanna Luzerne MPO region. The last LRTP was completed as a combined Comprehensive Plan and Long Range Transportation Plan in 2010 and was done so in a revolutionary way. As this update only includes an update of the long range transportation plan, the Counties felt it was important to maintain the connection to the original adopted document and include those relevant sections by reference in this document. Therefore, the following includes a listing of the original document sections and those that have been updated with this long range transportation plan update. The entire 2010 adopted document is available at:

http://www.luzernecounty.org/county/departments_agencies/planning_commission/lackawanna-luzerne-regional-plan

For the purposes of this document:

Chapter 1 – The Setting remains intact and as adopted by the counties in 2011

Chapter 2 – The Vision, Sections 2.1 and 2.2 were reviewed and concurred on with this LRTP update, the remainder of Chapter 2 remains as adopted in 2011

Chapter 3 – Implementation Strategy remains intact as adopted

Chapter 4 – Conditions in the Region have been updated significantly and is included with this document

Chapter 5 – Outreach and Coordinaiton has been updated and amended to reflect the outreach work completed as part of this LRTP update

Appendices have been adjusted and are included in this document

As noted above, this amendment updates a number of chapters in the original document. Chapter numbers have remained intact to mimic the original document. The following sections of Chapter 4 – Conditions in the Region, which primarily deals with the Long Range Transportation portions of the document were revised for this update:

- 4.2 The Transportation Profile
- 4.3 Demographic Housing and Employment Profile
- 4.10 Patterns of Change
- 4.11 Scenario Analysis & Transportation Program Development
- 4.12 Transportation Funding Challenges

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.

Transportation Plan Goals and Objectives

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 nonmotorized 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.

Existing Transportation System

Highways, Roadways, and Streets

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.

Table 4.2.1
Lane Mileage by Highway Jurisdiction

Highway Type	Lane Mileage
Interstate Highway	609
U.S. Highway	289
PA Highway	906
State Route (SR)	1,844
K Route	273
W Route	5.2
County Roads	106
Local Roads	3,148
Two-County Region Total	**7,180**

Source: PennDOT RMS Data 2015

Public Transit

There are three agencies that provide a variety of public transportation services in Lackawanna and Luzerne counties – County of Lackawanna Transit System (COLTS), Luzerne

County Transportation Authority (LCTA), and Hazleton Public Transit (HPT). COLTS operates service in Lackawanna County, and LCTA provides service throughout Luzerne County, except for the southern portion which is served by HPT along with the City of Hazleton.

Transit services consist of fixed-route, deviated fixed route, and demand response. The term "fixed route" refers to service that operates on an established path or route at a set or fixed time. Deviated fixed route service is similar to fixed route in that it operates along a fixed path at set times, but may deviate from the path as designated by the transit agency. Demand response, also referred to as shared ride or paratransit, and is defined as door-to-door service that requires a customer to call in advance to reserve or schedule a ride.

The agencies regularly monitor performance to maintain cost-effective and high quality services. Together, the agencies provide over 2.9 million passenger trips each year and operate over 4.1 million vehicle revenue miles. The majority of each agency's ridership comes from their fixed route systems – COLTS 93%, LCTA 87%, and HPT 95%. Fare revenues, as well, are generated primarily from fixed route services – COLTS 97%, LCTA 86% and HPT 81%. The average age of the agencies' fixed route vehicle fleets range from six to nine years, with HPT having the oldest average fleet age. The average age of the agencies' demand response vehicles is three to four years. LCTA has the lowest cost ($6.16) per passenger trip for its fixed route service, followed by COLTS at $6.98, and HPT at $10.16. COLTS and LCTA cost for its demand response passenger trips is $22.45 and HPT cost is $29.98.

Travel Demand

Journey-to-Work Commuter Travel

Census OnTheMap data for 2011 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 and it also shows the counties in which those employed in Lackawanna and Luzerne Counties live.

The following trends were noted:

- About 62 percent of Lackawanna County residents work in Lackawanna County and 10 percent work in Luzerne County.
- About 65 percent of Luzerne County residents work in Luzerne County and 7 percent work in Lackawanna County.
- About 72 percent of residents who live in Lackawanna and Luzerne Counties work there also. An additional 8 percent of residents who live in Lackawanna and Luzerne Counties work in the adjacent counties, with Monroe, Columbia, and Schuylkill Counties attracting the most workers. Non adjacent counties that attract a similar number of workers, if not more, as the adjacent counties include Dauphin, Lehigh, Montgomery and Philadelphia Counties.
- About 71 percent of workers who work in Lackawanna and Luzerne Counties live there also. An additional 12 percent of workers who work in Lackawanna and Luzerne Counties live in the adjacent counties, with Wayne, Wyoming, Columbia, and Schuylkill Counties supplying the most workers.

The trends indicate that the two-county area is mostly insular in regard to commuter travel

flow although these percentages have decreased since the last Long Range Plan. Previously 90 percent of residents of the two counties worked within the same area, which is now reduced to 72 percent. The data indicates that higher numbers of residents of the two counties are traveling further, or working remotely, for companies in Dauphin, Lehigh, Montgomery, and Philadelphia County. There is some interchange of workers and residents between Lackawanna and Luzerne Counties, but the majority of journey-to-work activity is contained within the county boundaries.

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.[1]

Figure 4.2.9 illustrates the IRI for state-owned roadways in Lackawanna and Luzerne Counties. ***Table 4.2.5*** summarizes IRI condition by miles and compares to those reported in the 2011 report.

Table 4.2.5
Miles of Roadway by Roughness Index

	Excellent	Good	Fair	Poor
2011 TOTALS	361.25 (22.0%)	716.94 (43.6%)	412.91 (25.1%)	152.11 (9.3%)
2015 TOTALS	274 (16.1%)	626 (36.8%)	435 (25.6%)	365 (21.5%)

Source: PennDOT District 4-0, 2008; U.S. Census Bureau, 2000, 2015 MPMS IQ

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's MPMS IQ online system. 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.[2] It should be noted that PennDOT's system for identifying "structurally deficient" bridges differs somewhat from FHWA's Sufficiency Rating scheme.

[1] Federal Highway Administration, Highway Performance Monitoring System (HPMS) Field Manual, Chapter 5.4: Pavement Data Guidance, http://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/HPMS_2014.pdf, 2014.
[2] Association of State Highway Transportation Officials, "Facts and Figures about the U.S. Transportation System," http://www.transportation.org/?siteid=93&pageid=2496, 2008.

Figure 4.2.13 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. The number of high priority bridges went up slightly from the 2011 data but has remained relatively consistent.

PennDOT prepares a Performance Measures Annual Report for Bridges where Structurally Deficient (SD) percentages by bridge count and deck area are measured against target values, *Figure 4.2.14.* These performance measures are consistent with those identified in the FHWA rulemaking that establishes new requirements for performance management to ensure an efficient investment of Federal transportation funds. The following performance goals are identified for State (greater than or equal to 8') and Local bridges (greater than or equal to 20'):

1. % of SD by count and deck area
2. Reducing rate of deterioration (by count and deck area)
3. Annual net SD reduction

The goals noted are directly from the 2013 Performance Measures Annual Report – Bridges and indicate optimum (long range goals) and cautionary (2014 targets) thresholds for performance. The 2014 goals provide a stepping stone to reaching the long range goals with significant advancements needed in the long term to meeting the long range goals. Based on the results for the Lackawanna Luzerne MPO, various metrics are meeting the cautionary threshold (2014 goals) based on 2013 data such as the reducing the rate of deterioration and the annual net SD reduction. Although not significantly different from the cautionary thresholds (2014 goals), the non-NHS bridges with greater than 2,000 ADT are consistently not meeting the cautionary thresholds for all metrics. Additionally, 50% of the bridge deck area of local bridges was SD in 2013 with a target goal of 43.9%. Currently, these values are consistent with other regions of the Commonwealth and reflect the continued asset management focus for the Commonwealth in the coming years.

Table 4.2.9
State Bridges by Condition

Location	Low Priority	Secondary Priority	High Priority	Unknown	TOTAL
State Roadway	839	54	88	0	981
Local Roadway	94	14	70	0	178
TOTAL	933	68	158	0	1159
2011 TOTAL	1274	68	149		

Source: PennDOT MPMS IQ, 2015 and PennDOT District 4-0, 2008.

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 (July 1, 2009 to June 30, 2014), which was provided by PennDOT Central Office for all state-maintained roadways.

Based on the safety analysis, projects were included in the fiscally constrained Long Range Transportation Plan to address high crash locations (segment and intersection) including but not limited to: SR 0309, Memorial Highway in Kingston Township; SR 0006, State Street in Clark Summit Borough; SR 0307, Morgan Highway in the City of Scranton; SR 0011, Pittston and Cedar Avenue in the City of Scranton, SR 0347, Dunmore Signal Network.

An annual Highway Safety Guidance Report prepared by PennDOT Central Office for each MPO provides guidance on safety measures and goals. PennDOT's safety goals include reducing average fatalities and serious injuries by 50 percent over the next two decades, starting in 2006. The June 2015 report for Lackawanna Luzerne MPO provides performance measures for safety based on the number of fatalities and serious injuries as well as the rates of each per hundred million vehicle miles traveled. The region has seen a general decline in fatalities from the 2006-2010 five-year average to the 2008-2012 five-year average and has remained consistent since that time frame. While fatalities have generally declined, the five year average number of serious injuries have generally increased from the 2006-2010 five-year average to the 2010-2014 five year average. The serious injury rate has seen an overall decline based on an increase in vehicle miles traveled.

Transit Level-of-Service

The performance of transit systems in the two-county region was previously evaluated using the methodology provided in the Transportation Research Board's Transit Capacity and Quality of Service Manual. While this performance is appropriate for larger transit agencies, the frequency and duration of service is not the only indicator of an agency's performance, particularly with the area and population density found in the two-county area. Therefore, the following information is provided in lieu of the Level of Service information provided in the last plan.

The performance of transit agencies is measured using multiple criteria and it is critical that agency transit services are evaluated in the context of the service that they provide as well as the service area demographics including population densities, employment densities and underserved populations.

Pennsylvania public transit agencies report and are evaluated on four key performance measures prescribed in Pennsylvania Act 44of 2007. The Act 44 metrics are:

- Passengers per revenue vehicle hour
- Operating cost per revenue vehicle hour
- Operating cost per passenger
- Operating revenue per revenue vehicle hour

The Act 44 performance data for FY 2013-14 is presented in ***Table 4.2.19***.

Table 4.2.19
Act 44 Performance Measures

Act 44 Performance Measures	COLTS	HPT	LCTA
Passengers per Revenue Vehicle Hour	12.87	7.16	15.42
Operating Cost per Revenue Vehicle Hour	$102.02	$79.59	$107.24
Operating Cost per Passenger	$7.93	$11.11	$6.95
Operating Revenue per Revenue Vehicle Hour	$17.97	$7.98	$16.36

Source: PA Public Transportation Annual Performance Report Transit Agency Profiles Fiscal Year 2013-14

Transportation Needs Assessment

The Lackawanna Luzerne MPO has developed an asset management focus to its project selection and deployment scheme to be consistent with 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 these line items, the PennDOT Asset Management Reports were reviewed and ***Table 4.11.5*** and ***Table 4.11.6***. were each developed. Table 4.11.5 summarized the total asset planning need for the region. This table shows that the annual pavement needs alone for the bi-county area exceed $126 million. 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.

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 projects along with line items have been defined in the plan for the last 15 plus 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 2015 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

January 2016.

System Evaluation & Transportation Problems

Specific areas and problems were identified from the analysis and assessment that was completed and described in Chapter 4. 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. ***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.

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. Finally, local governments, the public and other stakeholders were asked to submit any candidate problems or projects for consideration in the plan through the Transportation Issues Forums which were held in two separate sessions in Scranton and Forty Fort on April 2, 2015.

The State Transportation Commission solicited input for the PennDOT update of the 2017 Twelve Year Transportation Program (TYP) from April 16, 2015 to May 29, 2015, which were received late in this planning process. There were over 450 comments made for the Lackawanna Luzerne planning region. General themes included:

- Need for passenger rail between Scranton and NJ/NY/Philadelphia
- Improved transit service
- Improved roadway conditions
- Improvements to I-81
- More trails and connections
- Need for bike lanes
- Safety improvements
- Improved pedestrian access and safety

These comments will be reviewed in more detail as projects are scoped to identify if improvements can be incorporated into existing projects as well as identifying additional projects for future updates.

Project Scoring Criteria

In accordance with the goals and objectives of the long range plan steering committee and the goals and objectives of MAP 21 and the Mobility Plan, project ranking criteria was developed. The project ranking criteria was developed to identify measurable parameters against which projects could be scored. The importance of each criteria was weighted by the steering committee using a pairwise comparison method which determined the importance of each criteria relative to each other. System Management and Preservation ranked the highest with a score weighting 34.4% followed by Transportation Safety with a weighting score of 23.4%

Project Evaluation and Prioritization

Using the GIS layers and representatives for the MPO, each candidate project was evaluated in a series of meetings and online using the Decision Lens tool which compiles the data and provides a score for each project. The criteria either required direct input from the scoring committee or was auto scored based on GIS data and GIS analysis. This analysis has been documented in the GIS data book and included as an appendix to this document.

Seven criteria were utilized to place all candidate projects in a priority order for potential programming on the Long Range Plan. This priority takes into account the scores provided in each criteria as well as the weight assigned to each criteria. Once projects had been prioritized, funding levels and matching funds would enable projects to be selected from that list.

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 while also 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 2040. 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 current TIP (2015-2018) are developed in one year time periods. The next four years of the TYP are allocated in two, two year periods (2019-2020 and 2021-2022). The last four years of the TYP is included in the 2023-2026 time period. The final thirteen years of the LRTP are included in the 2027-2040 time frame.

Revenue Assumptions and Estimates

Preparation of this financial plan revenue estimate included a review of historical data and trends, including the Pennsylvania's 2015 Transportation Program Financial Guidance documents, previous statewide transportation improvement programs (STIPs) information from state DOTs and transit agencies, FHWA MAP 21 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 Year of Expenditure (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)

A lot has changed relative to transportation funding since the last LRTP Update in 2011. On July 6, 2012, the nation's current transportation bill, Moving Ahead for Progress in the 21st Century Act (MAP-21), supplanted the previous transportation bill, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Pennsylvania House Bill 1060 was signed into law the following year on November 25, 2013 resulting in comprehensive state transportation funding.

These bills imparted new objectives and areas of focus for transit, and, in the case of the state, additional funding for key initiatives.

Federal Funding

The current federal transportation bill, MAP-21 was a two-year authorization covering fiscal years 2013-2014 that provided $40.4 and $40.0 billion for fiscal year 2013 and 2014 in highway trust funding as well as $10.6 billion and $10.7 billion respectively for public transportation. The bill expired May 31, 2015 and has since been extended twice by Congress, most recently until October 29, 2015.

Financial projections of federal funding from the Pennsylvania's 2015 Transportation Program Financial Guidance document indicated 0% growth in Federal funds from 2015 to 2018, therefore for purposes of this plan, 0% growth was assumed through to 2040.

Highway Funding

MAP-21 restructures core highway formula programs. Activities carried out under some existing formula programs – the National Highway System Program, the Interstate Maintenance Program, the Highway Bridge Program, and the Appalachian Development Highway System Program – are incorporated into the following new core formula program structure:

- National Highway Performance Program (NHPP)
- Surface Transportation Program (STP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)

- Highway Safety Improvement Program (HSIP)
- Railway-Highway Crossings (set-aside from HSIP)
- Metropolitan Planning

It creates two new formula programs:

- Construction of Ferry Boats and Ferry Terminal Facilities – replaces a similarly purposed discretionary program.
- Transportation Alternatives (TA) – a new program, with funding derived from the NHPP, STP, HSIP, CMAQ and Metropolitan Planning programs, encompassing most activities funded under the Transportation Enhancements, Recreational Trails, and Safe Routes to School programs under SAFETEA-LU

Transit Funding

According to the American Public Transportation Association, the extension does not increase funding for "…public transportation infrastructure, which has an $88 billion backlog in needed repairs."[3]

The changes introduced by MAP-21 center mostly on safety, state of good repair, performance and program efficiency. Significant emphasis is placed on replacing and/or restoring public transportation's aging assets and infrastructure. To ensure agencies' assets comply with a state of good repair, the Federal Transit Administration (FTA) established a "needs-based formula" program for funding as well as new asset maintenance requirements. The bill authorized the following national funding levels relative to this priority:[4]

- State of Good Repair Formula Apportionment - $2 billion based on formula high intensity fixed guideway and high intensity motorbus

MAP-21 also expands safety guidelines to encompass bus-only agencies. Previously, agencies that operated rail systems were the only agencies required to develop safety plans and comply with national guidelines. But over the next two years, FTA will be rolling out its regulations and minimum standards for bus agencies' safety plans. FTA's Safety Oversight Program Formula Apportionment is $18.5 million nationwide including $1.12 million for Pennsylvania, which is established on a formula of base tier, modal tier, passenger miles, vehicle revenue miles, directional miles.[5]

State Funding

ACT 89, implemented in 2014, increased funding for all transportation by $2.3 billion annually. This includes an additional $1.65 billion per year for highway and bridges and about $480 million per year for public transit. The new transportation package eliminates the flat 12-cent gas tax uncaps the wholesale, Oil Company Franchise Tax (OCFT). Funding for public transportation operations, sourced by Turnpike funds, will eventually shift to sales tax

[3] http://www.progressiverailroading.com/passenger_rail/news/APTA-MAP21-extension-bill-falls-short-of-infrastructure-needs--44517
[4] http://www.fta.dot.gov/12853_16495.html
[5] http://www.fta.dot.gov/12853_16495.html

on motor vehicles as the primary source. Turnpike revenues will be used to help fund transit capital projects until the Turnpike as a revenue source for transit operating and capital sunsets in 2021, according to the Act.

The full increase in funding will be realized by 2018 with some fees adjusted for inflation over time. The Commonwealth anticipates that this increased investment will help transit agencies evade inevitable service cuts and meet critical capital needs. Like the FTA's focus on State of Good Repair, one of ACT 89's objectives is to "maximize the benefits of capital investment for all modes of transportation" by providing funds for initiatives that improve transit infrastructure thereby improving the effectiveness of the transit network.

The ACT also encourages investments in alternative energy projects. As such, the Commonwealth authorized up to $60 million from 1514 discretionary capital for these project types as well as establishment of an "Alternative Energy Capital Investment Program for public transportation providers to invest in equipment and facility upgrades to utilize alternative technologies such as hybrid and natural gas."[6]

Pennsylvania's 2015 Transportation Program Financial Guidance document projected increases in state funding from 2015 to 2018 but indications from the draft 2017 guidance indicates a 7.5% per year decline in state funding is anticipated from 2018 to 2020 due to additional costs associated with the State Police pension fund. Therefore for purposes of this plan, state revenue declines to 2020 and then continues with no change from 2021 to 2040.

Estimated Revenue for the Plan

As noted above, a short term decline in state revenue is projected with no change in federal funding over the term of the plan. Based on financial guidance distributed by the Program Center a three percent YOE was used for all project estimates.

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 $1.7 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*

[6] http://www.dot.state.pa.us/public/pdf/TRANSPLAN/FINAL_Trans_Funding_Plan_Summary.pdf

Projects on the Plan

Figure 4.12.1 present the projects on the fiscally constrained Long Range Transportation Plan by project category. This list is based on the prioritization process noted above along with consultation with the MPO and will be used in guiding the MPO through the next Transportation Improvement Program update.

Table 4.12.1 Revenue

FUNDING		2015	2016	2017	2018	2019-2020	2021-2022	2023-2026	2027-2040	TOTALS
Base Allocation		61,722,000	66,378,000	72,399,000	69,701,175	132,103,047	129,794,721	259,589,441	908,563,045	1,700,250,429
Federal Transit (Capital)		5,671,000	5,671,000	5,671,000	5,671,000	11,342,000	11,342,000	22,684,000	79,394,000	147,446,000
State Transit (Operating)		14,837,000	14,837,000	14,837,000	14,837,000	29,674,000	29,674,000	59,348,000	207,718,000	385,762,000
NHPP Allocation		17,886,000	17,886,000	17,886,000	17,886,000	35,772,000	35,772,000	71,544,000	250,404,000	465,036,000
STP Allocation		6,133,000	6,133,000	6,133,000	6,133,000	12,266,000	12,266,000	24,532,000	85,862,000	159,458,000
STP-Urban		6,211,000	6,211,000	6,211,000	6,211,000	12,422,000	12,422,000	24,844,000	86,954,000	161,486,000
State Highway		12,200,000	16,496,000	22,010,000	20,359,250	36,252,190	34,839,767	69,679,533	243,878,366	455,715,105
State Bridge		9,942,000	10,302,000	10,809,000	9,998,325	17,803,267	17,109,634	34,219,267	119,767,436	229,950,929
Off-System Bridge		3,152,000	3,152,000	3,152,000	2,915,600	5,191,590	4,989,321	9,978,641	34,925,244	67,456,395
HSIP		2,375,000	2,375,000	2,375,000	2,375,000	4,750,000	4,750,000	9,500,000	33,250,000	61,750,000
CMAQ		3,439,000	3,439,000	3,439,000	3,439,000	6,878,000	6,878,000	13,756,000	48,146,000	89,414,000
TAP		384,000	384,000	384,000	384,000	768,000	768,000	1,536,000	5,376,000	9,984,000
										0
										0
TOTAL		61,722,000	66,378,000	72,399,000	69,701,175	132,103,047	129,794,721	259,589,441	908,563,045	1,700,250,429
2015 to 2017 $ and 2018 non-State $ based on Pennsylvania's 2015 Transportation Program Fiancial Guidance										
2018 to 2020 $ assume a 7.5% decline/year in State funds (State Highway, Bridge, Off-System Bridge)										
0% increase in Federal Funds from 2019-2040, and State funds from 2021 to 2040										

Table 4.12.2
Expenditures

EXPENDITURES	2015	2016	2017	2018	2019-2020	2021-2022	2023-2026	2027-2040	TOTALS
NHPP PROJECTS	82,390,943				35,348,870	27,456,510	61,870,370	155,325,940	362,392,633
STP/STU PROJECTS	49,480,623				22,313,640	12,872,720	38,678,650	138,668,460	262,014,093
STATE HIGHWAY PROJECTS	70,942,080				36,212,000	27,087,650	55,247,170	62,324,140	251,813,040
STATE BRIDGE PROJECTS	38,309,923				17,559,890	15,307,570	33,475,640	108,526,909	213,179,932
OFF-SYSTEM BRIDGE PROJECTS	9,929,667				5,030,670	4,936,400	8,635,670	11,298,070	39,830,477
SAFETY (HSIP) PROJECTS	12,478,838				4,551,830	3,011,580	8,527,670	14,087,460	42,657,378
CONGESTION (CMAQ) PROJECTS	12,514,750				5,947,150	5,868,170	12,911,000	15,229,410	52,470,480
TRANSPORTATION ALTERNATIVE PROJECTS	768,000				0	0	0	0	768,000
NHPP RESERVE	2,188,677				423,130	8,315,490	9,673,630	95,078,060	115,678,987
STP/STU RESERVE	1,511,085				2,374,360	11,815,280	10,697,350	34,147,540	60,545,615
STATE HIGHWAY RESERVE	1,613,920				40,190	7,752,117	14,432,363	181,554,226	205,392,815
STATE BRIDGE RESERVE	4,987,507				243,377	1,802,064	743,627	11,240,527	19,017,102
OFF-SYSTEM BRIDGE RESERVE	3,121,433				160,920	52,921	1,342,971	23,627,174	28,305,418
SAFETY (HSIP) RESERVE	1,641,162				198,170	1,738,420	972,330	19,162,540	23,712,622
CONGESTION (CMAQ) RESERVE	1,241,250				930,850	1,009,830	845,000	32,916,590	36,943,520
TAP RESERVE	768,000				768,000	768,000	1,536,000	5,376,000	9,216,000
TOTAL PROJECTS	276,814,824				126,964,050	96,540,600	219,346,170	505,460,389	1,225,126,033
TOTAL RESERVE	17,073,034				5,138,997	33,254,121	40,243,271	403,102,656	498,812,079
TOTAL PROJECTS + RESERVE	293,887,858				132,103,047	129,794,721	259,589,441	908,563,045	1,723,938,112
	108.8%				100.0%	100.0%	100.0%	100.0%	
TOTAL ALLOCATION	270,200,175				132,103,047	129,794,721	259,589,441	908,563,045	1,700,250,429
TRANSIT PROJECTS	43,487,000				62,554,021	26,523,923	43,533,533	102,646,179	278,744,656
TRANSIT RESERVE	-				-	-	-	-	-
TOTAL TRANSIT PROJECTS +RESERVE	43,487,000				62,554,021	26,523,923	43,533,533	102,646,179	278,744,656
	53.0%				152.5%	64.7%	53.1%	35.8%	
TOTAL TRANSIT ALLOCATION	82,032,000				41,016,000	41,016,000	82,032,000	287,112,000	533,208,000

Outreach & Coordination

The Lackawanna-Luzerne Transportation Study MPO (LLTS MPO) launched a proactive public outreach initiative comprised of a combination of strategies from its existing and updated 2015 Public Participation Plans (PPP) to gather valuable input from key stakeholders, and to engage community members in and educate them about the importance of the LRTP and the update process. Several avenues of communications were utilized, including electronic media such as mass email notifications, online surveys, PowerPoint presentations, and electronic versions of planning documents posted on the MPO website to enhance public accessibility. Direct dialogue and interaction with community members representative of a variety of transportation interests throughout the two counties also occurred through targeted public coordination activities like the Transportation Issues Forums, and an Environmental Justice (EJ) meeting. These events were held in addition to the regularly-scheduled working committee meetings and public information meetings.

Public participation activities were initiated at the beginning of the LRTP update process, and continued through the preparation of the final version of the document in various formats. Specific activities were employed at key milestones within each phase of the plan to facilitate data collection, feedback, and public comment. The Phases of the LRTP update process and related activities are summarized below:

1. **Data Collection.** The Data Collection Phase included two stakeholder-focused Transportation Issues Forums, presentations to the MPO's Coordinating and Technical Committees, and one Special Interest Group Meeting – the Environmental Justice Workshop.

2. **Visioning.** The Visioning Phase consisted of three MPO Steering Committee meetings to revisit the plan vision and its framework, and project scoring and ranking criteria, and transportation project ranking meetings.

3. **Draft Plan.** The Draft Plan Phase consisted of presentations to the MPO Coordinating and Technical Committees; agency coordination and two public information meetings held during the Draft Updated LRTP (and Public Participation Plan) Public Review and Comment period.

4. **Final Plan.** The Final Plan Phase consisted of one presentation to the MPO's Coordinating and Technical Committees, and their official adoption of the final version of the Updated Long-Range Transportation Plan.

Chapter 4
CONDITIONS IN THE REGION

Introduction

This document serves as the Long Range Transportation Plan (LRTP) update, which must be provided every five years, for the Lackawanna Luzerne MPO region. The last LRTP was completed as a combined Comprehensive Plan and Long Range Transportation Plan in 2010 and was done so in a revolutionary way. As this update only includes an update of the long range transportation plan, the Counties felt it was important to maintain the connection to the original adopted document and include those relevant sections by reference in this document. Therefore, the following includes a listing of the original document sections and those that have been updated with this long range transportation plan update. The entire 2010 adopted document is available at:

http://www.luzernecounty.org/county/departments_agencies/planning_commission/lackawanna-luzerne-regional-plan

For the purposes of this document:

Chapter 1 – The Setting remains intact and as adopted by the counties in 2011

Chapter 2 – The Vision, Sections 2.1 and 2.2 were reviewed and concurred on with this LRTP update, the remainder of Chapter 2 remains as adopted in 2011

Chapter 3 – Implementation Strategy remains intact as adopted

Chapter 4 – Conditions in the Regions has been updated significantly and is included with this document

Chapter 5 – Outreach and Coordinaiton has been updated and amended to reflect the outreach work completed as part of this LRTP update

Appendices have been adjusted and are included in this document

As noted above, this amendment updates a number of chapters in the original document. Chapter numbers have remained intact to mimic the original document. The following sections of Chapter 4 – Conditions in the Region, which primarily deals with the Long Range Transportation portions of the document were revised for this update:

- 4.2 The Transportation Profile
- 4.3 Demographic Housing and Employment Profile
- 4.10 Patterns of Change
- 4.11 Scenario Analysis & Transportation Program Development
- 4.12 Transportation Funding Challenges

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.

Chapter Four – Conditions in the Region

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.

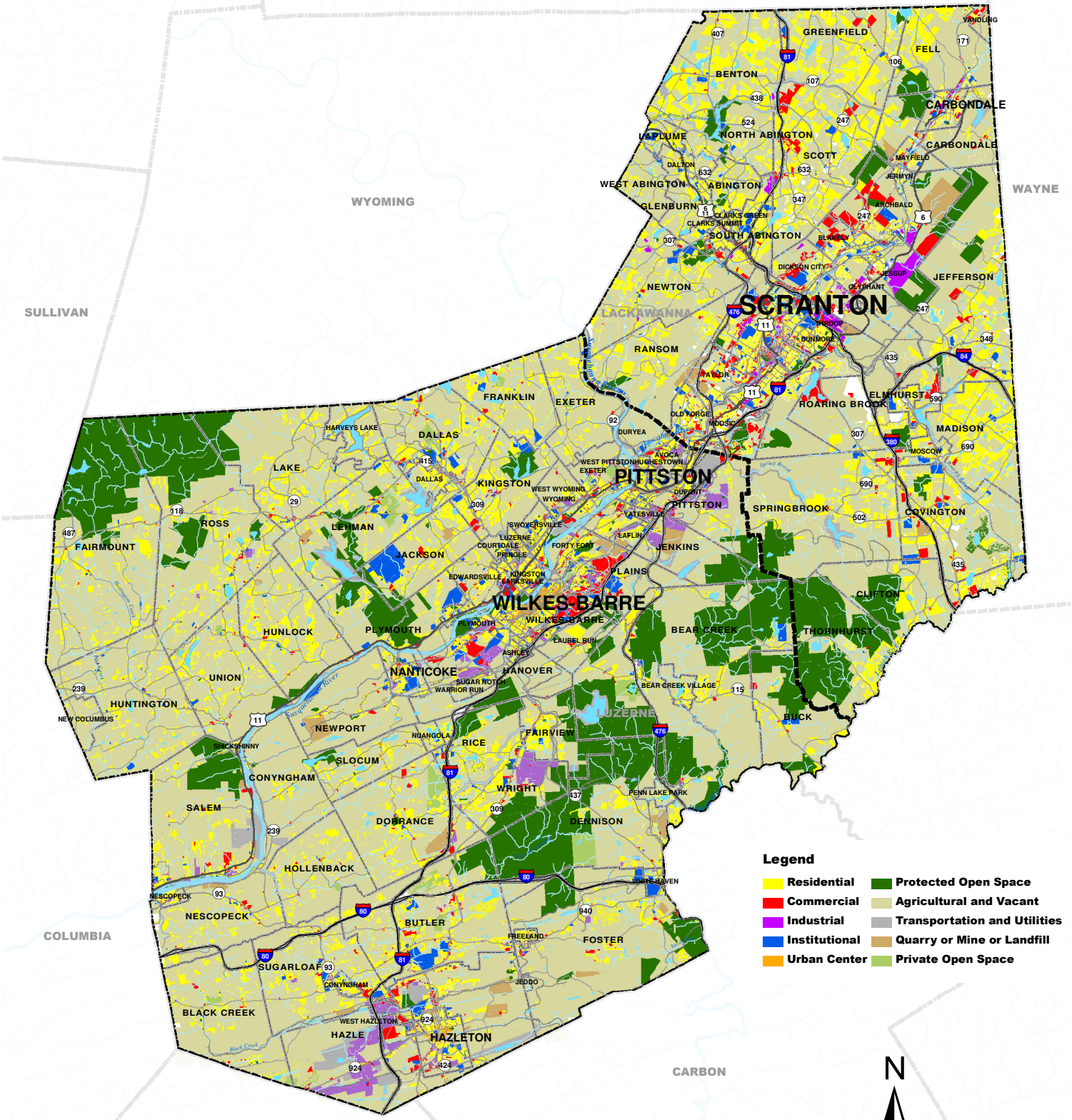
Current land uses and intensities in Lackawanna and Luzerne Counties' comprise a broad range. Highly urbanized lands are present throughout the Lackawanna and Wyoming Valleys and include the cities of Scranton, Wilkes-Barre, and Carbondale, as well as the Hazleton Area in southern Luzerne County. Opposite 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.

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

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

McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
AWORKD PLANNING
DRIVE ENGINEERING

Data from 2011 Plan

Table 4.1.1 Existing Land Use in Lackawanna and Luzerne

Luzerne County Existing Land Use	
Land Use	Acres
Agricultural and Vacant	357,320.08
Commercial	10,122.03
Industrial	9,179.84
Institutional	10,852.93
Open Space	91,951.90
Quarry or Mine or Landfill	4,443.32
Residential	71,111.18
Transportation and Utilities	11,327.86
Urban Center	897.15
Total	567,206.28

Lackawanna County Existing Land Use	
Land Use	Acres
Agricultural and Vacant	164,254.93
Commercial	10,059.12
Industrial	2,551.22
Institutional	6,220.39
Open Space	29,072.33
Quarry or Mine or Landfill	2,615.59
Residential	63,224.51
Transportation and Utilities	1,740.96
Urban Center	176.68
Total	279,915.74

NOTE: Data from 2011 Plan

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 3.75 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 0.15 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 90 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, and Comfort Suites.

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 Boulevard 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 and Trade Park East and West** at the interchange of I-81 and I-476 near Pittston has a base site area of about 1,650 acres, with several hundred acres developed.

- **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 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 a 118-acre industrial park 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. 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 located in Archbald Borough. PEI Power Corporation's Archbald Cogeneration Plant is located in the park. 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 I-81 and PA Route 924 corridor and include the following entities:

- **CenterPoint Commerce & Trade Park East, West, and South in Jenkins and Pittston Townships** (south section in design phase) is part of a 1,791 acre industrial park adjacent to the 1-81 and 1-476 interchange near PA Route 315. This site can accommodate manufacturing activities as well as manufacturing/ distribution buildings in excess of one million square feet. Rail is available for the south section and is possible for the west and east sections.

- **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 one 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 use 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 and southern third closest to Columbia and Schuylkill Counties 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, Harveys 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-day 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 country 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

Lackawanna and Luzerne Counties are host to numerous Greenways and Trails and are rich with active organizations that promote and develop these facilities. In April 2004, the Open Space, Greenways & Outdoor Recreation Master Plan was adopted for Lackawanna and Luzerne Counties, PA which identified a vision, goals, and objectives for the region. The vision, goals and objectives are carried out by numerous organizations including Pennsylvania Environmental Council, Countryside Conservancy, Lackawanna Heritage Valley Authority, Rail Trail Council of Northeast Pennsylvania, Lackawanna River Corridor Association, Lackawanna Valley Conservancy, and Delaware and Lehigh National Heritage Corridor. The Northeast Trails Forum, the Northeast Pennsylvania Conservation Alliance, and the Northeast Land Trust Partners are three forums that bring representatives from the various organizations together on a quarterly basis, sharing ideas and experiences.

Lackawanna County has many 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.

Recent initiatives in the MPO area include:

- The Pennsylvania Environmental Council (PEC) will soon release a map of biking and hiking trails open to the public within a ten county area, including Lackawanna and Luzerne Counties.
- The Lackawanna Heritage Valley Authority completed the Lackawanna Greenway, A Plan of Action, and the Lackawanna River Heritage Trail (LRHT) Feasibility Study, Stillwater Dam to Pittston, 2013, which identifies steps for the creation of a 70-mile corridor of land and water in Northeastern Pennsylvania that extends from Lanesboro in Susquehanna County south through Wayne and Lackawanna Counties to Pittston in Luzerne County. The trail study recommends phases of development for this 39-mile segment of the trail that will eventually extend from the New York State border to the confluence of the Lackawanna River and the Susquehanna River in Pittston. The LRHT will form the spine of the Lackawanna Greenway.
- An analysis of the 30-mile Delaware & Hudson Rail-Trail section of the LRHT from the Stillwater Dam north to the New York State border is being completed by the Rail-Trail Council of Northeast Pennsylvania.
- In Luzerne County, the PEC completed a study of the Harveys Creek Trail/Greenway that identifies connections between the Susquehanna Warrior Trail, the Back Mountain Trail, Back Mountain Recreation Park, Moon Lake Park, the Lackawanna Forestry Tract, Theta Lands along Harveys Creek and Pennsylvania State Forest lands
- Pennsylvania Environmental Council (PEC) directed and completed a Trail/ Greenway Feasibility/Master Plan for the City of Wilkes-Barre which identifies opportunities to bridge the gaps in the various trails and develop a cohesive network of trails throughout the City
- The Anthracite Scenic Trails Association continues to develop the Black Diamond Trail, opening a new section (19.7 miles total) in July of 2013. This trail will provide the final link, with only 30 miles left to develop, for the 150 mile D&L Trail that will connect Bristol, Bucks County to Wilkes Barre.

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 provides higher speed, regional mobility and connects 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.

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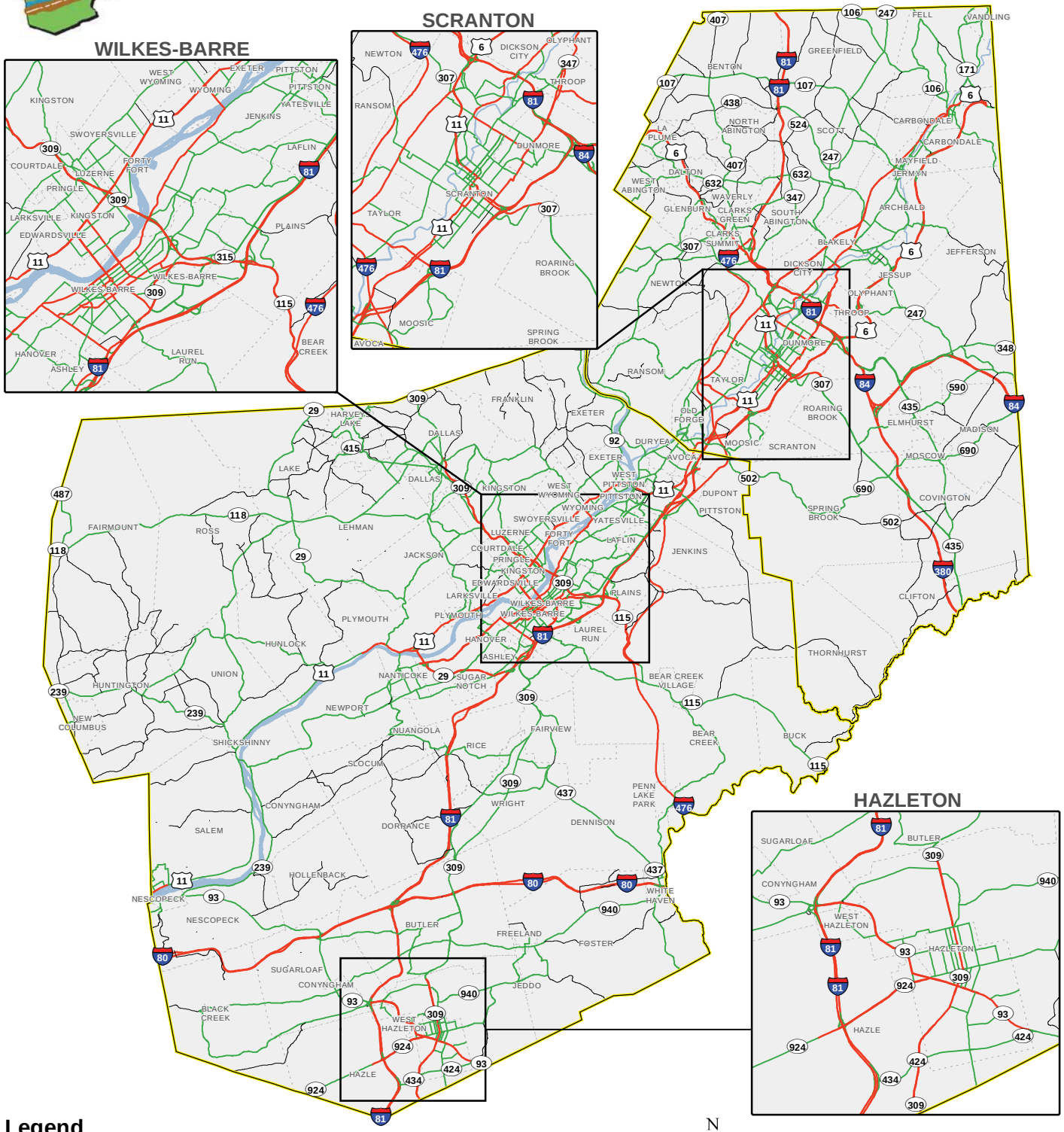
FIGURE 4.2.1
FEDERAL AID SYSTEM



Source: PennDOT PA Administrative State Roads Feb. 2015

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 164 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.

Table 4.2.1
Lane Mileage by Highway Jurisdiction

Highway Type	Lane Mileage
Interstate Highway	609
U.S. Highway	289
PA Highway	906
State Route (SR)	1,844
K Route	273
W Route	5.2
County Roads	106
Local Roads	3,148
Two-County Region Total	**7180**

Source: PennDOT RMS Data 2015

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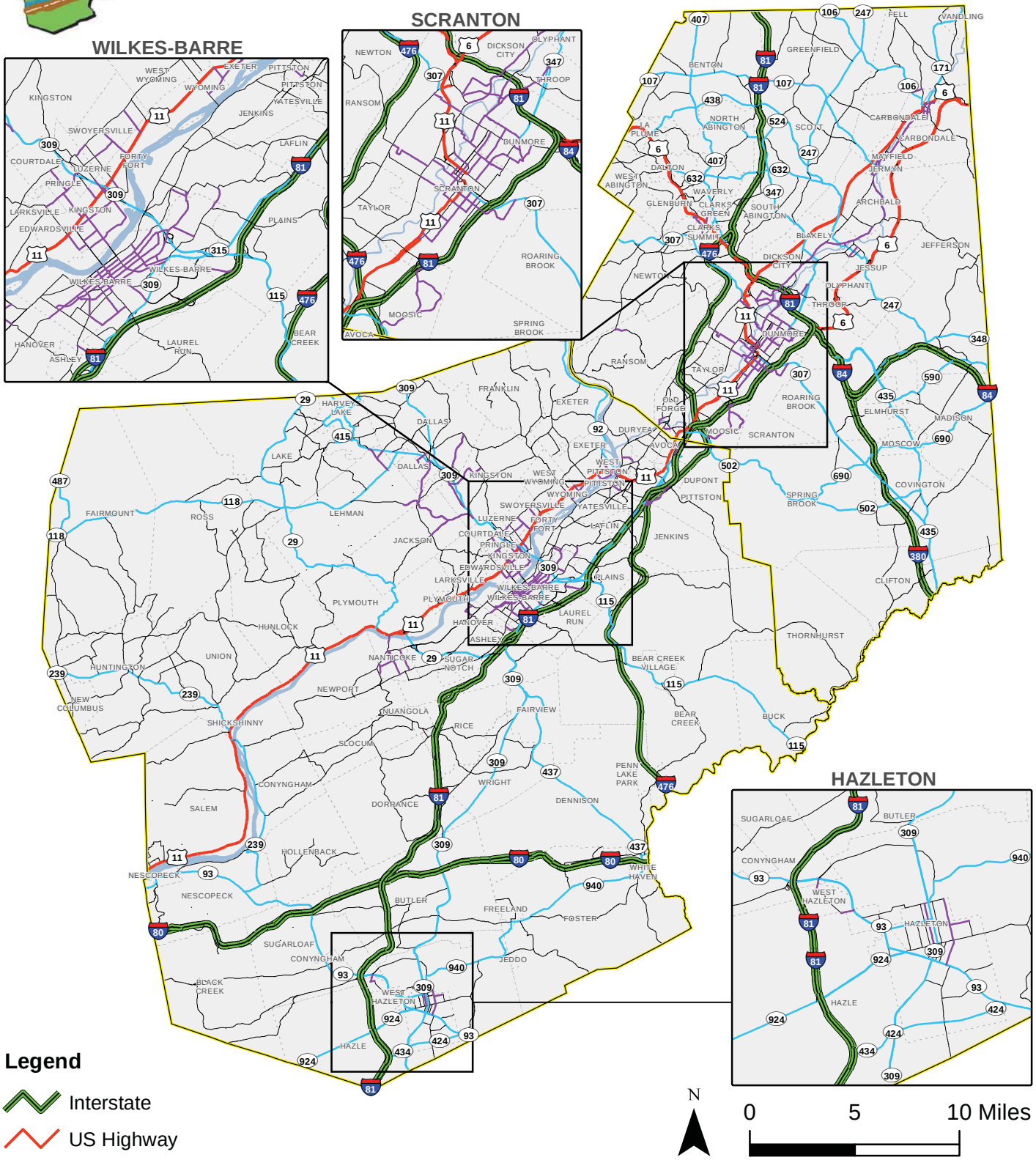
FIGURE 4.2.2
HIGHWAY JURISDICTION



Legend

- Interstate
- US Highway
- PA State Routes
- SR State Routes
- K Routes

Source: PennDOT PA State Roads Feb. 2015

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 States Department of Transportation (USDOT)
- Pennsylvania Department of Transportation (PennDOT)
- Pennsylvania Turnpike Commission (PTC)
- Lackawanna and 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 620 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

Park-and-Ride Lots

The region has numerous park-and-ride lots, all of which are owned and maintained by PennDOT. The lots are geared primarily for ride-share customers but some are served by the region's public transportation agencies including I-81, Exit 165 in Wilkes Barre Township and I-81, Exit 175 in Pittston Township.

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 and 348. [86 spaces and four spaces for persons with disabilities]
- Tigue Street Park & Ride, Dunmore Borough[7]
- Daleville Park & Ride, I-380 at Exit 20 on SR 307 in Covington Township[1]

[7] On the Transportation Improvement Plan (TIP), not yet constructed.

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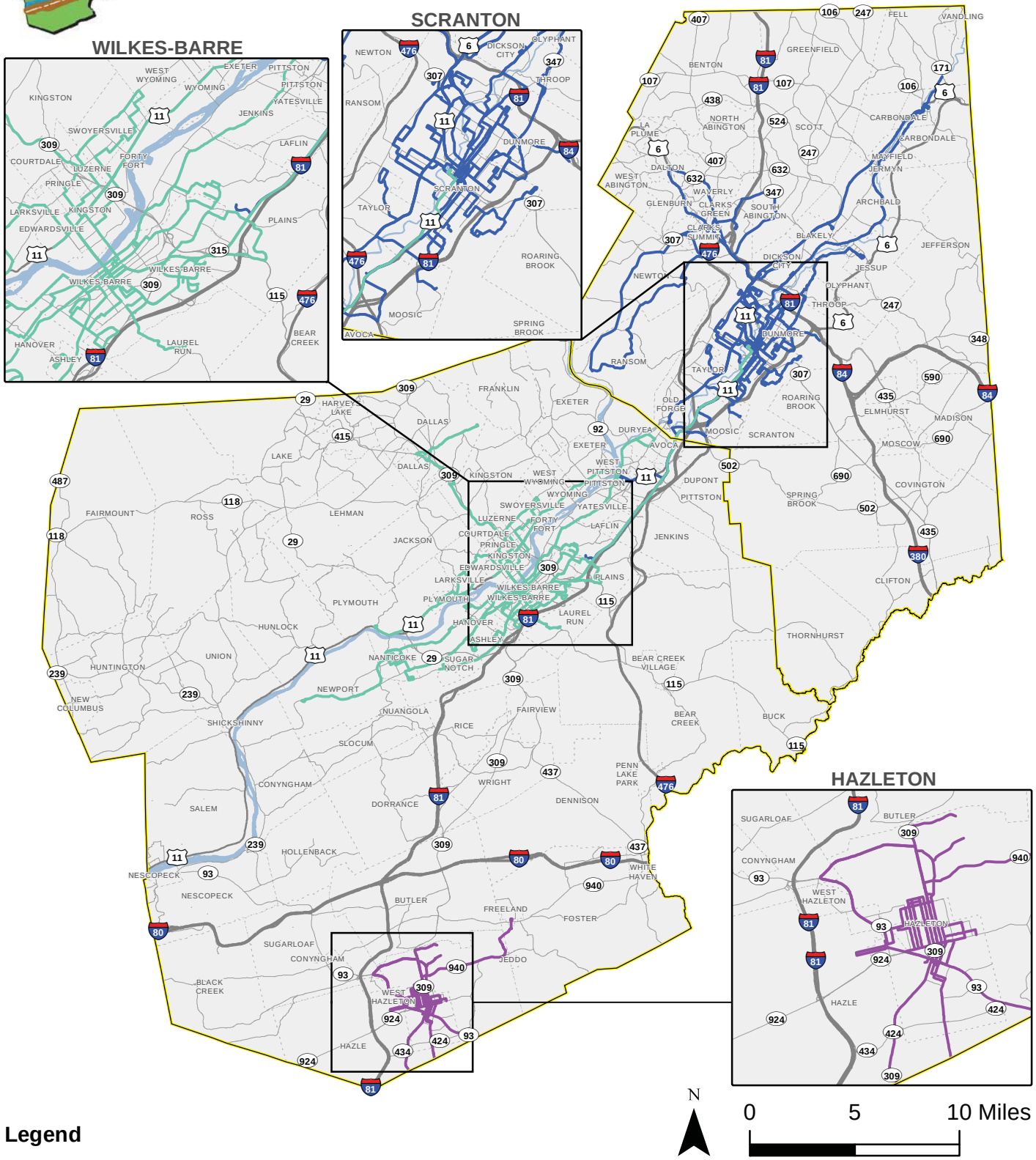
FIGURE 4.2.3
TRANSIT TRANSPORTATION NETWORK



Legend

- LCTA Transit Routes
- COLTS Transit Routes
- Hazleton Public Transit Routes

Source: LCTA, COLTS, HPT

These facilities are located in Luzerne County:

- Interstate 81 at Exit 175 (Dupont/Pittston). On Route 315. [148 spaces]
- 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]
- Tomhicken Road Park & Ride, Interstate 81, Exit 145, on Route 3020 (Tomhicken Road) [75 spaces] in Sugarloaf Township
- Butler Township Park & Ride, Interstate 80 at Route 309, Butler Township[1]
- White Haven Park & Ride, Interstate 80 at Route 940, White Haven Borough[1]
- Dorrance Park & Ride, I-81 at Exit 155 on SR 3007 in Dorrance Township[1]
- Union Street at SR 309 in Pringle/Luzerne Borough[8]

Public Transit

There are three agencies that provide a variety of public transportation services in Lackawanna and Luzerne counties – County of Lackawanna Transit System (COLTS), Luzerne County Transportation Authority (LCTA), and Hazleton Public Transit (HPT). COLTS operates service in Lackawanna County, and LCTA provides service throughout Luzerne County, except for the southern portion which is served by HPT along with the City of Hazleton.

Transit services consist of fixed-route, deviated fixed route, and demand response. The term "fixed route" refers to service that operates on an established path or route at a set or fixed time. Deviated fixed route service is similar to fixed route in that it operates along a fixed path at set times, but may deviate from the path as designated by the transit agency. Demand response, also referred to as shared ride or paratransit, and is defined as door-to-door service that requires a customer to call in advance to reserve or schedule a ride.

The agencies regularly monitor performance to maintain cost-effective and high quality services. Together, the agencies provide over 2.9 million passenger trips each year and operate over 4.1 million vehicle revenue miles. The majority of each agency's ridership comes from their fixed route systems – COLTS 93%, LCTA 87%, and HPT 95%. Fare revenues, as well, are generated primarily from fixed route services – COLTS 97%, LCTA 86% and HPT 81%. The average age of the agencies' fixed route vehicle fleets range from six to nine years, with HPT having the oldest average fleet age. The average age of the agencies' demand response vehicles is three to four years. LCTA has the lowest cost ($6.16) per passenger trip for its fixed route service, followed by COLTS at $6.98, and HPT at $10.16. COLTS and LCTA cost for its demand response passenger trips is $22.45 and HPT cost is $29.98.

Public Transit Agencies

The following public transit agencies provide passenger transit services in Lackawanna and Luzerne Counties:

[8] On the Twelve Year Transportation Plan, not yet constructed.

County of Lackawanna Transit System (COLTS)

COLTS is a municipal authority that provides fixed route and demand response services in Lackawanna County. The National Transit Database (NTD)[9] for fiscal year 2013 indicates that COLTS transported a total of 1,307,084 passengers of which 1,212,495 rode fixed route and 94,589 rode paratransit services. The agency has 42 fixed routes and 35 demand response vehicles. The average age of their vehicle fleet is 7.2 years and 3.8 years for fixed route and demand response, respectively. COLTS uses a sub-contractor to provide four fixed routes, referred to as shuttles, and paratransit services on Saturdays.

All COLTS' fixed routes are equipped with bike racks that can accommodate two bicycles. Six routes that are operated by Northeast Transit, which is a sub-contractor to COLTS, do not have bike racks.

COLTS' fixed route base fare is $1.75 and transfers are $.75. Reduced fares are available for children, persons with disabilities, and for customers who purchase a 31-day pass, 10-ride pass, day pass, or student pass. Senior Citizens (65 years and older) are able to ride free by showing a state issued Transit ID card. Seniors and persons with disabilities are eligible for reduced fares on COLTS' demand response services.

COLTS operates service from 5:30 a.m. to 1:00 a.m. weekdays and from 7:45 a.m. to 1:00 a.m. on Saturdays. COLTS operates a total of 35 fixed routes, including 30 that serve Steamtown Mall, which is the hub of transit services in downtown Scranton. A new facility called the Scranton Intermodal Transportation Center is currently under construction and is expected to be operational in December 2015. When the Scranton Intermodal Center, located on Lackawanna Avenue, is completed, it will supplant Steamtown Mall as the downtown transfer center. The facility will also serve as a hub for commercial buses and taxis as well. And, in the future, if passenger rail service to New York is restored, commuter trains will also operate from the Scranton Intermodal Center. Planning for a second phase of the Intermodal Center that would account for connections to the restored rail service is being considered.

Most of COLTS' services – 31 routes – operate every weekday except for two routes: one that operates on Tuesdays and Thursdays only; and another that operates on the first Friday of each month except in January. Twenty-two routes operate on Saturdays, including 17 that serve Steamtown Mall and one route that operates seasonally from September through May.

A few COLTS' routes penetrate into or near the adjacent service areas covered by LCTA and HPT providing opportunities to integrate services or coordinate transfers. COLTS' routes that provide those opportunities with LCTA include 28 Pittston Route, 31 Old Forge, and 26 Mohegan Sun. A possible opportunity for the agencies to connect services is at Mohegan Sun Casino, because it is served by COLTS, LCTA, and HPT. Currently, COLTS and LCTA coordinate timed connections between their respective routes in Old Forge.

[9] COLTS NTD FY 2013 contained an error with demand response numbers. The numbers have been updated by COLTS.

Luzerne County Transportation Authority (LCTA)

LCTA is a municipal authority that provides fixed routes and demand response services in the greater Wilkes-Barre (central and northern Luzerne County) area of Luzerne County. LCTA's paratransit services extend into Wyoming County.

LCTA has 17 fixed routes that operate Monday through Saturday. It should be noted that LCTA operates one deviated fixed route (17 Wyoming Valley) that provides service to the airport for customers who call LCTA in advance. Table 11 depicts all of LCTA's fixed routes. Service operates over a 14-hour span, every day Monday through Friday from 5 a.m. to 7:10 p.m. and over a nine-hour span on Saturdays from 8:50 a.m. to 6:05 p.m.

All of LCTA's routes serve the James F. Conahan Intermodal Center located on South Washington Street in downtown Wilkes-Barre. In addition to serving as the hub of bus services in Luzerne County, the James F. Conahan Intermodal Center, which is owned by the City of Wilkes-Barre, has 752 parking spaces, taxi-pick-up, retail shops, and a bus terminal for Martz Trailways.

There are opportunities for LCTA to interface with adjacent transit services, some of which have been mentioned previously. LCTA and HPT already provide services to Wyoming Valley Mall, Mohegan Sun, and Wilkes-Barre Intermodal Center and, as such, can formalize connections and transfer times in the future. LCTA and HPT are working together to make connections in Mountain Top so that HPT customers can get service to Luzerne County Community College. LCTA's Route 17 (Wyoming Valley Mall/Steamtown/Dupont) operates into downtown Scranton which provides customers with direct connections to COLTS routes. LCTA also connects with COLTS at Old Forge, Mohegan Sun, and Pittston which are possible locations for future formalized timed connections.

LCTA's fixed route base fare is $1.50 and transfers cost $.40. The agency's "short fare", which is a reduced cash fare for a partial trip (within one half of a mile of the transit center) is $1.10. Reduced fares are available for children, persons with disabilities, and for customers who purchase 31-day tickets, 20-ride tickets, 10-ride tickets, day pass, or student passes. Senior citizens (65 years and older) are able to ride LCTA for free with a state issued Transit ID card. Seniors and persons with disabilities are eligible for reduced fares on LCTA's paratransit services.

According to NTD for FY 2013-14, it indicates that LCTA transported a total of 1,357,907 passengers consisting of 1,182,000 fixed route riders and 175,907 paratransit riders. The agency has 38 fixed routes and 62 demand response vehicles. The average ages of the vehicle fleets are six years and three years respectively.

Hazleton Public Transit (HPT)

HPT is a department within the City of Hazleton's Department of Public Service and is governed by the Mayor and the City Council. HPT provides fixed route and paratransit transportation services for the City of Hazleton and surrounding communities, primarily in lower Luzerne County. HPT subcontracts its transportation services and oversees three private contractors.

HPT is not required to report its numbers into the NTD and as such, the information about HPT in this database is limited. HPT provided Delta with its numbers for all NTD categories. The NTD for FY 2013-14 indicates that HPT transported a total of 216,811 passengers consisting of 205,566 fixed routes and 11,245 paratransit riders. The agency has 16 total vehicles including 12 fixed routes and four demand response. The average ages of the vehicle fleets are nine years and four years, respectively.

Church Street Station, located at 126 Mine Street, serves as HPT's Administrative Office and also as an intermodal transfer center. All of HPT's routes serve Church Street Station, as well as, Susquehanna Trailways and Fullington Trailways, which both operate from the center to regional cities that include Harrisburg and Philadelphia. In addition to connecting with local and regional routes, HPT's customers can get trip information and purchase bus passes at Church Street Station. Susquehanna Trailways also has a ticket sales counter at Church Street Station. The design of the intermodal center allows for future expansions that would accommodate increases in parking, retail, and office space.

HPT operates a total of 14 fixed routes; 13 routes operate on weekdays; 10 routes operate on Saturdays; and one route operates on Sundays). Service on the weekdays operates about 18 hours each day (from 5:15 a.m. to 10:45 p.m.); however, service hours are reduced on Saturdays (from 8:00 a.m. to 10:00 p.m.), and greatly reduced on Sundays (from 11:00 a.m. to 6:00 p.m.)

HPT's fixed route base fare is $1.25 and transfers cost $.50. Reduced fares are available for children, persons with disabilities, and for customers who purchase a 20-ride ticket or a 10-ride ticket. Senior citizens (65 years and older) are able to ride fixed route service free with an HPT Transit ID card, which is available from HPT's office.

One of HPT's routes (Route 15 – Mountain Top and Wilkes-Barre), which operates between Hazleton and Wilkes-Barre, could be coordinated with LCTA's service at Mohegan Sun and Wyoming Valley Mall, and with COLTS' service at Mohegan Sun. HPT and LCTA continue to work together to identify places to interface their services, which include making connections in Mountain Top to transport Hazleton area customers to Luzerne County Community College. Several HPT routes travel into other counties: three routes serve parts of Carbon County; and one route touches into Schuylkill County creating an opportunity for passengers to connect with Schuylkill Transportation System.

Private Transit Operators

There are several private operators that provide transportation services in Lackawanna and Luzerne Counties, including some that receive funding from PennDOT. The private operators provide scheduled trips, as well as offering other services such as tours and charters.

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. [10,11]

Greyhound

Greyhound Lines, Inc. (Greyhound) is the largest provider of intercity bus transportation in North America, serving more than 3,800 destinations and 18 million passengers per year. Greyhound has other operating entities including BoltBus and YO! Greyhound provides service in Lackawanna and Luzerne Counties and interlines with Martz Trailways, Susquehanna Trailways and Fullington Trailways. Key Greyhound stops include:

- Wilkes-Barre: 4700 South Washington Street – Wilkes-Barre, PA
- Wyoming Valley Mall: 29 Wyoming Valley Mall – Wilkes-Barre, PA
- Dallas: 31 Claude Street – Dallas, PA
- Scranton: 23 Lackawanna Avenue – Scranton, PA
- Scranton: 1300-1310 Pine Street – Scranton, PA
- Hazleton Intermodal Center: 126 Mine Street – Hazleton, PA

BPT's FY 2013-2014 Performance Report indicated that Greyhound serves 16 counties in Pennsylvania and also travels outside of Pennsylvania. The company has 12 vehicles and an average fare of $25.15.

Trailways

Trailways Transportation System (a.k.a., Trailways) is a regionally-based ground transportation system that is comprised of multiple privately owned and operated companies. Trailways offers locally-based transportation services via a network of smaller, independent operators that provide complementary interline services to smaller towns and destinations.

The following summarizes the current scheduled service that connects with COLTS, LCTA, and/or HPT.

- **Susquehanna Trailways[12]**
  - Susquehanna Trailways (Susquehanna) is a family-owned motor coach company based in Avis, Pennsylvania. It has a Travel Center and Bus Terminal at HPT's Intermodal Center at 126 West Mine Street in Hazleton. The Travel Center is open seven days a week. Customers can purchase tickets and ship packages, as well as, board a Trailways bus to various cities in New York, such as New York City and Elmira; and in Pennsylvania, such as Philadelphia, Lock Haven, Williamsport, and Harrisburg. As a Trailways provider, Susquehanna offers inline connections with Greyhound and other Trailways operators in the Northeastern United States.

  - BPT's FY 2013-2014 Performance Report indicated that Susquehanna serves 19 counties in Pennsylvania and allows for travel outside of Pennsylvania. The company has 13 vehicles and an average fare of $16.02.

[10] Trailways Transportation System Webpage, http://www.trailways.com, 2008.
[11] Greyhound Webpage, http://www.greyhound.com
[12] http://www.susquehannabus.com

- **Martz Trailways**[13]
  - Martz Trailways (Martz) provides bus service seven days a week to and from New York City, Atlantic City, Philadelphia, Bethlehem, Wilkes-Barre, and Scranton. Public transit customers can connect with Martz in Luzerne County at Wyoming Valley Mall and Wilkes-Barre Transit Center; and, in Lackawanna County at 23 Lackawanna Avenue in downtown Scranton (near Steamtown Mall and COLTS' transfer hub.) Within Lackawanna and Luzerne Counties, Martz Trailways operates an intercity, express bus service between Scranton and Wilkes-Barre on weekdays and weekends. During weekdays, 14 trips depart Scranton for Wilkes-Barre, and eight trips depart Wilkes-Barre for Scranton. During weekends, the service is slightly less frequent, with six to eight trips departing Scranton or Wilkes-Barre during the day. As a Trailways provider, Martz offers inline connections with Greyhound and other Trailways operators in the Northeastern United States.

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's (COLTS) 6,500 square foot intermodal transportation center located in the city of Scranton along Lackawanna Avenue is currently under construction and is anticipated to be completed in the spring of 2016. 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.

Wilkes-Barre Intermodal Transportation Center

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 include a 14-screen movie theater and a Barnes & Noble bookstore. 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.

[13] http://martztrailways.com

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

One 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

- Norfolk Southern Railway Company (NSRC), formerly Canadian Pacific Railroad (CPR) –The former 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. It is expected that former CPR operations will not change as NSRC has operating rights on the CPR line for a number of years. NSRC also maintains branch line trackage near Hazleton for some customers. 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.

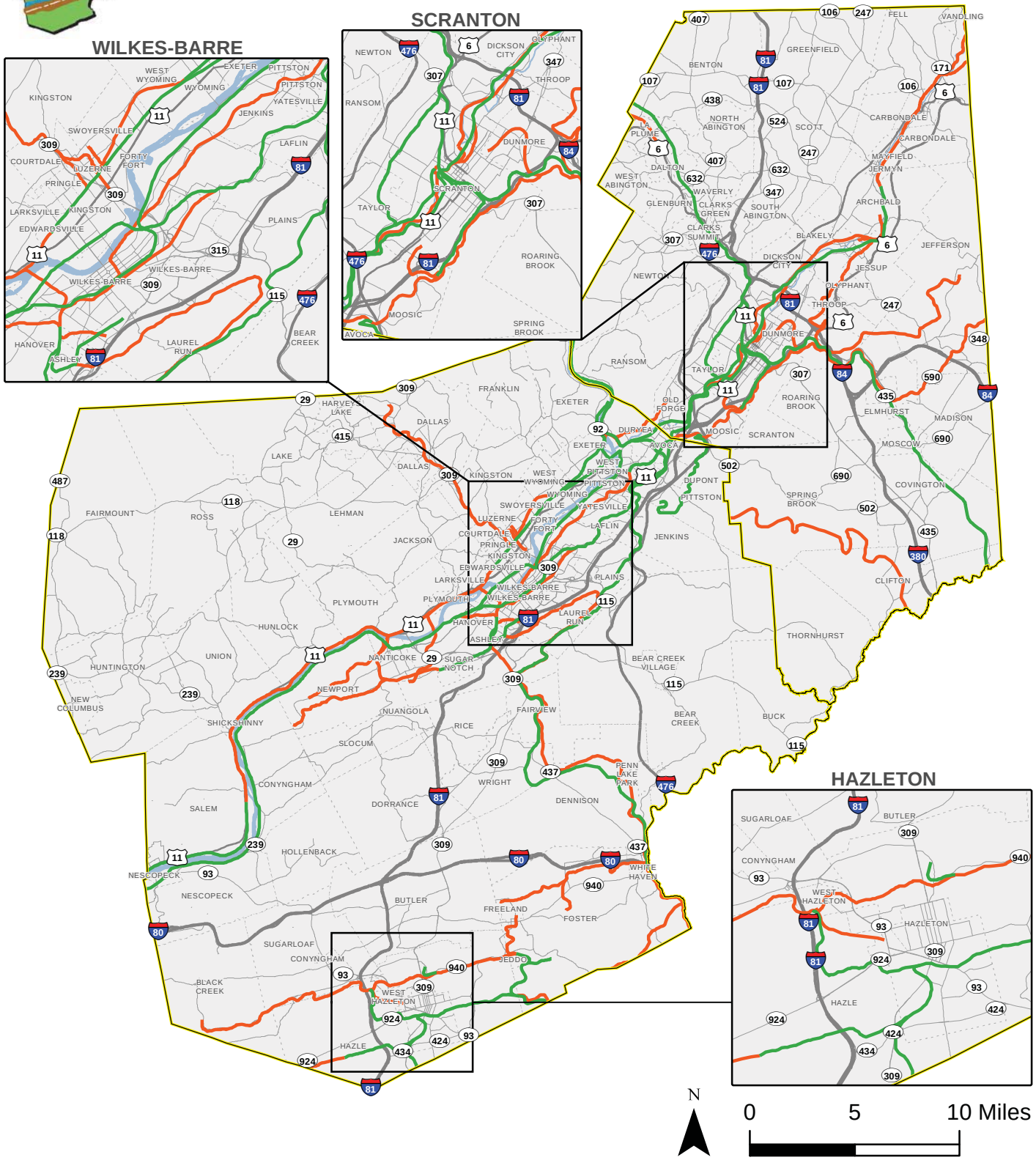
- North Shore Railroad Company (NSRR) – NSRR operates a branch line service along the west shore of the Susquehanna River from Northumberland north into Luzerne County at Berwick and then on to the Susquehanna Steam Electric Station near Beach Haven. NSRR serves the power station as well as other industries along the line.

Freight Intermodal Facility

The Taylor Yards are located on approximately 30 acres in Taylor Borough with facilities to trans-load truck trailers and shipping containers to rail flat cars and container unit carriers. The trans-load facility has been in operation for over twenty years and was recently acquired by Norfolk Southern as part of their purchase of the Canadian Pacific rail lines in the area. It covers a service area of approximately 100 miles with access to Interstates 81 and 476 and services large companies such as CVS Pharmacy, Sam's Club, Lowes and Walmart. A large part of the growing business is servicing Marcellus Shale companies drilling and processing natural gas in the area.

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

FIGURE 4.2.4
FREIGHT TRANSPORTATION NETWORK



Legend

Active Railroad

Inactive Railroad

Source: Railroad digitized from USGS Topographic

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 and has been identified as a priority corridor by PennDOT and New Jersey Transit[14]. (This service could also extend from Scranton to Wilkes-Barre.) 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.[15]

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.[16]

- 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.[17]

- 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.

[14] "Pennsylvania Intercity Passenger and Freight Rail Plan", February, 2010
[15] "Efforts Continue on NYC Rail Link," The Times Tribune, Scranton, PA, August 20, 2006.
[16] Steamtown National Historic Site Webpage, National Park Service, http://www.nps.gov/stea/, 2008.
[17] Electric City Trolley Museum, http://www.ectma.org/museum.html, 2008.

Today, the WBSIA has four major airlines: Allegiant, American Airlines, Delta, and United. Inbound and outbound flights are routed through larger national hubs at Newark, Philadelphia, Atlanta, Detroit, Chicago, and Charlotte plus nonstop service to Orlando/ Sanford and Tampa/St. Petersburg. International flights have recently been operated on a trial basis. Regional Sky has begun excursion flights on a limited basis between Avoca and Freeport, Bahamas and depending on demand the number of flights may increase. Allegiant has also added a twice weekly year round flight to Tampa/St. Petersburg to its schedule.

Recently completed airport facilities include a new control tower and an aircraft parking apron. A new airport access road is currently under construction that improves access to Interstate 81 and PA 315 and will eventually connect to Commerce Boulevard. The airport also owns several parcels of vacant land zoned commercial/industrial which are 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's 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

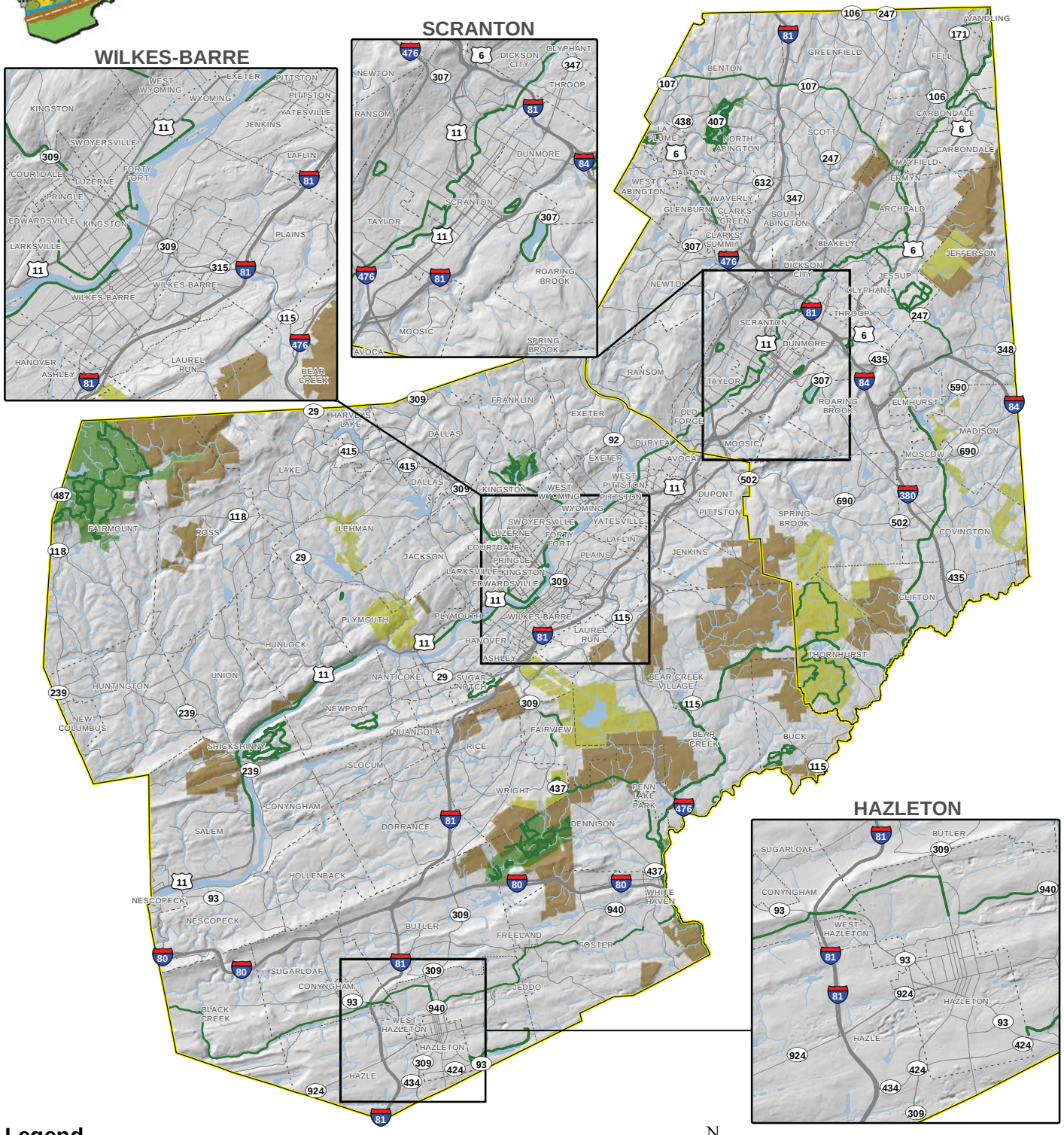
Seaman's Field is located northeast of Factoryville, near the Lackawanna-Wyoming County line in Benton Township. Seaman's Field has been in operation for over fifty years, and was officially activated as a privately-owned, public use airport in 1971. The airport has developed from a small grass strip 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:

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

FIGURE 4.2.5
TRAILS & CONSERVATION LAND



Legend

- Trails
- State Park
- State Gameland
- State Forest

Source: DCNR and PGC

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.

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 Transportation Alternatives Program applications. Much of the master planning began with the development of the MPO’s Bicycle and Pedestrian Plan in 1999 as well as the Open Space, Greenways & Outdoor Recreation Master Plan completed in 2004. 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 (PFBC).

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 including D&H Trail	Rail trail that generally runs along the Lackawanna River from the Borough of Pittston north to the New York State border, approximately 50 miles completed with on road routes that currently bridge the remaining 20 miles under development	70 miles
Trolley Trail	Clarks Summit to Dalton, with funding for Phase 2 recently awarded which will extend another 1.5 miles through the Keystone Woodlands Campus	3 miles
Back Campus Trails at Keystone College	Network of trails on the south side of Keystone College	4.5 miles
Davis Trail, Nay Aug Park, City of Scranton	Loop trail on the northwest side of I-81/Central Scranton Expressway interchange	2 miles
South Abington Park, South Abington Twp	Loop trail	1.5 miles
Eales Preserve	Mountain biking and hiking trails near Moosic Lake	9 miles
Lackawanna State Park Trails	Network of trails in the Lackawanna State Park	12 miles
Lake Scranton Walking Trail	Walking trail around Lake Scranton	4 miles

Source: Guide to the Lackawanna River Heritage Trail and the D&H Rail-Trail

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.

Transportation Alternative projects, which include trails, that have been recently added to the TIP include:

- Carbondale Riverwalk includes the construction of a two-mile section of trail linking Carbondale and Fell Township
- Extension of the Back Mountain Trail from Overbrook Road to Dorchester Road in Dallas Township
- Streetscape and pedestrian safety improvements at Wilkes University on South Franklin and West South Street

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 OnTheMap data for 2011 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 and it also shows the counties in which those employed in Lackawanna and Luzerne Counties live.

The following trends were noted:

- About 62 percent of Lackawanna County residents work in Lackawanna County and 10 percent work in Luzerne County.
- About 65 percent of Luzerne County residents work in Luzerne County and 7 percent work in Lackawanna County.
- About 72 percent of residents who live in Lackawanna and Luzerne Counties work there also. An additional 8 percent of residents who live in Lackawanna and Luzerne Counties work in the adjacent counties, with Monroe, Columbia, and Schuylkill Counties attracting the most workers. Non adjacent counties that attract a similar number of workers, if not more, as the adjacent counties include Dauphin, Lehigh, Montgomery and Philadelphia Counties.
- About 71 percent of workers who work in Lackawanna and Luzerne Counties live there also. An additional 12 percent of workers who work in Lackawanna and Luzerne Counties live in the adjacent counties, with Wayne, Wyoming, Columbia, and Schuylkill Counties supplying the most workers.

The trends indicate that the two-county area is mostly insular in regard to commuter travel flow although these percentages have decreased since the last Long Range Plan. Previously 90 percent of residents of the two counties worked within the same area, which is now reduced to 72 percent. The data indicates that higher numbers of residents of the two counties are traveling farther, or working remotely, for companies in Dauphin, Lehigh, Montgomery, and Philadelphia County. There is some interchange of workers and residents between Lackawanna and Luzerne Counties, but the majority of journey-to-work activity is contained within the county boundaries.

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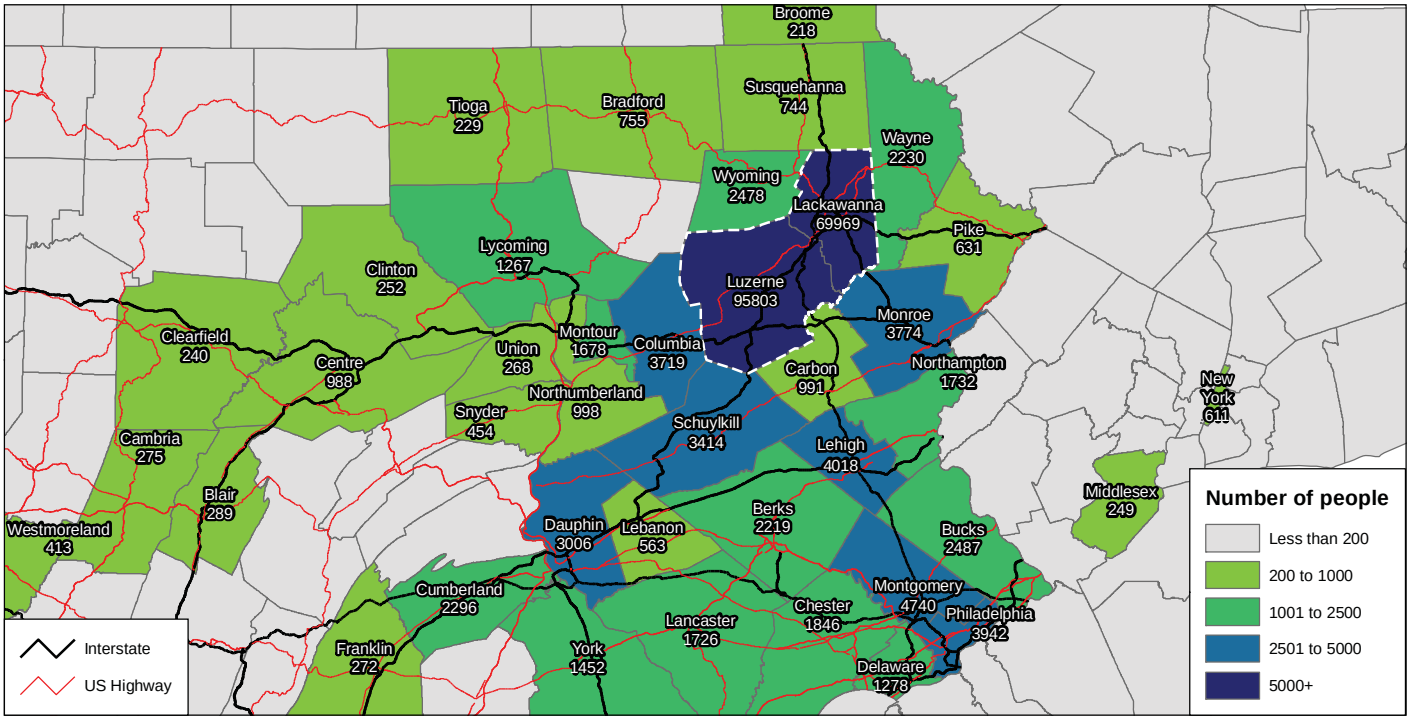
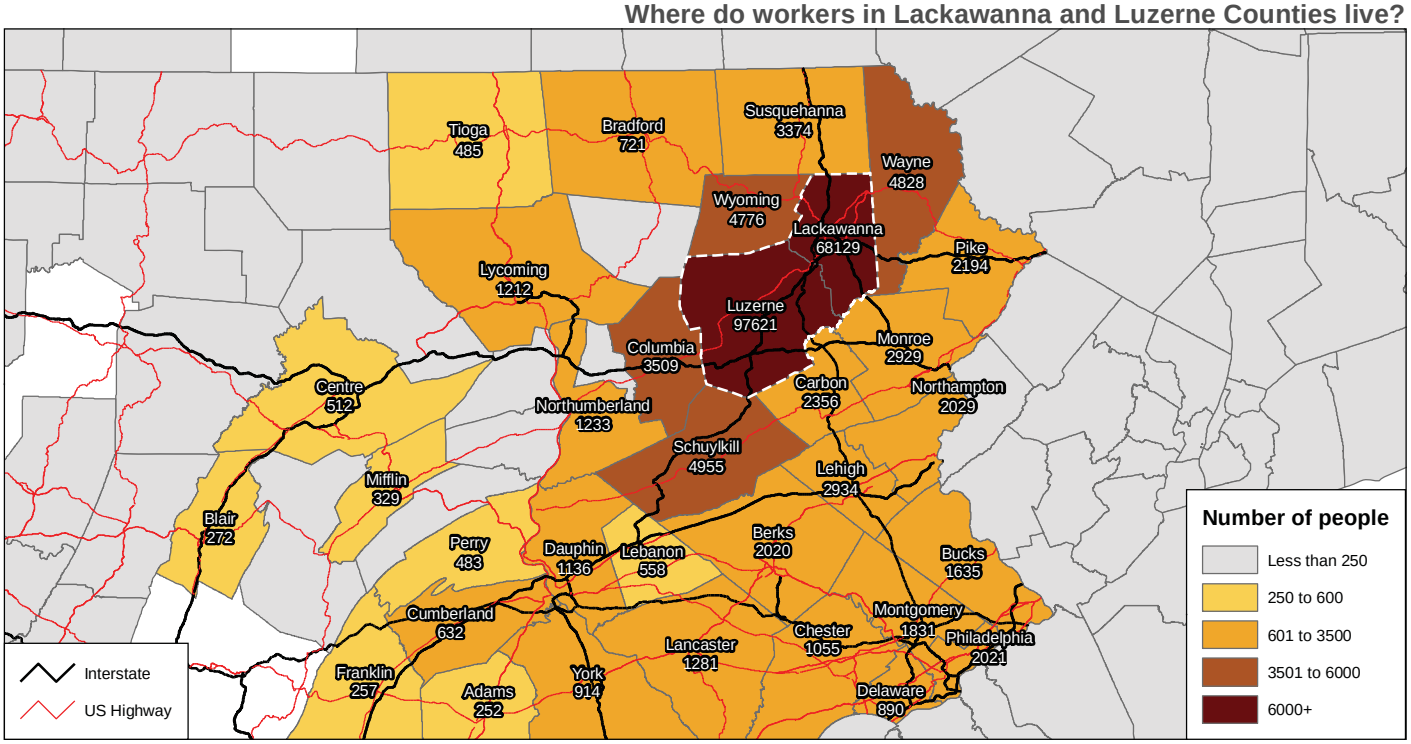
FIGURE 4.2.6
JOURNEY-TO-WORK COMMUTER TRAVEL

Where do residents of Lackawanna and Luzerne Counties work?



Where do workers in Lackawanna and Luzerne Counties live?



Source: Census, OneTheMap, LEHD 2011 All Jobs

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 72 percent of Lackawanna and Luzerne residents work in Lackawanna and Luzerne Counties.
- More than 80 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 85 percent of all freight transported within Pennsylvania and more than 60 percent of all freight shipped to and/or from the Commonwealth.[18] 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 2015 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 2015 Average Daily Truck Traffic (ADTT) volumes.

[18] U.S. Department of Transportation (USDOT), Office of Freight Management and Operations, Pennsylvania's Freight Analysis Framework Version 3 (FAF3), http://faf.ornl.gov/fafweb/FUT.aspx, FAF3.5 State Summary by Dmsmode and Trade, 2007, and 2012.xlsx, 2015.

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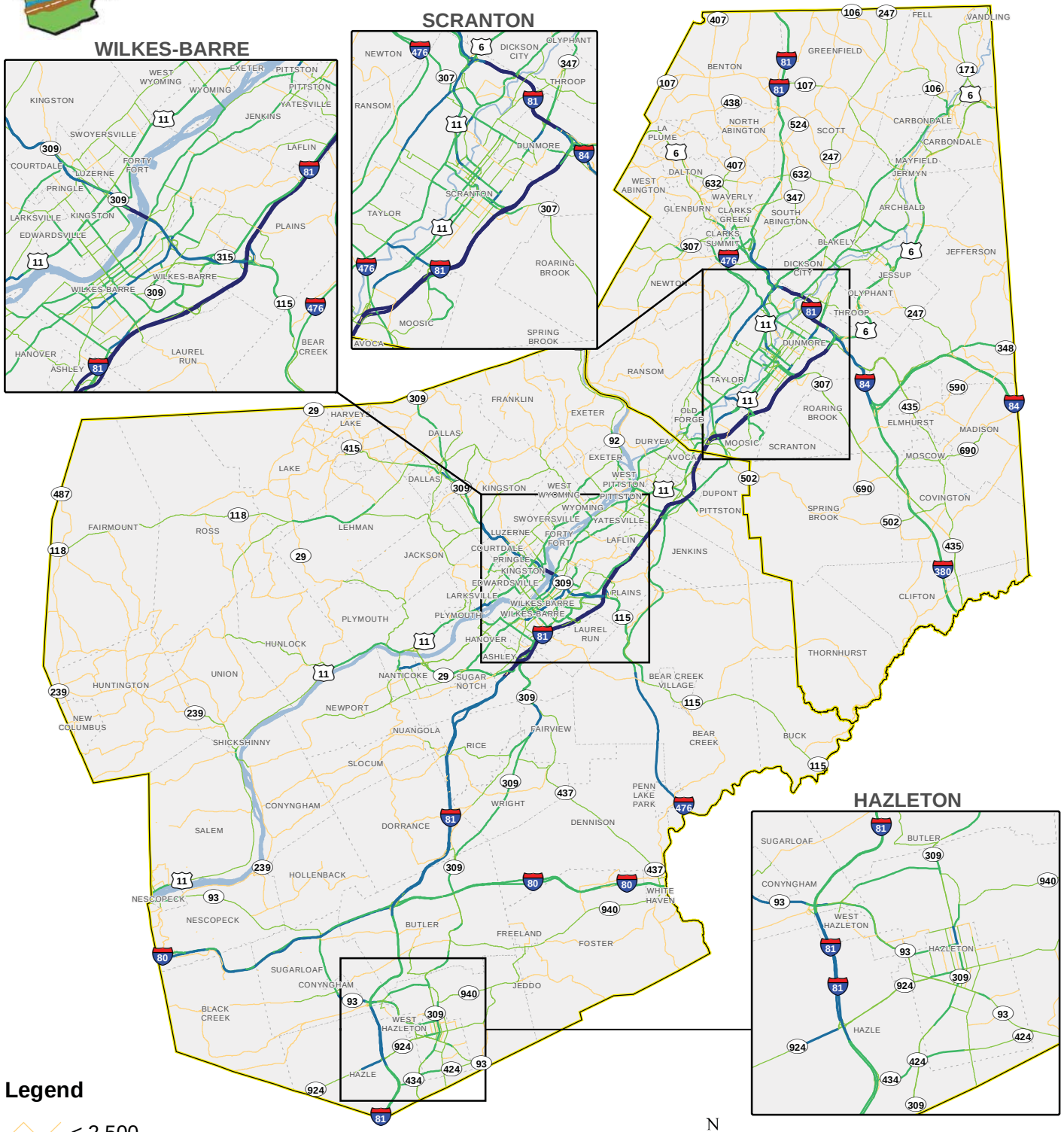
FIGURE 4.2.7
AVERAGE DAILY TRAFFIC VOLUME



Source: PennDOT PA State Roads Feb. 2015

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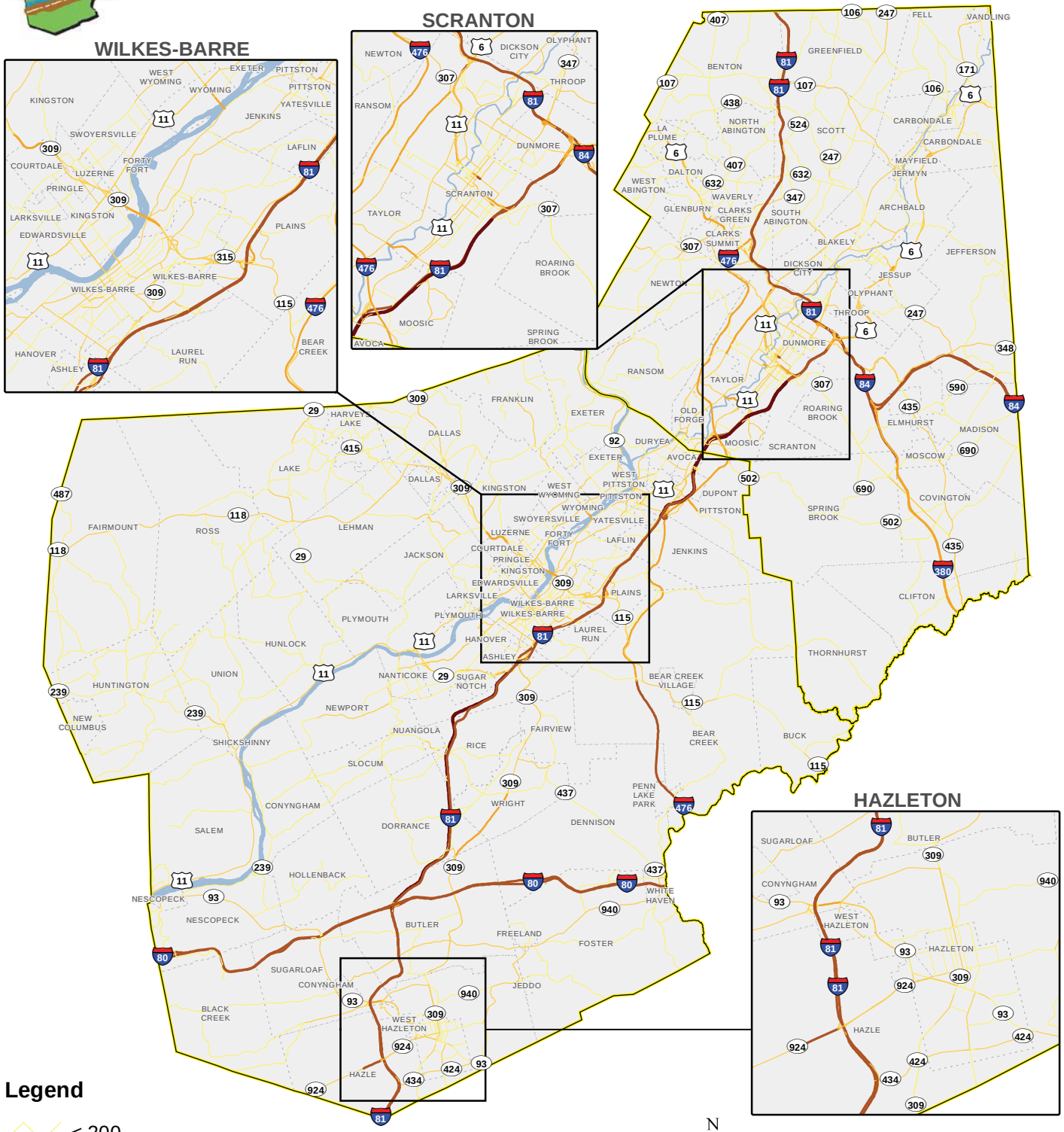
FIGURE 4.2.8
AVERAGE DAILY TRUCK VOLUME



Legend

- < 200
- 201 - 1,000
- 1,001 - 2,500
- 2,501 - 6,000
- > 6,000

Source: PennDOT PA State Traffic Counts Jan. 2015

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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 Luzerne County Transportation Authority (LCTA) and Hazleton Public Transit (HPT) served 2.9 million passengers in fiscal year 2013 which is over 10,000 passenger trips each 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.[19]

Figure 4.2.9 illustrates the IRI for state-owned roadways in Lackawanna and Luzerne Counties. *Table 4.2.5* summarizes IRI condition by miles and compares to those reported in the 2011 report.

[19] Federal Highway Administration, Highway Performance Monitoring System (HPMS) Field Manual, Chapter 5.4: Pavement Data Guidance, http://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/HPMS_2014.pdf, 2014.

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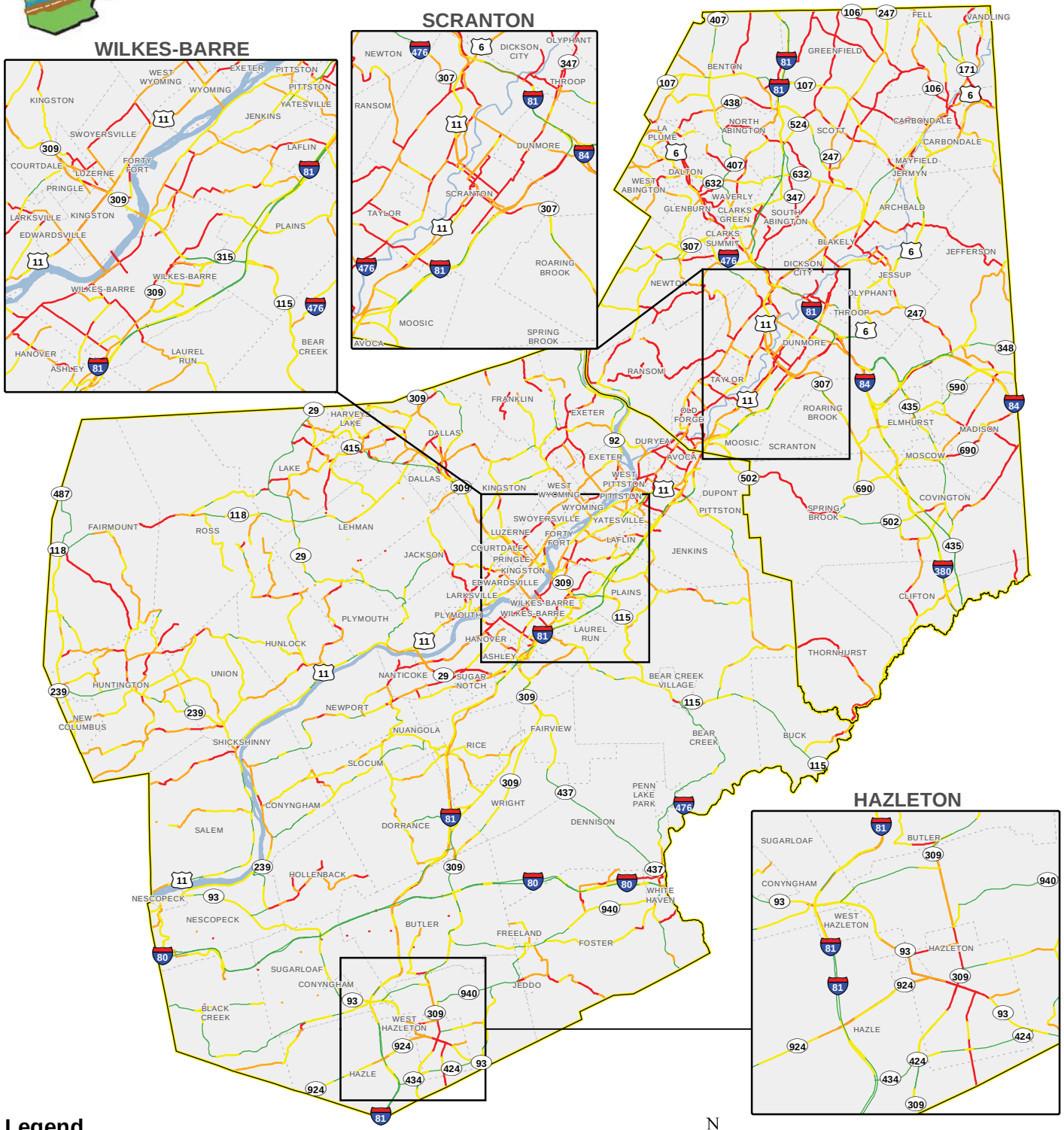
FIGURE 4.2.9
INTERNATIONAL ROUGHNESS INDEX (IRI)



Source: MPMS IQ, 1/15/2015

Table 4.2.5
Miles of Roadway by Roughness Index

	Excellent	Good	Fair	Poor
2011 TOTALS	361.25 (22.0%)	716.94 (43.6%)	412.91 (25.1%)	152.11 (9.3%)
2015 TOTALS	274 (16.1%)	626 (36.8%)	435 (25.6%)	365 (21.5%)

Source: PennDOT District 4-0, 2008; U.S. Census Bureau, 2000, 2015 MPMS IQ

Approximately 62% of the total lane miles in the region are in the Fair and Good category, down 6% from 2011. These classifications take into account traffic volume and the ride index developed by PennDOT.

In addition to IRI, PennDOT reports Overall Pavement Index (OPI) which combines the IRI based roughness index with individual pavement distress indices such as cracking (fatigue, transverse, longitudinal, and misc.), edge deterioration, patching, raveling/weathering, rutting, faulting and spalling. ***Figure 4.2.10*** illustrates the OPI for state-owned roadways in Lackawanna and Luzerne Counties.

PennDOT prepares a Performance Measures Annual Report for Pavements where IRI and OPI parameters are measured against target values. These performance measures are consistent with those identified in the FHWA rulemaking that establishes new requirements for performance management to ensure an efficient investment of Federal transportation funds. The following performance goals are identified for Interstate and National Highway System (NHS) non-interstate roadways:

1. Reduce poor IRI
2. Maintain % Good and Excellent OPI
3. Reduce surface out-of-cycle (Fair and Poor OPI)
4. Maintain pavement potentially past design service life, out-of-cycle (Poor OPI)

Similarly, the following performance goals are identified for Non-NHS roadways:

1. Reduce poor IRI
2. Maintain % Good and Excellent OPI
3. Maintain surface out-of-cycle (Poor OPI)
4. Reduce seal coat (low level) network out-of-cycle

The goals noted in ***Figure 4.2.11*** are directly from the 2013 Performance Measures Annual Report and indicate optimum and cautionary thresholds for performance. Based on the results for the Lackawanna Luzerne MPO, various metrics are not meeting the cautionary threshold based on 2013 data. The percentage of roadways with good or excellent OPI is notably below the long range targets for all roadway types. Currently, these values are consistent with other regions of the Commonwealth and reflect the need for continued asset management focus for the Commonwealth in the coming years.

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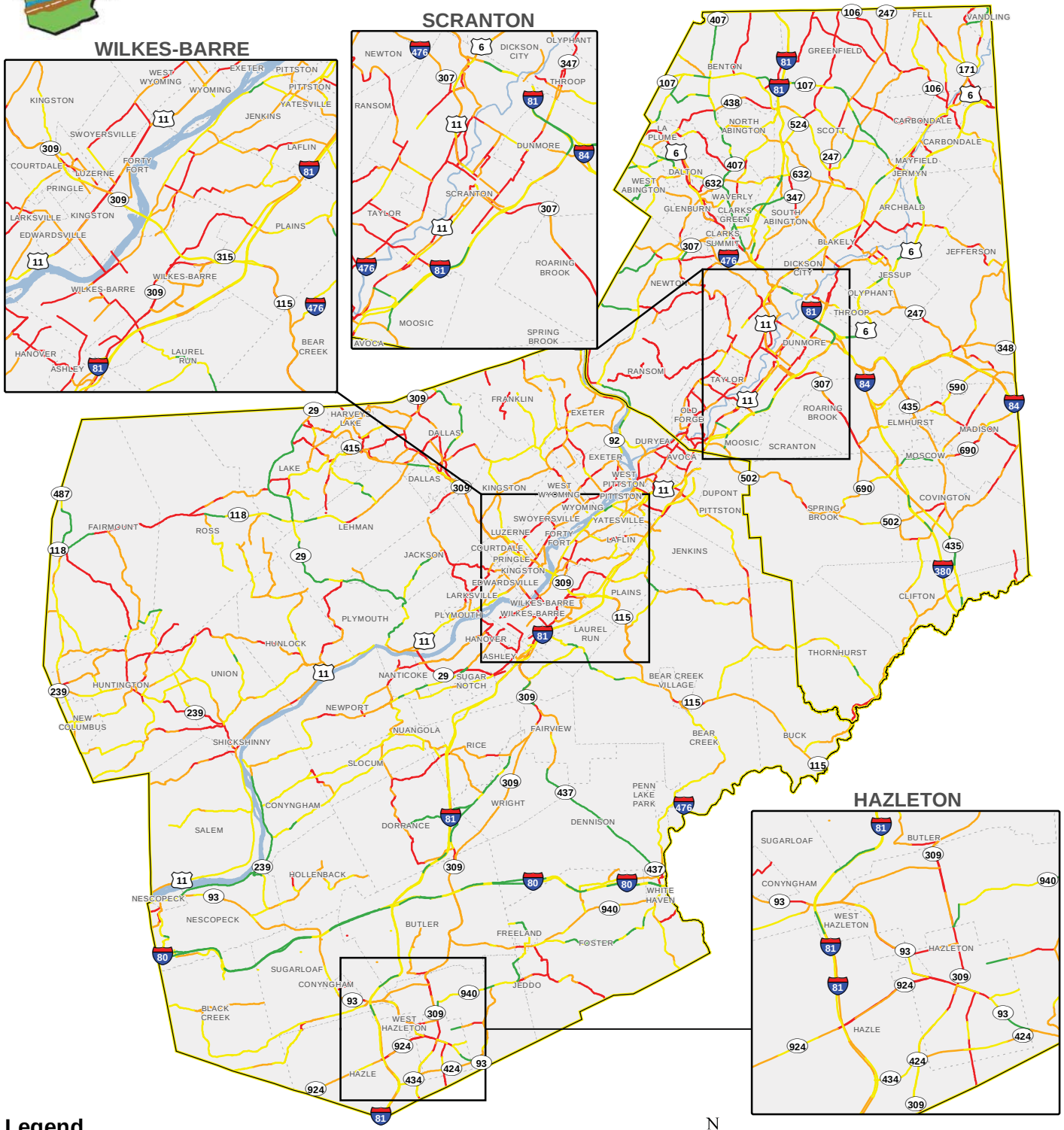
FIGURE 4.2.10
OVERALL PAVEMENT INDEX (OPI)



Legend

- Excellent
- Good
- Fair
- Poor

Source: MPMS IQ, 8/26/2015

Figure 4.2.11
2013 Performance Measures Annual Report – Pavements

2013 Performance Measures Annual Report -- Pavements

Scranton-Wilkes Barre MPO

Current Pavement Smoothness Summary by Business Plan Network

Business Plan Network	Total Segment Miles	IRI: Tested Segment Miles	IRI: Excellent Seg-Mi	IRI: Good Seg-Mi	IRI: Fair Seg-Mi	IRI: Poor Seg-Mi	IRI: Median IRI	Low Level Network: Segment Miles	Low Level Network: Seal Coat Out-of-Cycle Seg-Mi
Interstate	62.8	215.9	77.1	77.9	48.1	12.8	88		
NHS, Non-Interstate	285.6	235.2	11.4	87.3	91.3	45.2	84		
Non-NHS, ≥ 2000 ADT	526.8	520.0	115.8	208.3	92.3	103.6	136	121.3	0.0
Non-NHS, < 2000 ADT	648.9	637.7	73.8	221.0	178.0	164.8	177	456.8	3.5
Total - Roadway	**1,524.2**	**1,608.8**	**278.2**	**594.6**	**409.6**	**326.4**		**578.1**	**3.5**

Current Overall Pavement Index Summary

Business Plan Network	Total Segment Miles	OPI: Tested Segment Miles	OPI: Excellent Seg-Mi	OPI: Good Seg-Mi	OPI: Fair Seg-Mi	OPI: Poor Seg-Mi	OPI: Median OPI	Surface Out-of-Cycle Seg-Mi	Pavement Age > 40 years Out-of-Cycle Seg-Mi
Interstate	62.8	214.9	24.7	132.6	45.2	12.3	91	0.0	0.0
NHS, Non-Interstate	285.6	232.2	8.2	73.2	71.4	79.3	83	88.0	62.3
Non-NHS, ≥ 2000 ADT	526.8	517.4	44.8	96.8	280.7	95.1	75	120.5	
Non-NHS, < 2000 ADT	648.9	637.7	47.7	243.1	212.5	134.4	69	36.0	
Total - Roadway	**1,524.2**	**1,602.1**	**125.5**	**545.7**	**609.7**	**321.2**		**244.5**	**62.3**

Interstate and NHS, Non-Interstate Goals

Goal: Reduce Poor IRI

Business Plan Network	Long Range % IRI Seg-Mi	Target 2014 % IRI Seg-Mi	Actual 2013 % IRI Seg-Mi
Interstate	1.5%	2.4%	5.9%
NHS, Non-Interstate	5.0%	6.7%	19.2%

Goal: Maintain % Good and Excellent OPI

Business Plan Network	Long Range % OPI Seg-Mi	Target 2014 % OPI Seg-Mi	Actual 2013 % OPI Seg-Mi
Interstate	87.7%	87.7%	73.2%
NHS, Non-Interstate	79.0%	75.3%	35.1%

Goal: Reduce Surface Out-of-Cycle (Fair and Poor OPI)

Business Plan Network	Long Range % OPI Seg-Mi	Target 2014 % OPI Seg-Mi	Actual 2013 % OPI Seg-Mi
Interstate	3.0%	3.7%	5.3%
NHS, Non-Interstate	10.0%	10.9%	25.1%

Goal: Maintain Pavement Potentially Past Design Service Life, Out-of-Cycle (Poor OPI)

Business Plan Network	Long Range % OPI Seg-Mi	Target 2014 % OPI Seg-Mi	Actual 2013 % OPI Seg-Mi
Interstate	1.4%	1.4%	0.5%
NHS, Non-Interstate	4.1%	4.1%	13.4%

Non-NHS Goals

Goal: Maintain Poor IRI

Business Plan Network	Long Range % IRI Seg-Mi	Target 2014 % IRI Seg-Mi	Actual 2013 % IRI Seg-Mi
Non-NHS, ≥ 2000 ADT	18.0%	18.0%	19.9%
Non-NHS, < 2000 ADT	19.8%	19.8%	25.8%

Goal: Maintain % Good and Excellent OPI

Business Plan Network	Long Range % OPI Seg-Mi	Target 2014 % OPI Seg-Mi	Actual 2013 % OPI Seg-Mi
Non-NHS, ≥ 2000 ADT	43.8%	43.8%	27.4%
Non-NHS, < 2000 ADT	61.0%	61.0%	45.6%

Goal: Maintain Surface Out-of-Cycle (Poor OPI)

Business Plan Network	Long Range % OPI Seg-Mi	Target 2014 % OPI Seg-Mi	Actual 2013 % OPI Seg-Mi
Non-NHS, ≥ 2000 ADT	4.2%	4.2%	7.8%
Non-NHS, < 2000 ADT	1.2%	1.2%	3.7%

Goal: Reduce Seal Coat (Low Level) Network Out-of-Cycle

Business Plan Network	Long Range % Seg-Mi	Target 2014 % Seg-Mi	Actual 2013 % Seg-Mi
Non-NHS, ≥ 2000 ADT	0.0%	0.0%	0.0%
Non-NHS, < 2000 ADT	0.0%	0.4%	0.8%

Note: for the Interstate and NHS, Non-Interstate Business Plan Networks, the IRI and OPI data is for 2013. For the Non-NHS Business Plan Networks, the IRI and OPI data for most recent year captured, either 2012 or 2013.

Note: Pavement Potentially Past Design Service Life, Out-of-Cycle is defined as old pavements (pre-2009 pavement age) greater than 40 years.

Note: Coloration of the Actual 2013 column is based on the Target set for 2013. Long-Range Goals are for 2015.

Legend

Target - Opimum Threshold
Target - Cautionary Threshold
Actual - At Optimum Threshold
Actual - At Cautionary Threshold
Actual - Not Meeting Cautionary Threshold

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 4.2.12* 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 Pennsylvania Spatial Data Access (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.

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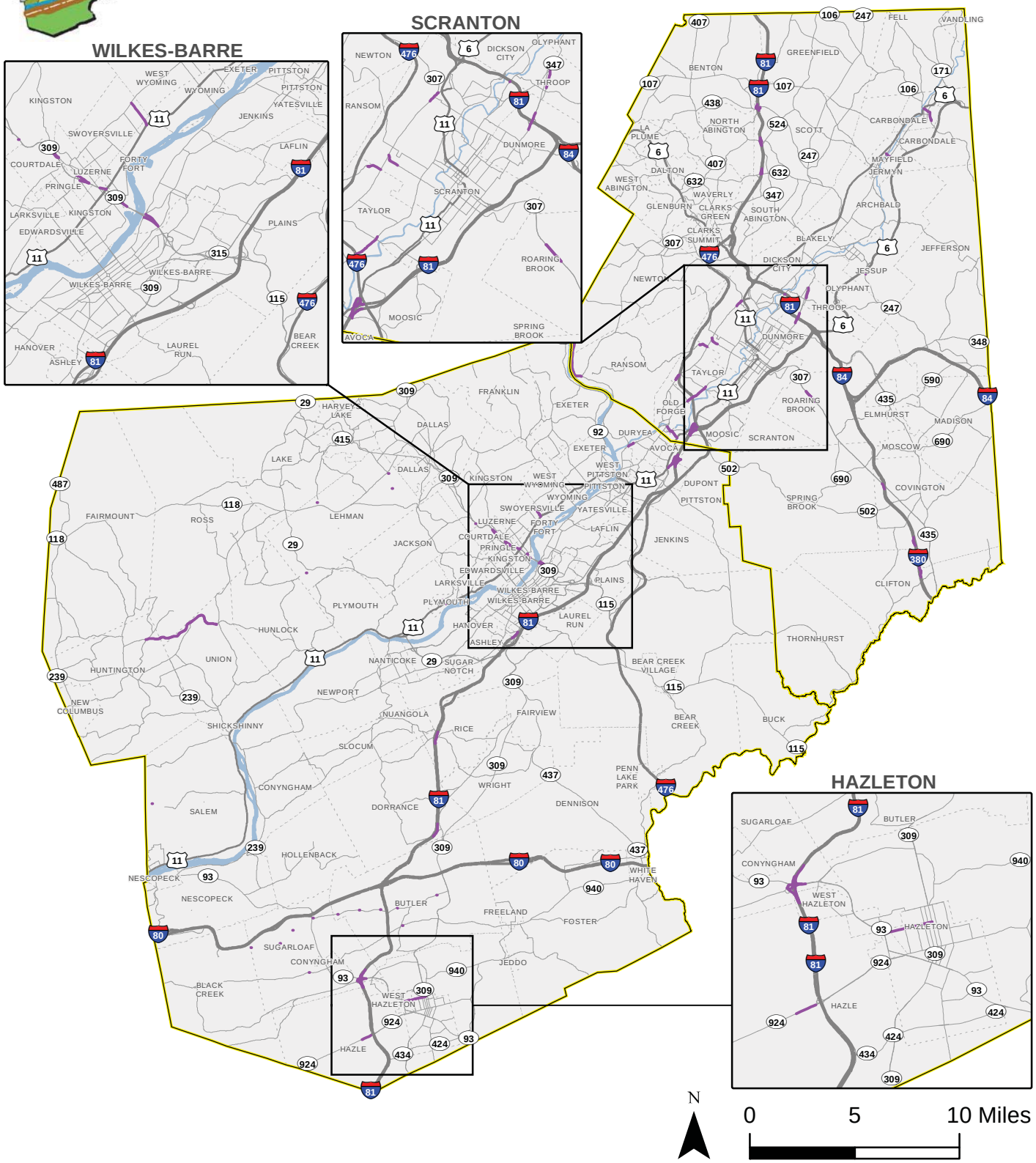
FIGURE 4.2.12
OLDER HIGH VOLUME PAVEMENTS



Legend

Critical Pavements

Source: PennDOT State Roads, January 2015

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 Roadway Management System 2015

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	**6.1**		
Group B		< 5,000	5,000 to 20,000	> 20,000
	< 20 years	**1603.8**	**416.2**	**100.5**
	20 – 25 years	**24.8**	**14.8**	**0**
	> 25 years	**270.5**	**179.0**	**1.0**
Group C		< 5,000	5,000 to 20,000	> 20,000
	< 30 years	**282.5**	**596.0**	**7.0**
	30 – 35 years	**0**	**4.2**	**0**
	> 35 years	**6.8**	**50.0**	**0**
Group D		< 10,000	10,000 to 20,000	> 20,000
	< 30 years	**0.00**	**0**	**0**
	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	**64.3**	**251.8**	**0**
	40 – 45 years	**0.00**	**0.00**	**0.00**
	> 45 years	**1.8**	**20.2**	**0.00**

Source: PennDOT Roadway Management System 2015

Table 4.2.8
Lane Miles of Critical Pavement

	Non-Critical	Critical	Unknown	TOTAL
Group A	0.00	0.00	0.0	6.1
Group B	2059.6	450.50	0.0	2510.1
Group C	889.7	56.8	0.0	946.5
Group D	0.0	0.0	0.0	0.0
Group E	316.1	22.0	0.0	338.1
TOTAL	**3265.4 (83.8%)**	**529.3 (13.6%)**	**0.0 0.0%)**	**3,895.2**
2011 TOTAL	**3340.1 (86.8%)**	**65.34 (1.7%)**	**488.15 (12.5%)**	

Source: PennDOT Roadway Management System 2015

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's MPMS IQ online system. 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.[20] It should be noted that PennDOT's system for identifying "structurally deficient" bridges differs somewhat from FHWA's Sufficiency Rating scheme.

Figure 4.2.13 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. The number of high priority bridges went up slightly from the 2011 data but has remained relatively consistent.

PennDOT prepares a Performance Measures Annual Report for Bridges where Structurally Deficient percentages by bridge count and deck area are measured against target values, *Figure 4.2.14.* These performance measures are consistent with those identified in the FHWA rulemaking that establishes new requirements for performance management to ensure an efficient investment of Federal transportation funds. The following performance goals are identified for State (greater than or equal to 8') and Local bridges (greater than or equal to 20'):

4. % of SD by count and deck area
5. Reducing rate of deterioration (by count and deck area)
6. Annual net SD reduction

The goals noted in the following tables are directly from the 2013 Performance Measures Annual Report – Bridges and indicate optimum (long range goals) and cautionary (2014 targets) thresholds for performance. The 2014 goals provide a stepping stone to reaching the long range goals with significant advancements needed in the long term to meeting the long range goals. Based on the results for the Lackawanna Luzerne MPO, various metrics are meeting the cautionary threshold (2014 goals) based on 2013 data such as the reducing the rate of deterioration and the annual net SD reduction. Although not significantly different from the cautionary thresholds (2014 goals), the non-NHS bridges with greater than 2,000 ADT are consistently not meeting the cautionary thresholds for all metrics. Additionally, 50% of the bridge deck area of local bridges was SD in 2013 with a target goal of 43.9%. Currently, these values are consistent with other regions of the Commonwealth and reflect the need for continued asset management focus for the Commonwealth in the coming years.

[20] Association of State Highway Transportation Officials, "Facts and Figures about the U.S. Transportation System," http://www.transportation.org/?siteid=93&pageid=2496, 2008.

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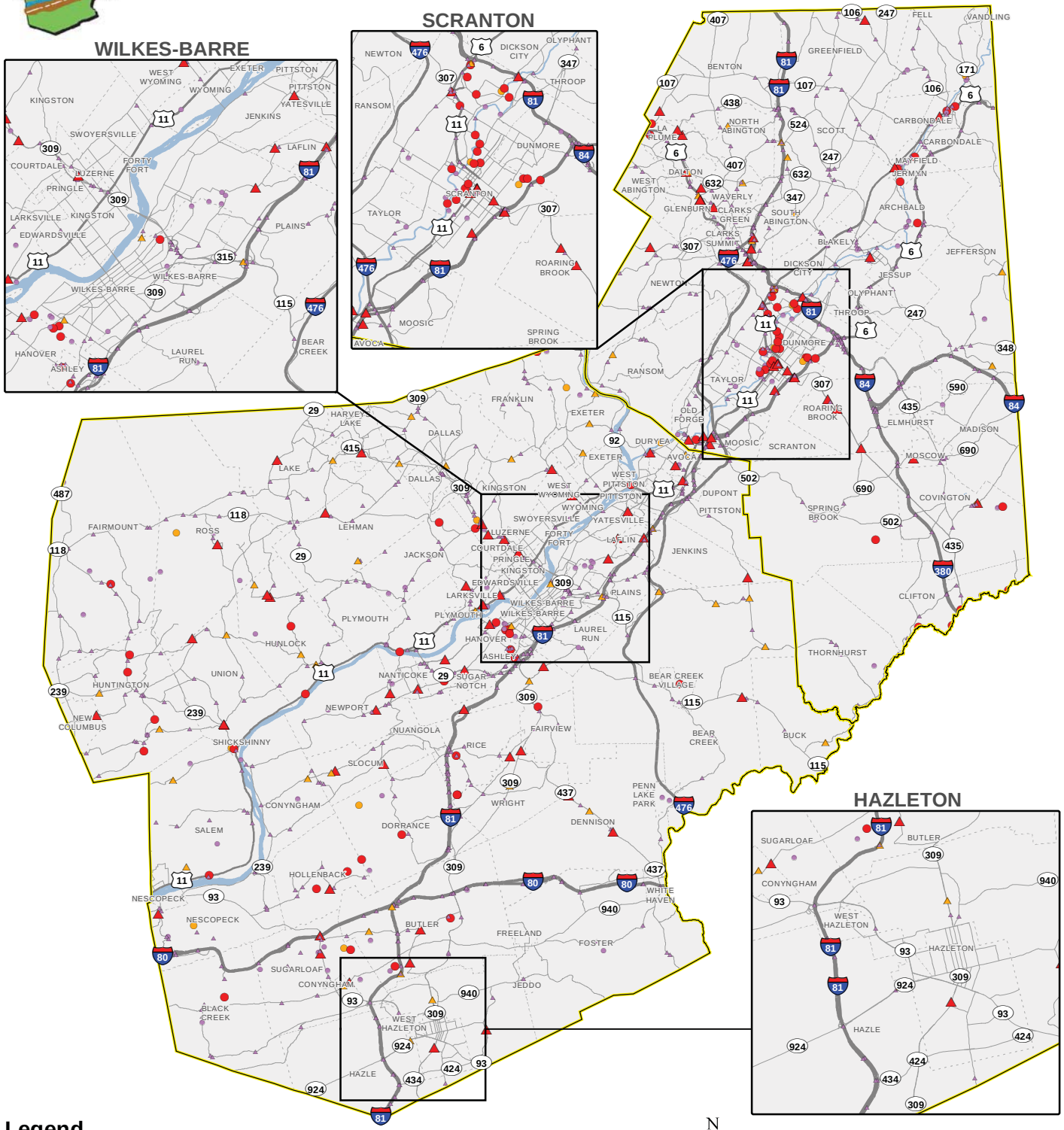
FIGURE 4.2.13
PRIORITY FOR BRIDGE IMPROVEMENTS



Legend

State Bridge

- High Priority
- Secondary Priority
- Low Priority

Local Bridge

- High Priority
- Secondary Priority
- Low Priority

Source: MPMS IQ, February 2015

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Table 4.2.9
State Bridges by Condition

Location	Low Priority	Secondary Priority	High Priority	Unknown	TOTAL
State Roadway	839	54	88	0	981
Local Roadway	94	14	70	0	178
TOTAL	933	68	158	0	1159
2011 TOTAL	1274	68	149		

Source: PennDOT MPMS IQ, 2015 and 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 4.2.15 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.

Figure 4.2.14
2013 Performance Measures Annual Report – Bridges

2013 Performance Measures Annual Report -- Bridges **Scranton/W-B**

Current Status of Bridges in Region:

Network	Total Bridge Count	Total Deck Area (Msf)	Aver. Bridge DA (sf)	Closed Bridges	Posted Bridges	Struct. Deficient Count	% SD by Count	SD-Deck Area (Msf)	% SD by Deck Area	Non-SD Bridges with a "5" Condition Rating
State ≥8'; Interstate/Ramps	207	1.5470	7,473	0	0	23	11.11%	0.2037	13.17%	0
State ≥8'; NHS (non Interstate)	90	1.1159	12,399	0	1	11	12.22%	0.1023	9.17%	0
State >8'; non-NHS >2000 ADT*	371	1.7914	4,829	1	14	83	22.37%	0.2970	16.58%	0
State ≥8'; non-NHS <2000 ADT	302	0.5005	1,657	1	10	54	17.88%	0.0376	7.52%	0
Total - State Bridges (≥8')	**970**	**4.9547**	**5,108**	**2**	**25**	**171**	**17.63%**	**0.6405**	**12.93%**	**0**
Local≥20'	164	0.4195	2,558	9	46	87	53.05%	0.2120	50.53%	0

Note: Data includes adjustments for MAP-21 Enhanced NHS. Local Bridges on Enhanced NHS are reported with Locally Owned Bridges.

	Annual Performance Measures - *by SD Bridge Count*								
Goals:	% SD by Count			Reducing Rate of Deterioration			Annual Net SD Reduction		
Network	Long Range Goal SD Count (max.)	Target 2014 SD Count (max.)	Actual SD Count	Max. Annual New SD Count	Max. Annual New SD Count (State-wide Ave.)	Actual Annual New SD Count (SD "on")	Min. Net Annual SD Count Reduction	Min. Net Annual SD Count Reduction	Net Actual SD Count Reduction
State ≥8'; Interstate/Ramps	9	23	23	0	0	0	1	1	2
State ≥8'; NHS (non Interstate)	4	10	11	0	1	0	0	0	1
State >8'; non-NHS >2000 ADT*	36	66	83	3	4	17	2	2	-10
State ≥8'; non-NHS <2000 ADT	36	65	54	3	4	5	2	2	4
Total - State Bridges (≥8')	**84**	**164**	**171**	**6**	**9**	**22**	**5**	**5**	**-3**
Local≥20'	39	70	87	2	3	**3**	2	2	-2

	Annual Performance Measures - *by SD Deck Area (DA)*								
Goals:	% SD by Deck Area			Reducing Rate of Deterioration			Annual Net SD Reduction		
Network	Long Range Goal % SD by DA (max.)	Target %2014 SD DA (max.)	Actual %SD DA	Max. Annual New % SD DA	Max. Annual New % SD DA	Actual Annual New SD DA (SD "on")	Min. Net Annual % SD DA Reduction	Min. Net Annual % SD DA Reduction	Net Actual % SD DA Reduction
State ≥8'; Interstate/Ramps	4.4%	11.6%	13.2%	0.00%	0.06%	0.00%	0.38%	0.28%	2.07%
State ≥8'; NHS (non Interstate)	2.9%	7.7%	9.2%	0.25%	0.39%	0.00%	0.25%	0.19%	1.65%
State >8'; non-NHS >2000 ADT*	7.7%	14.1%	16.6%	0.75%	1.11%	1.69%	0.34%	0.25%	-0.63%
State ≥8'; non-NHS <2000 ADT	9.6%	17.6%	7.5%	1.00%	0.93%	0.45%	0.00%	0.00%	2.38%
Total - State Bridges (>8')	**5.8%**	**12.2%**	**12.9%**	**0.43%**	**0.57%**	**0.66%**	**0.34%**	**0.25%**	**1.02%**
Local≥20'	15.4%	43.9%	50.5%	1.00%	1.86%	1.42%	1.05%	0.78%	-1.04%

	Annual Performance Measures - SD Prevention					
Goals:	SD Prevention - Expenditures			SD Prevention - Count		
Network	Min. SD Prevention (million$)	Min. SD Prevention (million$)	Actual SD Prevention (million$)	Min. SD Prevention (# bridges)	Min. SD Prevention (# bridges)	Actual SD Prevention (# bridges)
State ≥8'; Interstate/Ramps	$0.00	$0.00	$0.08	0	0	1
State ≥8'; NHS (non Interstate)	$0.00	$0.00	$1.07	0	0	1
State >8'; non-NHS >2000 ADT*	$0.00	$0.00	$2.31	0	0	5
State ≥8'; non-NHS <2000 ADT	$0.00	$0.00	$0.32	0	0	1
Total - State Bridges (>8')	**$0.00**	**$0.00**	**$3.77**	**0**	**0**	**8**
Local≥20'	$0.00	$0.00	$0.00	0	0	1

Legend

Target - Optimum Threshold
Target - Cautionary Threshold
Actual - At Optimum Threshold
Actual - At Cautionary Threshold
Actual - Not Meeting Cautionary Threshold

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.

An I-81 Corridor Study was completed in 2007 that identified future traffic projections and actions needed to ensure the continued safe and efficient movement of people and goods. The study supported the expansion of I-81 from four lanes to six lanes from Exit 164 (Ashley) to Exit 197 (Waverly) along with other shorter term improvements. The funding need, $1.09 billion in 2006 dollars, for this widening far exceeded the available funding. PennDOT, Lackawanna Luzerne MPO, and Focus 81 continue to advocate for improvements to I-81 as there are corridor needs at the local and statewide level. Although the actual impacts are unknown at this point, the expansion of the Panama Canal, opening in 2016, is anticipated to increase freight traffic in the northeast region, which could have significant impacts along I-81 and other major corridors.

Projects programmed by PennDOT are laying groundwork for expansion from Exit 180 (Lackawanna Luzerne County line) to Exit 185 (Scranton Expressway). Additionally the Turnpike Commission is evaluating providing improved connections between I-81 and I-476 in an effort to divert traffic from I-81.

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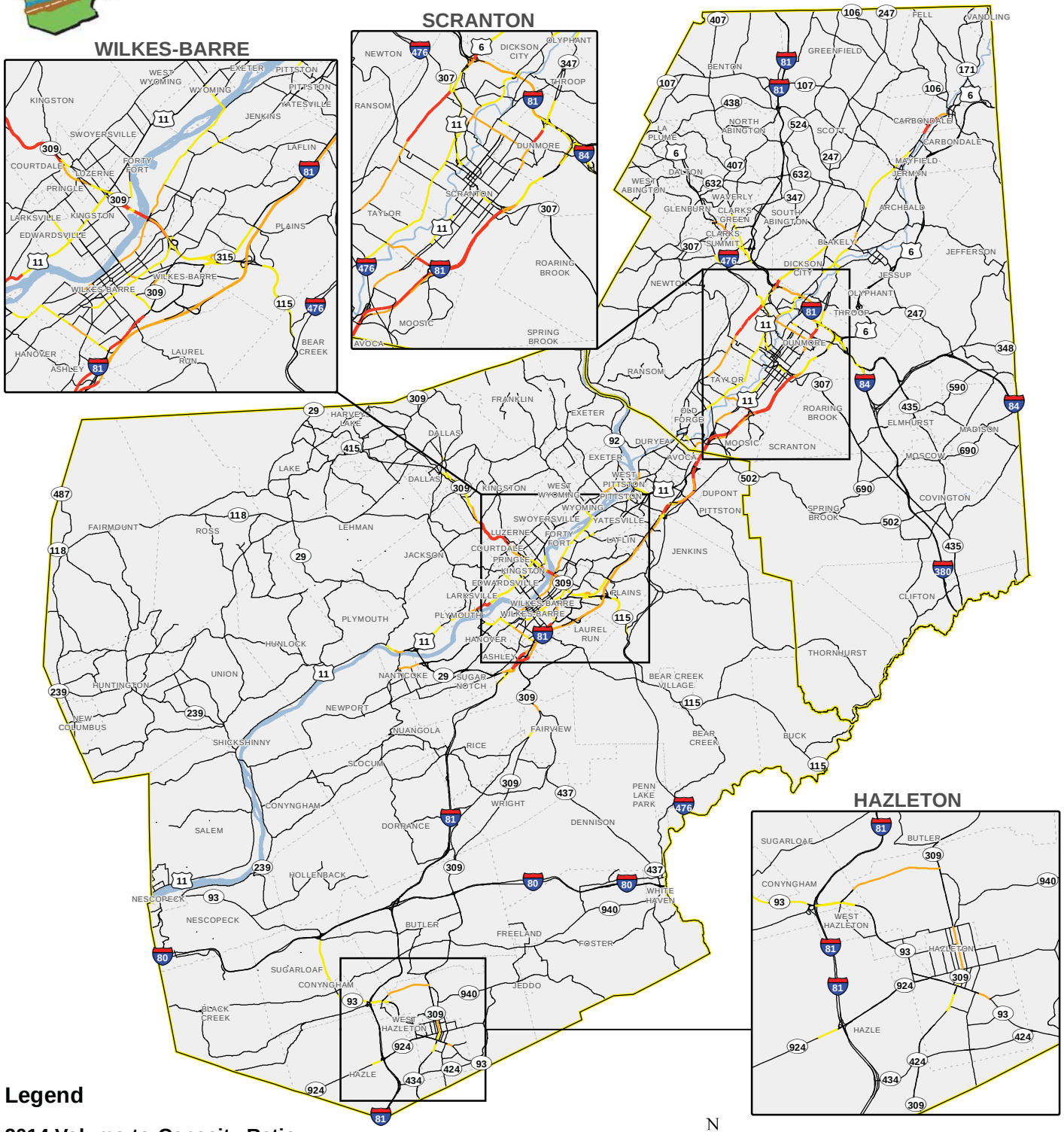
FIGURE 4.2.15
LEVEL OF SERVICE



Source: PennDOT

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 will be updated concurrently with the Long Range Transportation Plan. The Congestion Management Program 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**
Dunmore Borough	Blakely St Drinker St - Jessup St	Congested	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lane			x
Scranton City	Keyser Ave Dalton St - Morgan Hwy	Congested	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lanes			x
Scranton City	N Main St/ Main Ave Providence Rd - Market St	Acceptable	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lanes			x
Moosic Borough/ Scranton City	Davis St N Main St - Montage Mtn Rd	Congested	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lanes			x
Dunmore Borough	Blakely St Cherry St - Potter St	Acceptable	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lanes			x
Jessup	Constitution Ave Bridge St - Main Ave	Acceptable	Stop Intersections at Hill and Main Sts create long queues	Study Alternate intersections		x	
				Alternate intersection (possible roundabout) at Hill Street & Signalization at Main St			x
Old Forge	Main Ave Drakes lane - Taylor Line	Acceptable	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lanes			
Scranton	Main Ave Eynon St - Lackawanna Ave	Acceptable	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lanes			x
Clarks Green	South Abington Rd Venard Rd - Cook St	Acceptable	Outdated Signal timing	Signal Retiming	x		
Olyphant	Burke By-pass Spruce St - Susquehanna Ave	Acceptable	Intersection configuration & railroad	Signal Retiming	x		
				Study for signal upgrade and roundabout		x	
Throop	Cypress St/ Dunmore Simpson St - Meade St	Acceptable	Outdated Signal timing	Signal Retiming	x		
County-wide	I-81 Countywide	Congested	Over capacity	Additional Lanes			x

Table 4.2.11
Congested Corridors from Luzerne County CMP Report

					Priority		
Town	**Corridor Location**	**Level of Congestion**	**Cause of Congestion**	**Mitigation Needs**	**High**	**Med**	**Low**
Larksville Borough	Main St Carey Ave - Woodward Hill Rd	Congested	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lanes			x
Hazleton City	Church St SR 309 - W 22nd Street	Approaching	Left turn blocking through movements, lack of capacity	Signal Retiming	x		
				Signal upgrades, Aux lanes, Removal of signs, Eval of one way flow			x
Nanticoke Borough	Main St Market St - Loomis St	Approaching	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lanes			x
Plains Twp	N River St North St - River St	Approaching	5 legged intersection and lack of capacity at ramps	Signal retiming	x		
				Alt intersection configurations for ramps			x
Dallas Borough	S Memorial Hwy Caverton Rd - Center St	Approaching	Outdated Signal timing	Signal retiming	x		
Wilkes-Barre City	S River St Academy - North St	Acceptable	Underutilized SB right lane & Signal timing	Signal timing and Lane Reconfigurations	x		
Wilkes-Barre Twp	SR 309 Business Blackman St - Mundy St	Congested	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Alt config at Pine/ Sherman, Aux lanes			x
Wilkes-Barre City	Wilkes-Barre Blvd Northampton St - Conyngham St	Congested	Outdated Signal timing	Signal retiming	x		
Hazleton	Broad Street Diamond St - Poplar St	Acceptable	Lanes underutilized, Transit blockages	Lane re-assignment	x		
Pittston City	Main Street SR 2024 - Jenkins Bridge	Acceptable	Left turn blocking through movements	Signal Retiming	x		
				Signal upgrades, Aux lanes			x
County-wide	I-81 Countywide	Congested	Over capacity	Additional Lanes			x

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 4.2.16 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
2014 vs. 2040 Volume to Capacity Ratios

	< 0.50	0.50 to 0.79	0.80 to 0.99	> 1.00
Existing	4368	201	126	66
Future	4066	358	173	164

Source: PennDOT MPMS IQ and RMS data, 2015

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.

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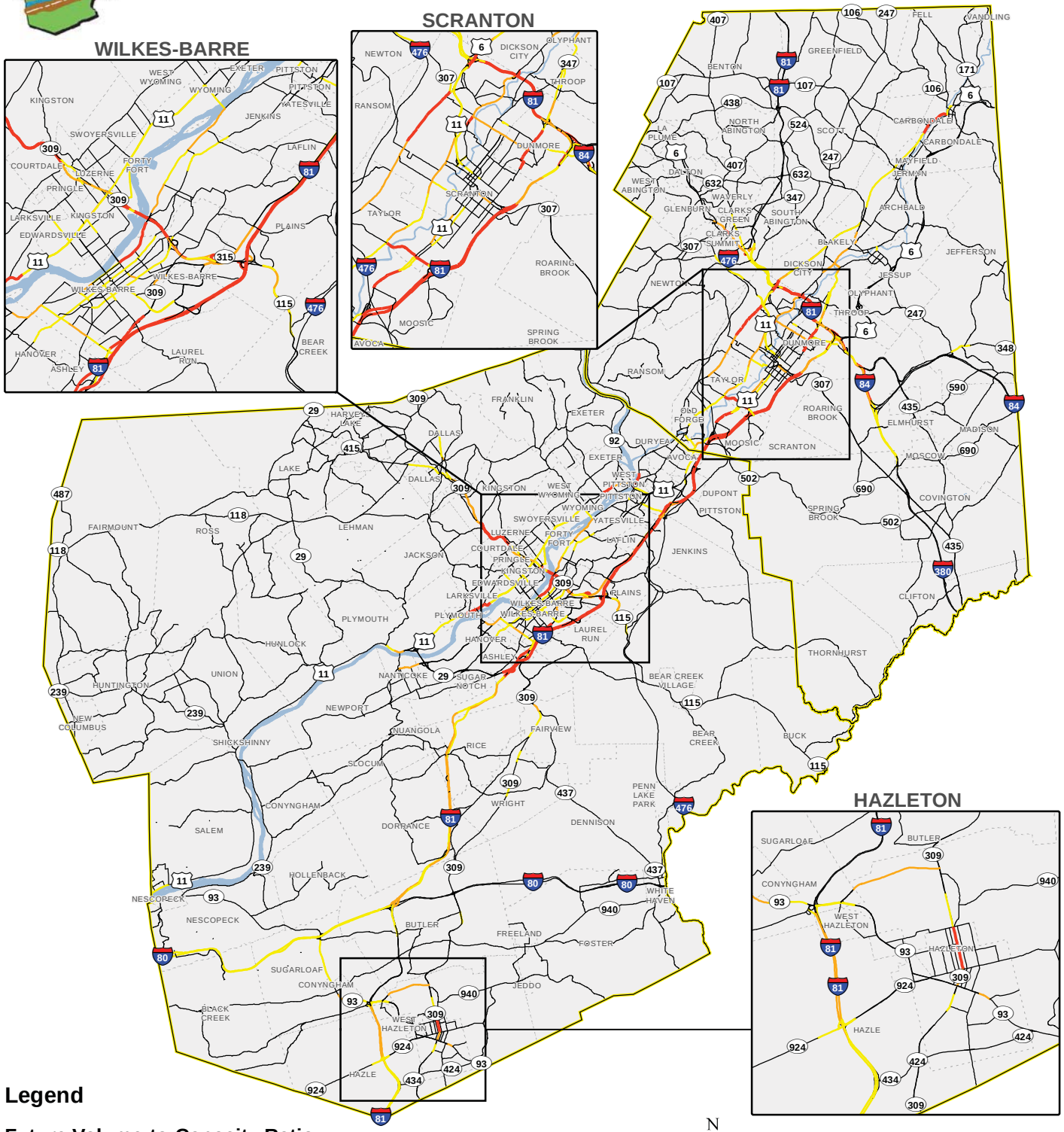
FIGURE 4.2.16
FUTURE LEVEL OF SERVICE



Legend

Future Volume-to-Capacity Ratio

- < 0.6
- 0.6 to 0.8
- 0.8 to 1.00
- > 1.00

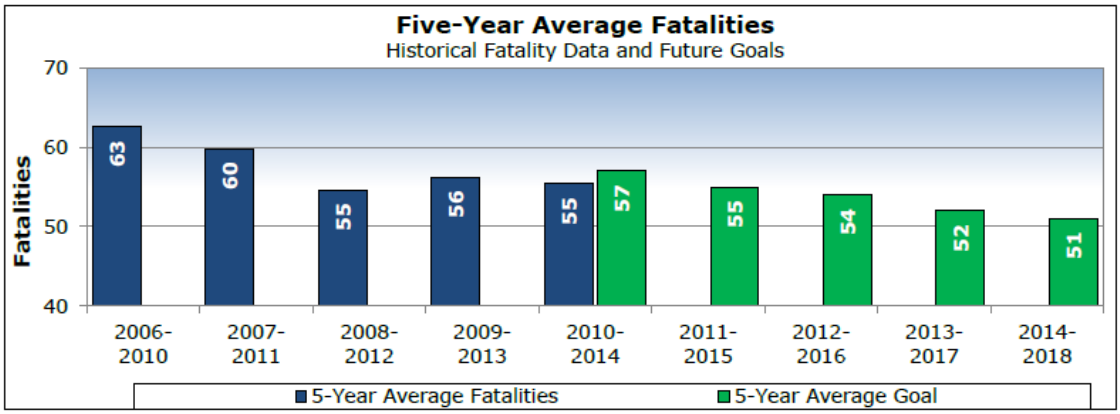
Source: PennDOT

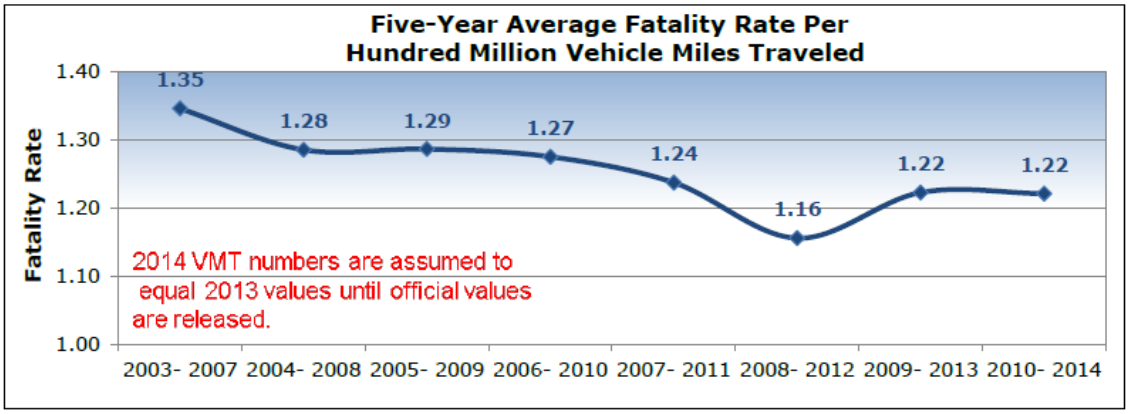
Highway Safety Performance

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.

An annual Highway Safety Guidance Report prepared by PennDOT Central Office for each MPO provides guidance on safety measures and goals. PennDOT's safety goals include reducing average fatalities and serious injuries by 50 percent over the next two decades, starting in 2006. The June 2015 report for Lackawanna Luzerne MPO provides performance measures for safety based on the number of fatalities and serious injuries as well as the rates of each per hundred million vehicle miles traveled. ***Figure 4.2.17*** below indicates the five year average number and rate of fatalities as well as the goals for future years. The region has seen a general decline in fatalities from the 2006-2010 five-year average to the 2008-2012 five-year average and has remained consistent since that time frame. The 2010-2014 five-year average of 55 fatalities is under the current goal of 57.

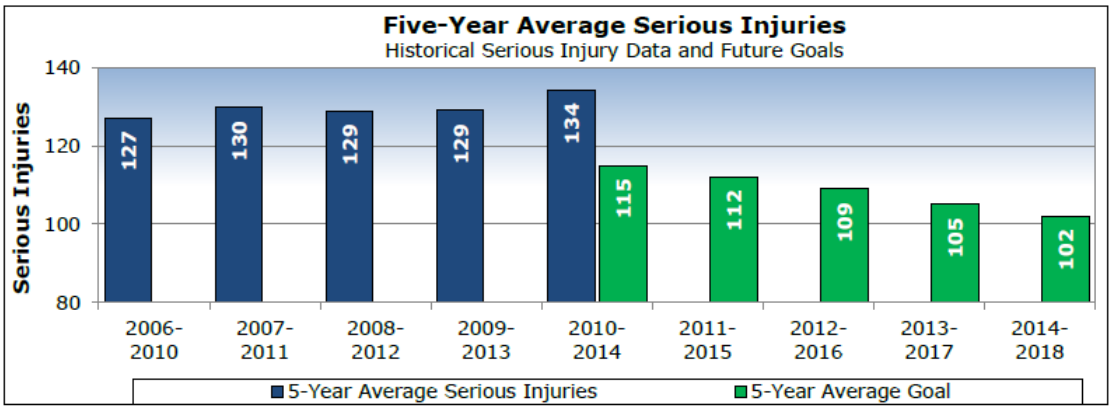
Figure 4.2.17
2015 Highway Safety Guidance Report, Lackawanna Luzerne MPO – Fatalities

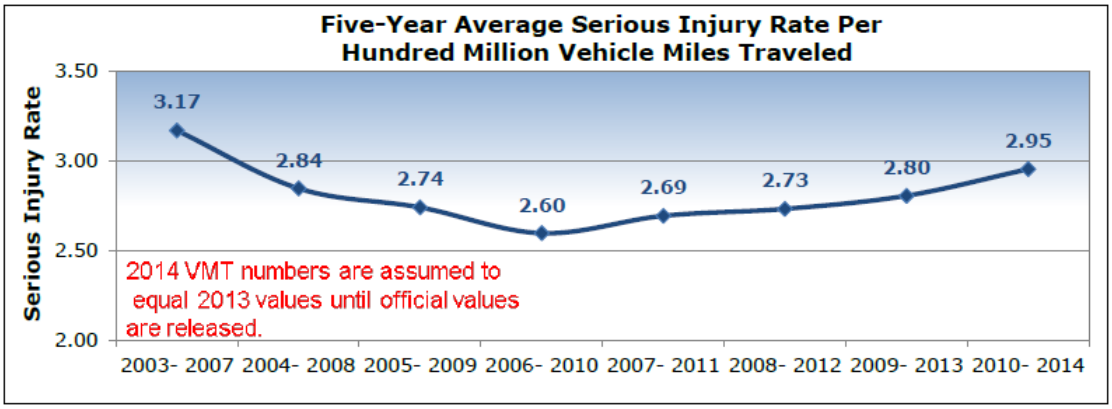




While fatalities have generally declined, ***Figure 4.2.18*** indicates the five year average number of serious injuries have generally increased from the 2006-2010 five-year average to the 2010-2014 five year average. The serious injury rate has seen an overall decline based on an increase in vehicle miles traveled.

Figure 4.2.18
2015 Highway Safety Guidance Report, Lackawanna Luzerne MPO – Serious Injuries





Based on the safety analysis, projects were included in the fiscally constrained Long Range Transportation Plan to address high crash locations (segment and intersection) including but not limited to: SR 0309, Memorial Highway in Kingston Township; SR 0006, State Street in Clarks Summit Borough; SR 0307, Morgan Highway in the City of Scranton; SR 0011, Pittston and Cedar Avenue in the City of Scranton, and SR 0347, Dunmore Signal Network. Additional programmed low cost systematic improvements include rumble strip installation along various routes in the area, cable median barrier on I-81 and SR 0006, improved signing and curve modifications to prevent run off the road crashes, and wrong way signing on ramps.

The following evaluation of highway safety considers the history of reportable crashes for the previous 5-year period (July 1, 2009 to June 30, 2014), which was provided by PennDOT Central Office 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 4.2.19***. ***Table 4.2.13*** lists the specific segments with the highest number of crashes.

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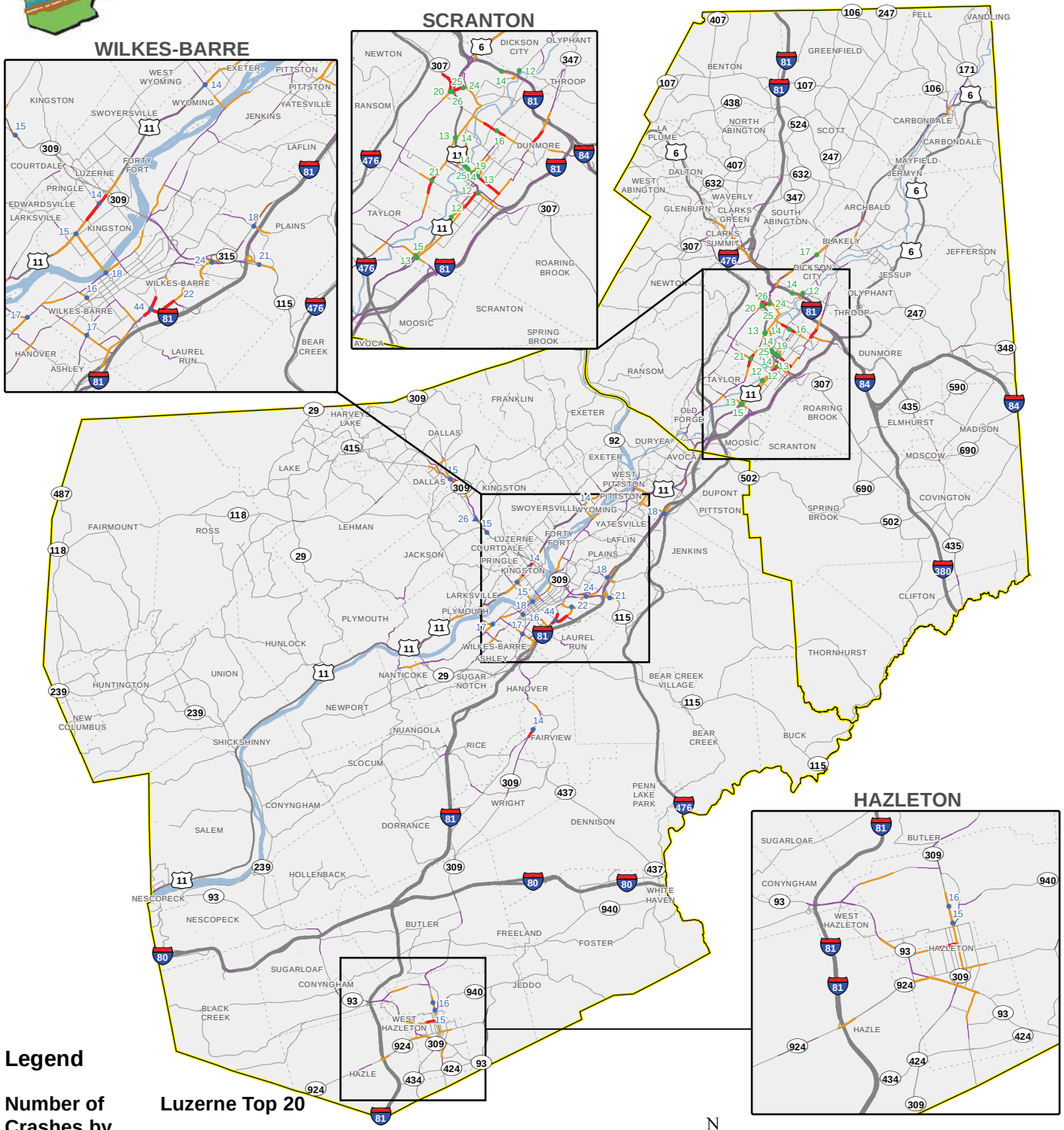
FIGURE 4.2.19
CRASHES BY SEGMENT & TOP INTERSECTION CRASHES FOR EACH COUNTY



Legend

Number of Crashes by RMS Segment

- 15 to 30
- 31 to 60
- 61 to 93

Luzerne Top 20

- Number of Injury Crashes
- Fatal Injury Crash Occurred

Lackawanna Top 20

- Number of Injury Crashes
- Fatal Injury Crash Occurred

Source: PennDOT, Date range 7/1/2009 to 6/30/2014, Only crashes that occured on State Routes

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Table 4.2.13
Highway Segments with the Highest Number of Crashes (July 2009-June 2014)

Rank	County	Street Name	Route	Segment	Crashes	Total Injury Crashes	Major Injury Crashes	Fatal Crashes	Average ADT
1	LUZERNE	HIGHLAND PARK BLVD	2063	0010	93	75	0	0	11732
2	LUZERNE	HIGHLAND PARK BLVD	2063	0011	92	77	0	0	10822
3	LUZERNE	WILKES-BARRE TWP BL	6309	0590	91	75	0	0	5711
4	LUZERNE	WILKES-BARRE TWP BL	6309	0591	91	77	0	0	5711
5	LUZERNE	WYOMING AVENUE	0011	0580	90	72	4	1	9687
6	LACKAWANNA	GREEN RIDGE STREET	6011	0260	88	63	2	0	13395
7	LACKAWANNA	MULBERRY STREET	3027	0010	85	58	1	0	9571
8	LUZERNE	WYOMING AVENUE	0011	0581	84	74	3	1	11420
9	LACKAWANNA	KEYSER AVE	6307	0240	81	74	0	0	4232
10	LACKAWANNA	MORGAN HWY	0307	0250	78	74	1	1	10432
11	LACKAWANNA	N BLAKELY ST	0347	0010	78	48	0	0	18467
12	LACKAWANNA	S MAIN AVE	3013	0100	74	63	1	0	13353
13	LUZERNE	S MOUNTAIN BLVD	0309	0450	73	55	1	1	15750
14	LACKAWANNA	PITTSTON AVE	0011	0170	71	57	0	0	7924
15	LACKAWANNA	S STATE ST	0006	0161	70	45	2	0	13718
16	LUZERNE	W 15TH ST	0924	0150	69	54	1	0	9009
17	LACKAWANNA	N KEYSER AVE	6307	0241	66	54	0	0	7416
18	LACKAWANNA	MULBERRY ST	0011	0203	64	51	0	0	7608
19	LACKAWANNA	MULBERRY ST	0011	0202	63	51	0	0	7553
20	LUZERNE	MEMORIAL HWY	0309	0750	61	53	0	0	12971
21	LUZERNE	HIGHLAND PARK BLVD	2063	0020	60	49	0	0	8925
22	LACKAWANNA	N MAIN AVE	3013	0130	60	44	0	0	11546
23	LUZERNE	MEMORIAL HWY	0309	0711	59	56	1	1	13589
24	LUZERNE	DIAMOND AVE	3030	0010	58	47	2	0	3615
25	LUZERNE	WYOMING AVE	0011	0571	58	46	0	0	9475

Source: PennDOT Central Office, 2015

Intersection Crashes

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 100 feet of an intersection. These locations were then ranked according to the number of fatal/injury crashes. The top 20 Intersection Crashes in Lackawanna and Luzerne Counties are given in ***Tables 4.2.14*** and ***4.2.15***, respectively, and illustrated on ***Figure 4.2.19***. 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 (July 2009-June 2014)

Rank	Major Street	Route	Cross Street	Route	Fatal/Injury Crashes	Municipality
1	N Keyser Ave	SR 0307	Joseph McDade Exp SB Ramps	US 11	26	Scranton City
2	Mulberry St	US 0011	Adams Ave	City	25	Scranton City
3	N Keyser Ave	SR 6307	Joseph McDade Exp NB Ramps	US 11	24	Scranton City
4	S Main Ave	SR 3013	Luzerne St	SR 3014	21	Scranton City
5	Morgan Way	SR 0307	N Keyer Ave	SR 3011	20	Scranton City
6	Mulberry Street	SR 0011	Washington Ave	City	19	Scranton City
7	Scranton Carbondale Hwy	SR 6006	Memo Lane	Boro	17	Blakely Borough
8	Green Ridge St	SR 6011	Sanderson Ave	City	16	Scranton City
9	Birney Ave	US 0011	Davis St	SR 3016	15	Scranton City
10	Mulberry St	US 0011	Wyoming Ave	SR 3025	14	Scranton City
11	Mulberry St	US 0011	Penn Ave	City	14	Scranton City
12	I-81 SB	I 0081	I-81 SB Ramps		14	Scranton City
13	N Main Ave	SR 3013	Joseph McDade Exp SB Ramps	US 11	14	Scranton City
14	Pittston Ave	US 0011	Davis St	SR 3016	13	Scranton City
15	Jefferson Ave	US 0011	Mulberry St	SR 3027	13	Scranton City
16	Jackson St	SR 3003	Keyser Ave	SR 3011	13	Scranton City
17	N Main Ave	SR 3013	Joseph McDade Exp NB Ramps	US 11	13	Scranton City
18	Cedar Ave	US 0011	Cherry St	City	12	Scranton City
19	Moosic St	SR 0307	Harrison Ave	SR 6011	12	Scranton City
20	I-81 NB Ramp	SR 8011	Main St	City	12	Scranton City

Source: PennDOT Central Office, 2015

Table 4.2.15
Luzerne County Intersection Crashes (July 2009-June 2014)

ES	Major Street	Route	Cross Street	Route	Fatal/Injury Crashes	Municipality
1	Highland Park Blvd	SR 2063	Wilkes Barre Twp Blvd	SR 6309	44	Wilkes Barre Twp
2	Memorial Hwy	PA 0309	Caverton Rd	SR 1036	26	Kingston Twp
3	Kidder St	SR 6309	PA 309 SB Ramps	PA 309	24	Plains Twp
4	Mundy St	SR 2061	Highland Park Blvd	SR 2063	22	Wilkes Barre Twp
5	E End Blvd	SR 0115	I-81 NB Ramps	I 81	21	Wilkes Barre City
6	8th St	SR 1021	River Rd	SR 2004	19	Wyoming Boro
7	PA 315	PA 0315	Main St/Jumper St	SR 2020	18	Plains Twp
8	PA 315	PA 0315	Oak St	SR 2019	18	Pittston Twp
9	Market St	SR 1009	River Rd	SR 2004	18	Kinston Boro
10	Sans Souci Pkwy	SR 2002	West End Rd	SR 2005	17	Hanover Twp
11	Blackman St	SR 2005	Wilkes Barre Twp Blvd	SR 6309	17	Wilkes Barre City
12	Church St	PA 0309	28th St	Twp	16	Hazle Twp
13	Academy St	SR 2014	Main St	City	16	Wilkes Barre City
14	Wyoming Ave	US 0011	Market St	SR 1009	15	Kingston Boro
15	E End Blvd	SR 0115	East Mountain Blvd	Twp	15	Wilkes Barre City
16	Church St	PA 0309	23rd ST	Twp	15	Hazle Twp
17	Memorial Hwy	PA 0309	Hillside Rd	Twp	15	Kingston Twp
18	Tunkhannock Hwy	PA 0309	Memorial Hwy	SR 415	15	Dallas Boro
19	Wyoming Ave	US 0011	Union St	Boro	14	Forty Fort Boro
20	Wyoming Ave	U 0011	8th St	SR 1021	14	Exeter Boro

Source: PennDOT Central Office, 2015

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 4.2.20*. *Table 4.2.16* gives the segments with the highest crash rate DELTA values.

Each year PennDOT identifies the most severe highway safety needs, prioritized on a fatal and all injury crashes, on a statewide basis. This reporting is used in an effort to provide a significant reduction in the fatalities and serious injury on all public roads, one of the objectives of MAP 21. Several roadway segments of PA Route 309 (Segments 680 to 720 and 730 to 760) in Luzerne County were listed in the 2012 Statewide High Crash Locations as well as US 11 (Segments 203 to 225 and 192 to 224) in Lackawanna County.

Examples of high crash locations from the previous LRTP plan that are currently being addressed with projects on the current TIP include SR 347 (O'Neill Highway) in Dunmore Borough from University Drive to Greenridge Street and a Safety Improvement Corridor and Congestion Study (20 intersections) on SR 309, SR 415, SR 118 in Kingston Township, Dallas Borough, and Dallas Township that will address multiple intersection crash hot spots.

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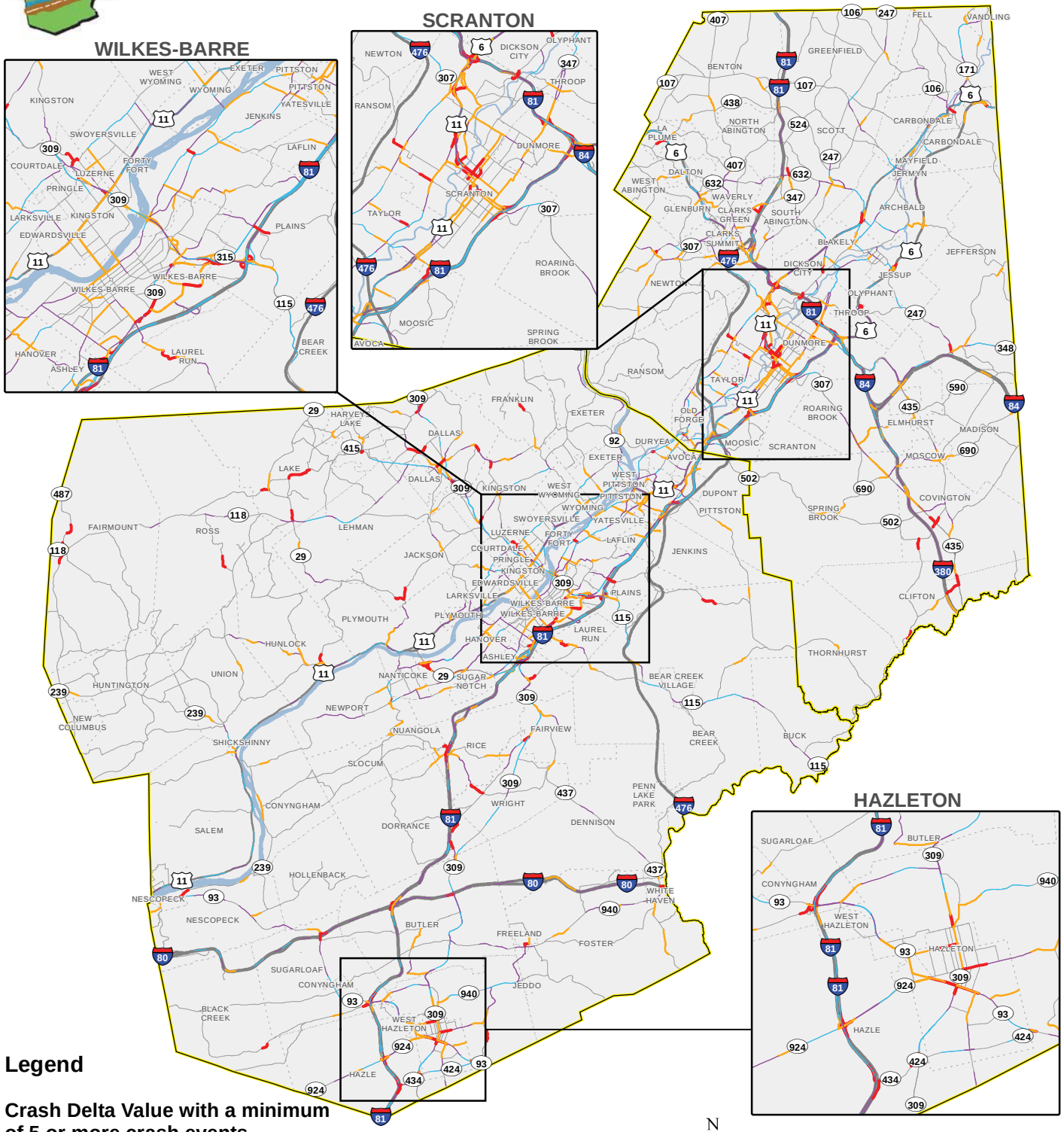
FIGURE 4.2.20
CRASH DELTA VALUES BY SEGMENT



Legend

Crash Delta Value with a minimum of 5 or more crash events

- 0 to 1.00
- 1.01 to 2.00
- 2.01 to 5.00
- 5.01 to 426

Source: PennDOT, Date range 7/1/2009 to 6/30/2014, Only crashes that occured on State Routes

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Table 4.2.16
Highway Segments with the Highest Crash Rate DELTA Values (July 2009-June 2014)

Rank	County	Street Name	Route		Segment	# of Crashes	Average ADT	Crash Rate	Homogen. Rate	DELTA
1	LUZERNE	US 11	US	0011	0335	14	3335	20.52	0.86	23.86
2	LUZERNE	KIDDER ST	SR	2009	0002	13	2605	41.24	1.94	21.26
3	LUZERNE	KIDDER ST	SR	2009	0003	15	3523	41.07	1.94	21.17
4	LUZERNE	US 11	US	0011	0334	11	3335	16.12	0.86	18.75
5	LACKAWANNA	KEYSER AVE	SR	6307	0240	81	4232	35.09	1.94	18.09
6	LACKAWANNA	HARPER ST	SR	2014	0010	26	2982	25.20	1.52	16.58
7	LUZERNE	JUMPER RD	SR	2020	0070	31	1126	35.67	2.19	16.29
8	LUZERNE	HARTMAN RD	SR	4001	0010	5	201	30.33	2.00	15.17
9	LACKAWANNA	FALLS RD	SR	4036	0060	6	1451	17.34	1.22	14.21
10	LACKAWANNA	NEWTON RD	SR	3003	0010	23	1037	29.78	2.19	13.60
11	LUZERNE	MAIN ST	SR	1045	0010	16	1249	20.51	1.52	13.49
12	LUZERNE	LOYALVILLE OUTLET RD	SR	1032	0040	7	246	26.96	2.00	13.48
13	LACKAWANNA	SIMMERELL RD	SR	4023	0050	11	465	42.69	3.21	13.30

Source: PennDOT District 4-0, 2008. Note: < 5 # of crashes and ramps 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 five 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 4.2.21*. 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 Five or More Pedestrian Crashes (July 2009-June 2014)

Rank	County	Street Name	Route	Segment	Pedestrian Crashes	Fatal Pedestrian Crashes	Average ADT
1	LACKAWANNA	MULBERRY ST	US 0011	0203	13	0	7608
3	LACKAWANNA	LUZERNE ST	SR 3014	0030	11	0	4281
4	LACKAWANNA	MULBERRY ST	SR 3027	0010	9	0	9571
5	LACKAWANNA	S MAIN ST	SR 3013	0100	9	0	13353
6	LACKAWANNA	PITTSTON AVE	US 0011	0170	8	0	7924
7	LACKAWANNA	LINDEN ST	SR 3020	0024	8	1	7023
8	LUZERNE	ACADEMY ST	SR 2014	0008	8	1	10629
9	LACKAWANNA	ADAMS AVE	SR 3023	0080	7	0	3931
10	LUZERNE	W BROAD ST	SR 0093	0071	6	0	6203
11	LUZERNE	MARKET ST	SR 1009	0030	6	0	6740
12	LACKAWANNA	N MAIN ST	SR 6006	0490	6	0	13055
13	LACKAWANNA	ADAMS AVE	SR 3023	0070	5	0	5081
14	LUZERNE	WYOMING AVE	US 0011	0581	5	0	11420
15	LACKAWANNA	DUNDAFF ST	SR 0106	0172	5	0	8781
16	LACKAWANNA	CEDAR AVE	US 0011	0160	5	0	10832
17	LUZERNE	S MAIN ST	SR 2004	0184	5	0	8772
18	LACKAWANNA	N MAIN ST	SR 6011	0280	5	0	13160
19	LACKAWANNA	S MAIN AVE	SR 3013	0090	5	0	13353
20	LACKAWANNA	HARRISON AVE	SR 6011	0190	5	0	16100
21	LUZERNE	MARKET ST	SR 1009	0031	5	0	6916
22	LACKAWANNA	PITTSTON AVE	SR 3023	0030	5	0	11976
23	LACKAWANNA	MOOSIC ST	PA 0307	0222	5	0	9454
24	LUZERNE	WYOMING AVE	US 0011	0571	5	0	9475
25	LUZERNE	WYOMING AVE	US 0011	0580	5	0	9687

Source: PennDOT Central Office, 2015.

Table 4.2.18

Highway Segments with One or More Fatal Pedestrian Crashes (July 2009-June 2014)

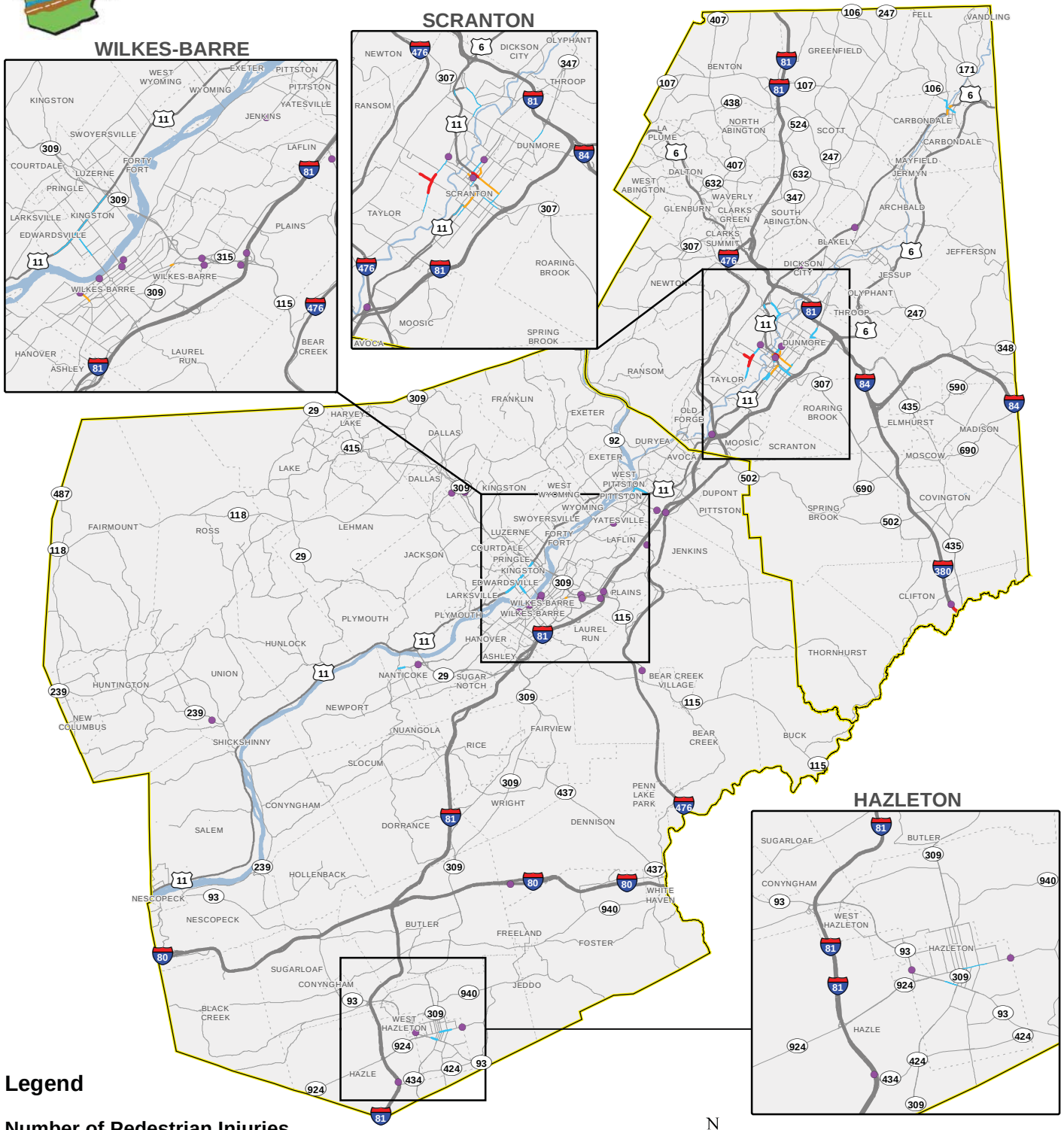
Rank	County	Street Name	Route	Segment	Fatal Pedestrian Crashes*	Other Pedestrian Crashes	Average ADT
1	LACKAWANNA	SCRANTON CARBONDALE HWY	SR 6006	0340	1 (2 fatalities)	0	8247
2	LUZERNE	BEAR CREEK BLVD	SR 0115	0220	1 (2 fatalities)	0	7518
3	LACKAWANNA	LINDEN ST	SR 3020	0024	1	7	7023
4	LUZERNE	ACADEMY ST	SR 2014	0008	1	7	10629
5	LACKAWANNA	JOSEPH MCDADE EXP RAMP TO KEYSER AVE	SR 8031	0010	1	2	5773
6	LACKAWANNA	N MAIN AVE	SR 3013	0120	1	2	11546
7	LUZERNE	S RIVER ST	SR 2004	0041	1	2	6513
8	LUZERNE	E MAIN ST	SR 2002	0020	1	2	15589
9	LACKAWANNA	SCRANTON CARBONDALE HWY	SR 6006	0291	1	1	10744
10	LUZERNE	NORTH ST	SR 1011	0010	1	1	9570
11	LACKAWANNA	WYOMING AVE	SR 3025	0030	1	1	4023
12	LUZERNE	N BROAD ST	SR 0093	0100	1	1	5462
13	LUZERNE	I-81	I 0081	1415	1	1	14974
14	LUZERNE	KIDDER ST	SR 6309	0640	1	0	12911
15	LUZERNE	I-81	I 0081	1701	1	0	28761
16	LUZERNE	N MEMORIAL HWY	PA 0309	0740	1	0	13059
17	LUZERNE	PA 309 RAMP TO I-81	SR 8015	0250	1	0	13158
18	LUZERNE	PA 239	PA 0239	0240	1	0	2701
19	LUZERNE	S RIVER ST	SR 2004	0030	1	0	8499
20	LUZERNE	MUNDY ST	SR 2061	0031	1	0	6211
21	LACKAWANNA	BIRNEY AVE	US 0011	0041	1	0	6353
22	LUZERNE	N RIVER ST	SR 2004	0060	1	0	13300
23	LUZERNE	PA 315	PA 0315	0161	1	0	11585
24	LUZERNE	KIDDER ST	SR 6309	0641	1	0	13020
25	LUZERNE	OAK ST	SR 2019	0010	1	0	10604
26	LUZERNE	WESTMINSTER RD	SR 2039	0120	1	0	738
27	LACKAWANNA	I-380	I 0380	0136	1	0	10407
28	LACKAWANNA	ROBERT P CASEY HWY	US 0006	0465	1	0	6191
29	LACKAWANNA	JOSEPH MCDADE EXP	US 0011	0262	1	0	15833
30	LUZERNE	E DIAMOND AVE	SR 3030	0030	1	0	3615
31	LUZERNE	I-80 EB	SR 0080	2650	1	0	10303
32	LUZERNE	KIDDER ST	PA 0309	0624	1	0	16760
33	LUZERNE	MAIN ST	SR 2024	0090	1	0	9443
34	LUZERNE	OVERBROOK AVE	SR 1014	0040	1	0	1923
35	LUZERNE	I-8S SB RAMP TO SR 424	SR 8049	0500	1	0	4476

Source: PennDOT Central Office, 2015.

* One fatality unless noted otherwise

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

FIGURE 4.2.21
PEDESTRIAN INJURY CRASHES



Legend

Number of Pedestrian Injuries by RMS Segment with a minimum of 4 injuries

- 4 to 6
- 7 to 9
- 10 to 30

Fatal Pedestrian Crash Location

Source: PennDOT, Date range 7/1/2009 to 6/30/2014, Only crashes that occured on State Routes

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Transit Level-of-Service

The performance of transit systems in the two-county region was previously evaluated using the methodology provided in the Transportation Research Board's Transit Capacity and Quality of Service Manual. While this performance is appropriate for larger transit agencies, the frequency and duration of service is not the only indicator of an agency's performance, particularly with the area and population density found in the two-county area. Therefore, the following information is provided in lieu of the Level of Service information provided in the last plan.

The performance of transit agencies is measured using multiple criteria and it is critical that agency transit services are evaluated in the context of the service that they provide as well as the service area demographics including population densities, employment densities and underserved populations.

Pennsylvania public transit agencies report and are evaluated on four key performance measures prescribed in Pennsylvania Act 44of 2007. The Act 44 metrics are:

- Passengers per revenue vehicle hour
- Operating cost per revenue vehicle hour
- Operating cost per passenger
- Operating revenue per revenue vehicle hour

The Act 44 performance data for FY 2013-14 is presented in ***Table 4.2.19***.

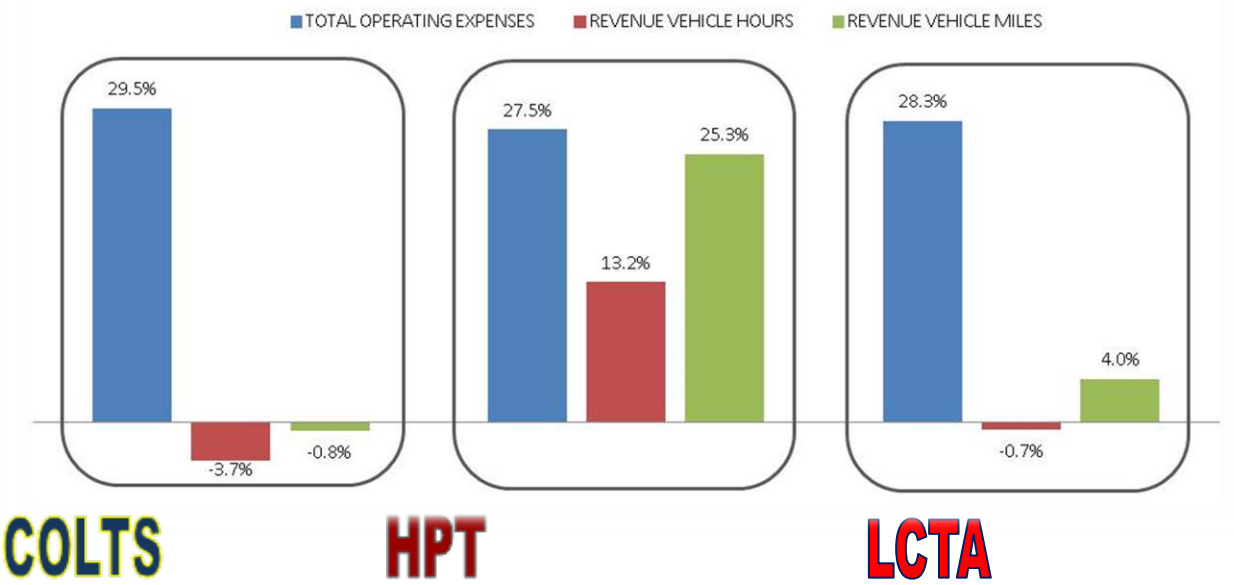
Table 4.2.19
Act 44 Performance Measures

Act 44 Performance Measures	COLTS	HPT	LCTA
Passengers per Revenue Vehicle Hour	12.87	7.16	15.42
Operating Cost per Revenue Vehicle Hour	$102.02	$79.59	$107.24
Operating Cost per Passenger	$7.93	$11.11	$6.95
Operating Revenue per Revenue Vehicle Hour	$17.97	$7.98	$16.36

Source: PA Public Transportation Annual Performance Report Transit Agency Profiles Fiscal Year 2013-14

Over the five year period, operating expenses for all three agencies have increased consistently, in a range of 27.5 and 29.5 percent, ***Figure 4.2.22***. COLTS shows a reduction in service reflected in decreases in both revenue hours and miles while LCTA experienced a slight decrease in revenue hours but an increase of 4% in revenue miles. To the contrary, HPT has shown significant growth in service reflected in both revenue hours and miles increases of 13.2% and 25.3%, respectively.

Figure 4.2.22
Percentage Change in Expenses and Service
FY2009-10 through FY2013-14



In addition to the data reporting requirements of Act 44, PennDOT conducts performance reviews of agencies once every five years that include peer comparisons of multiple measurements as well as reviews of key organizational functions.
On the Federal level, transit agencies are required annually to report a wide variety of statistics to the Federal Transit Administration through the National Transit Database (NTD). Information reported includes financial, ridership, revenue, expenses, service and maintenance data. The NTD identifies seven metrics to summarize performance and the chart below reflects the fiscal year 2012-13 NTD data for the three agencies.

Table 4.2.20
National Transit Database Fiscal 2013 Fixed-Route Data

	COLTS	HPT	LCTA
Efficiency - Operating Expense per Vehicle Revenue Mile	$ 7.59	$ 6.04	$ 7.15
Efficiency - Operating Expense per Vehicle Revenue Hour	$ 98.32	$ 76.39	$ 97.56
Effectiveness - Operating Expense per Passenger Mile	$ 1.60	$ 6.04	$ 1.65
Effectiveness - Operating Expense per Unlinked Passenger Trip	$ 6.98	$ 10.16	$ 6.16
Effectiveness - Unlinked Passenger Trip per Vehicle Revenue Mile	1.09	0.60	1.16
Effectiveness - Unlinked Passenger Trip per Vehicle Revenue Hour	14.09	7.52	15.83
Fixed Route Fare Recovery Ratio	13.7%	7.0%	14.9%

Source: National Transit Database, COLTS and HPT

**COLTS NTD FY 2013 contained an error. The table contains updated numbers provide by COLTS.*
***HPT provided the numbers that were not available in NTD.*

Tables 4.2.21 through ***4.2.23 s***hows passengers per revenue vehicle hour by route for each agency. This measure reflects the effectiveness of each fixed route and serves as an indicator for possible service changes. Generally speaking, an agency will use this measurement as a guide to trigger an in-depth route review. As mentioned previously, the analysis would also include pertinent operational matters (i.e. vehicle size, route length, etc.) and demographic data to thoroughly assess performance.

Table 4.2.21
COLTS Passengers Per Revenue Vehicle Hour

COLTS				
Route	Name	Total Ridership	Total Revenue Vehicle Hours	Passengers Per Revenue Vehicle Hour
12	Jessup	94,211	6,651	14.2
13	Drinker Marywood Saturday	1,157	204	5.7
14	Drinker	33,253	2,550	13.0
15	Chestnut Ash	26,486	2,508	10.6
18	Petersburg	44,919	3,132	14.3
21	East Mountain Wintermantel	22,661	2,308	9.8
25	Valley View Hilltop	78,349	3,229	24.3
26	Mohegan Sun	14,541	1,377	10.6
27	Minooka	37,453	2,124	17.6
28	Pittston	89,404	6,111	14.6
29	Stauffer Industrial	14,481	1,530	9.5
31	Old Forge	173,516	10,046	17.3
34	Keyser Valley Saturday	3,305	306	10.8
35	Keyser Valley Weekday	32,297	3,060	10.6
36	Lafayette	20,747	1,785	11.6
37	Oram Lafayette Saturday	2,317	408	5.7
38	Oram	10,942	1,148	9.5
41	High Works	63,188	5,814	10.9
42	Providence Tripper	19,527	212	92.1
43	Viewmont Bangor	75,515	3,651	20.7
45	Viewmont Express	34,642	1,454	23.8
46	Mall Circulator	16,696	2,907	5.7
48	Dalton Waverly Weekday	5,703	1,339	4.3
49	Dalton Waverly Saturday	417	94	4.4
50	Shoppers Special	1,999	170	11.7
52	Carbondale	103,133	7,089	14.5
53	Marywood (University of Scranton)	29,794	2,550	11.7
54	Green Ridge Dickson City	56,152	4,209	13.3
71/72	Evening City Circle North/South	27,407	3,060	9.0
73	Saturday Night Special	1,982	328	6.0
82	Simpson Carbondale Route 6	18,827	2,243	8.4
83/84	Newton Ransom/Chinchilla Clarks Green Justus	11,364	2,319	4.9
	Total:	***1,166,385***	***85,916***	***13.6***

Source: COLTS

Table 4.2.22
HPT Passengers Per Revenue Vehicle Hour

HPT				
Route	Name	Total Ridership	Total Revenue Vehicle Hours	Passengers Per Revenue Vehicle Hour
5/15	Humboldt/Mountain Top & Wilkes-Barre	13,668	3,560	3.8
10	Hazleton Heights	7,298	3,063	2.4
20/30	McAdoo/Kelayres – Beaver Meadows/Weatherly	21,625	3,394	6.4
40	Freeland	28,076	3,796	7.4
50/60	NE Diamond/NW Hazleton	19,757	3,192	6.2
70/100	West Hazleton/Sunday Loop	46,863	4,017	11.7
80	Hazle Marketplace	47,328	3,432	13.8
90/95/ 110	Penn State/Summer Loop/Saturday Loop	34,055	4,342	7.8
	Total:	*218,670*	*28,796*	*7.6*

Source: HPT

Table 4.2.23
LCTA Passengers Per Revenue Vehicle Hour

LCTA				
Route	Name	Total Ridership	Total Revenue Vehicle Hours	Passengers Per Revenue Vehicle Hour
1	Miners Mills/Hudson	76,521	3,576	21.4
3	Grove & Brown/Heights	46,279	2,447	18.9
5	Parsons via Scott Street/Geisinger	85,855	3,799	22.6
6	Dallas/Kingston Trucksville/Shavertown	67,384	6,013	11.2
7	Georgetown	65,768	3,214	20.5
8	Swoyersville/Luzerne/Pringle/Forty Fort/Edwardsville	25,541	2,701	9.5
10	Wyoming Valley Mall/VA/Timber Ridge/Wilkeswood/John Heinz	94,634	3,927	24.1
11	West Pittston/Kingston/Forty Fort/ Wyoming/Exeter/Pittston	131,140	7,843	16.7
12	Larksville/Kingston/Edwardsville/Plymouth	70,466	3,761	18.7
13	Ashley/W Ashley/Sugar Notch/Warrior Run	75,112	4,255	17.7
14	Nanticoke/Glen Lyon via Hanover/Hanover Green	130,353	7,112	18.3
15	Nanticoke/Middle Rd via Askam/Hanover/Nanticoke/LCCC	66,595	4,064	16.4
16	Old Forge	67,879	5,302	12.8
17	Highway 315/Wyoming Valley Mall/Steamtown /Dupont/ Avoca/Moosic/WB-Scranton Airport	19,338	2,912	6.6
18	+Shoppers Delight and Wyoming Valley Mall	81,286	3,553	22.9
22	Plymouth via Old River Road	80,281	4,437	18.1
	Total:	***1,184,432***	***68,916***	***17.2***

Source: LCTA

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".

Railroad Freight Movement

The demand for railroad freight travel in Pennsylvania is significant and accounts for about eleven percent of all freight transported within the state and more than 17 percent of all inter-state freight.[21] Rail's proportion of all freight travel within the state increased by 3% from the last plan indicating an increase in freight movement by this mode. Commodities originating and terminating in Pennsylvania and carried by rail are dominated by coal (66 percent of originating tons and 26 percent of terminating tons) and also include intermodal (shipping containers and truck trailers), nonmetallic minerals, chemicals and food products.[22] The number of units transported on rail freight is projected to increase by approximately 65 percent to the year 2040 with intermodal units making up 75 percent of that increase.

[21] U.S. Department of Transportation (USDOT), Office of Freight Management and Operations, Pennsylvania's Freight Analysis Framework Version 3 (FAF3), http://faf.ornl.gov/fafweb/FUT.aspx, FAF3.5 State Summary by Dmsmode and Trade, 2007, and 2012.xlsx, 2015.
[22] PA's Long Range Transportation Comprehensive Freight Movement Plan, Rail Freight Conditions, Trends and Implications, CDM Smith, March 2014.

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 2040

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 2040 are based on Pennsylvania Department of Environmental Protection (DEP) State Water Planning forecasts, as well as The Center for Rural Pennsylvania 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 2040, there would be a 2.3% 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 2040 Lackawanna and Luzerne Counties, combined, would grow by 8.6% and achieve a population of 581,426 persons, a gain of 46,071 residents from 2010 to 2040.

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 2040 Lackawanna and Luzerne Counties, combined, would grow by 13.4% and achieve a population of 607,116 persons, a gain of 71,761 residents from 2010 to 2040.

The fourth population forecast uses a rate of growth projected by the Center for Rural Pennsylvania for the State of Pennsylvania to the Year 2040 and applies it to the two-county area. In this case, Lackawanna and Luzerne Counties would have a combined population of 595,214 people by 2040, an increase of 11.2 percent from 2010 to 2040 or 59,859 residents.

Table 4.3.1
Alternative Population Forecasts, 1990-2040
Source: PA DEP State Water Planning Forecast and The Center for Rural PA

Alternative Population Forecasts 1990-2040 Bi-County									
Alternative		1990	2000	2010	2020	2030	2040	2010-2040	
								Number	Percent
1.	DEP State Water Planning Forecast (2 County Rate)	547,188	532,545	535,355	528,417	527,421	523,030	-12,325	-2.3%
2.	DEP State Water Planning Forecast (Ten County Rate)	547,188	532,545	535,355	549,030	566,235	581,426	46,071	8.6%
3.	DEP State Water Planning Forecast (5 County Rate)	547,188	532,545	535,355	557,275	583,389	607,116	71,761	13.4%
4.	The Center for Rural Pennsylvania (PA Forecast)	547,188	532,545	535,355	557,208	579,505	595,214	59,859	11.2%

A forecast for housing construction over the period 2010 to 2040 (including 2015 to 2040) 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 2010 (535,355 persons) as the "low" end (this assumes no net change in the two-county area from 2010 to 2040), and the average of the high and low figures as a "medium" prospect (558,391 residents).

These figures have been used in *Table 4.3.2* in order to forecast housing units to be constructed by 2040. Base data from the 2010 Census includes an assumed vacancy rate of 11.5 percent and 96.3 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 2040. According to the medium forecast, approximately 21,500 additional housing units are to be constructed by the planning horizon year, an average of around 980 new units per year.

Table 4.3.2
Housing Unit Construction Forecasts, 2010-2040
Source: PA DEP State Water Planning Forecast and U.S. Census Bureau

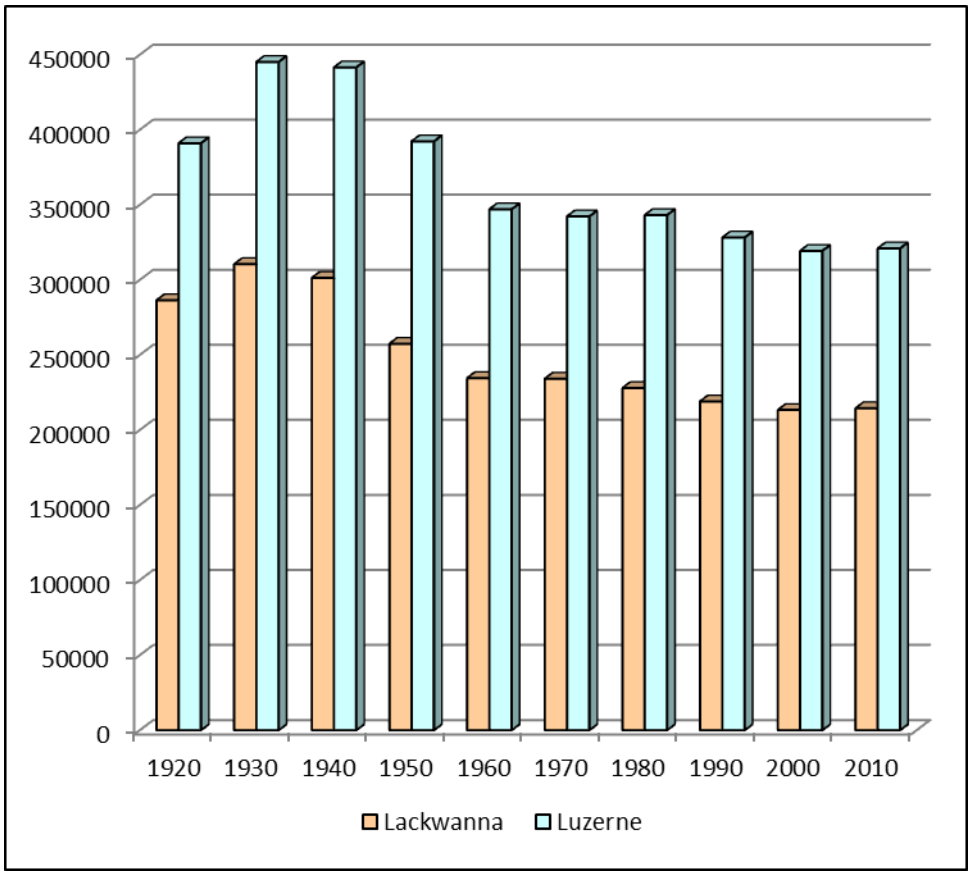
Two-County Housing Units to be Constructed, 2010-2040 (11.5 vacancy rate)			
Housing Units to be Constructed			
	Low	**Medium**	**High**
Population Projection, Year 2040	535,355	558,391	581,426
Population in Households (96.1%)	515,547	537,730	559,913
Persons per Household	2.25	2.25	2.25
Occupied Housing Units	229,132	238,991	248,850
Vacant Units (9.6% Vacancy Rate)	29,774	31,055	32,336
Total Housing Units Required (OHU / 0.904)	258,906	270,046	281,187
Existing Stock, Year-Route Housing Units, 2000	245,580	245,580	245,580
Net Additions to Housing Stock	13,326	24,466	35,607
Replacement of Existing Stock (3%)	7,367	7,367	7,367
Conversions (-1%)	-2,456	-2,456	-2,456
Total Housing Units to be Constructed, 2010-2040 (30 years)	18,238	29,378	40,518
Average number of Housing Units to be Constructed per year (2010-2040)	**608**	**979**	**1,351**
Total Housing Units to be Constructed, 2015-2040 (25 years)	13,374	21,544	29,714

Population Characteristics

Population Trends

Population trends for both Lackawanna and Luzerne Counties are shown from 1920 to 2010 in ***Figure 4.3.1***. In 2010, the total population for the two-county area was 535,355 people (214,437 individuals in Lackawanna County and 320,918 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, 1920-2010
Source: U.S. Census Bureau (2000 & 2010 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 76,089 residents. The county's second-largest city, Carbondale, has 8,981 residents. Township populations range between 9,073 residents in South Abington Township to 250 residents in West Abington Township. Boroughs range in size from 14,057 inhabitants in Dunmore Borough to Vandling Borough, with 751 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 41,498 residents. The second largest city is Hazleton, with 25,340 residents, followed by Nanticoke, with 10,465 residents and Pittston, with 7,739 residents. Townships range in size from Hanover Township with 11,076 residents, to Buck Township with 435 people. The population in boroughs range from 13,182 residents in Kingston, to 98 residents in Jeddo (***Table 4.3.4***).

Table 4.3.3

Population Trends by Municipality, Lackawanna County, Two-County, Pennsylvania and Nation, 1970-2010

Source: U.S. Census Bureau and Pennsylvania State Data Center (1970-2010 Decennial Census)

Population Trends by Municipality 1970-2010 Lackawana County					
	1970	1980	1990	2000	2010
Abington Township	1,316	1,487	1,515	1,616	1,743
Archbald Borough	6,118	6,295	6,291	6,220	6,984
Benton Township	1,141	1,670	1,837	1,881	1,908
Blakely Borough	6,391	7,438	7,222	7,027	6,564
Carbondale City	12,808	11,255	10,664	9,800	8,891
Carbondale Township	610	1,032	925	1,008	1,115
Clarks Green Borough	1,674	1,862	1,603	1,626	1,476
Clarks Summit Borough	5,376	5,272	5,433	5,063	5,116
Clifton Township	526	855	1,040	1,152	1,480
Covington Township	1,460	1,858	2,055	1,994	2,284
Dalton Borough	1,282	1,383	1,369	1,294	1,234
Dickson City Borough	7,698	6,699	6,276	6,205	6,070
Dunmore Borough	17,300	16,781	15,403	14,018	14,057
Elmhurst Township	799	953	850	852	894
Fell Township	2,963	2,817	2,432	2,340	2,178
Glenburn Township	1,113	1,257	1,242	1,212	1,246
Greenfield Township	1,140	1,524	1,749	1,990	2,105
Jefferson Township	1,809	3,132	3,419	3,592	3,731
Jermyn Borough	2,435	2,411	2,263	2,287	2,169
Jessup Borough	4,948	4,974	4,605	4,718	4,676
La Plume Township	971	1001	644	642	602
Lehigh Township	167	326	487	-	-
Madison Township	993	1,659	2,210	2,569	2,750
Mayfield Borough	2,176	1,812	1,890	1,756	1,807
Moosic Borough	4,273	6,068	5,339	5,575	5,719
Moscow Borough	1,430	1,536	1,527	1,883	2,026
Newton Township	2,568	2,521	2,844	2,698	2,846
North Abington Township	553	619	692	756	703
Old Forge Borough,	9,522	9,304	8,834	8,798	8,313
Olyphant Borough,	5,422	5,204	5,222	4,978	5,151
Ransom Township	1,196	1,506	1,607	1,430	1,420
Roaring Brook Township	1,385	1,895	1,966	1,623	1,907
Scott Township	3,803	4,624	5,344	4,931	4,905
Scranton City	103,564	88,117	81,805	76,415	76,089
South Abington Township	3,374	6,353	6,377	8,705	9,073
Spring Brook Township	1,577	2,144	2,097	2,340	2,768
Taylor Borough	6,977	7,246	6,941	6,475	6,263
Thornhurst Township	-	-	-	785	1,085
Throop Borough	4,307	4,166	4,070	4,010	4,088
Vandling Borough	633	557	654	733	751
West Abington Township	309	295	296	298	250
Lackawanna County Total	234,107	227,908	219,039	213,295	214,437
Luzerne County Total	342,211	343,079	328,149	319,224	320,918
Bi-County Total	576,408	570,987	547,188	532,519	535,355
Pennsylvania Total	11,800,766	11,863,895	11,881,643	12,281,054	12,702,379
US Total	203,211,926	226,545,805	248,709,873	281,421,906	308,745,538
Source: U.S. Census Bureau (1990, 2000, & 2010 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, 1970-2010

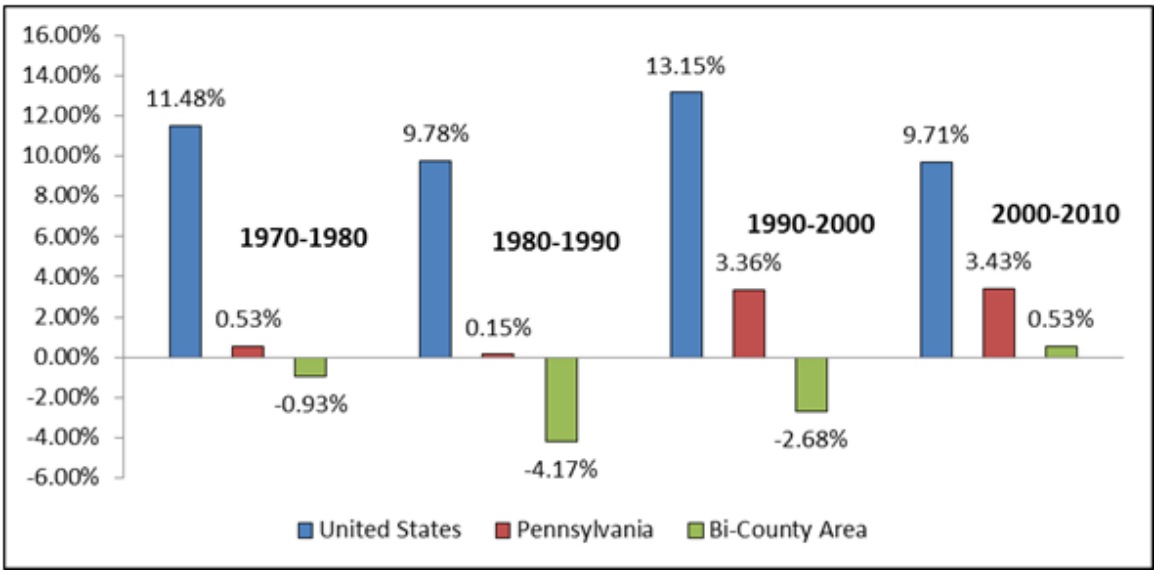
Population Trends by Municipality 1970-2010 Luzerne County	1970	1980	1990	2000	2010
Ashley Borough	4,095	3,512	3,291	2,866	2,790
Avoca Borough	3,543	3,536	2,897	2,851	2,661
Bear Creek Township	1,825	3,076	2,719	2,580	2,774
Bear Creek Village Borough	-	-	-	279	257
Black Creek Township	1,745	1,927	1,937	2,132	2,016
Buck Township	294	397	377	397	435
Butler Township	3,762	5,537	6,020	7,166	9,221
Conyngham Borough	1,850	2,242	2,049	1,958	1,914
Conyngham Township	1,693	1,663	1,509	1,385	1,453
Courtdale Borough	1,027	844	766	791	732
Dallas Borough	2,913	2,679	2,608	2,557	2,804
Dallas Township	5,232	7,287	7,625	8,179	8,994
Dennison Township	784	753	807	907	1,125
Dorrance Township	1,209	1,829	1,778	2,110	2,188
Dupont Borough	3,431	3,460	2,984	2,719	2,711
Duryea Borough	5,264	5,415	4,869	4,634	4,917
Edwardsville Borough	5,633	5,729	5,399	4,984	4,816
Exeter Borough	4,670	5,493	5,691	5,955	5,652
Exeter Township	1,869	2,355	2,457	2,557	2,378
Fairmount Township	825	1,167	1,211	1,226	1,276
Fairview Township	2,658	2,908	3,016	3,995	4,520
Forty Fort Borough	6,114	5,590	5,049	4,579	4,214
Foster Township	2,594	3,258	3,380	3,396	3,467
Franklin Township	1,145	1,473	1,414	1,601	1,757
Freeland Borough	4,784	4,285	3,916	3,643	3,531
Hanover Township	12,108	12,601	12,050	11,462	11,076
Harveys Lake Borough	1,693	2,318	2,746	2,888	2,791
Hazle Township	7,619	9,495	9,308	8,991	9,549
Hazleton City	30,426	27,318	24,730	23,264	25,340
Hollenback Township	663	1,006	1,198	1,243	1,196
Hughestown Borough	1,407	1,783	1,734	1,541	1,392
Hunlock Township	1,682	2,419	2,496	2,568	2,443
Huntington Township	1,518	1,943	1,905	2,098	2,244
Jackson Township	1,956	2,941	5,336	4,453	4,646
Jeddo Borough	177	128	135	144	98
Jenkins Township	3,252	4,508	4,740	4,584	4,442
Kingston Borough	18,325	15,681	14,507	13,855	13,182
Kingston Township	6,196	6,535	6,763	7,145	6,999
Laflin Borough	399	1,650	1,487	1,502	1,487
Lake Township	1,332	1,783	1,924	2,110	2,049
Larksville Borough	3,937	4,410	4,700	4,694	4,480
Laurel Run Borough	327	725	720	727	500
Lehman Township	2,219	3,030	3,035	3,206	3,508
Luzerne Borough	4,504	3,703	3,206	2,952	2,845
Nanticoke City	14,632	13,044	12,267	10,955	10,465
Nescopeck Borough	1,807	1,768	1,651	1,528	1,583
Nescopeck Township	708	833	1,072	1,096	1,155
New Columbus Borough	149	214	228	221	227
Newport Township	6,002	4,989	4,593	5,006	5,374
Nuangola Borough	464	726	690	686	679
Penn Lake Park Borough	-	217	234	270	308
Pittston City	11,113	9,930	9,389	8,104	7,739
Pittston Township	3,564	3,611	2,725	3,450	3,368
Plains Township	11,481	11,338	10,988	10,906	9,961
Plymouth Borough	9,536	7,605	7,134	6,507	5,951
Plymouth Township	2,614	2,437	1,773	2,097	1,812
Pringle Borough	1,155	1,221	1,179	991	979
Rice Township	941	1,935	1,907	2,460	3,335
Ross Township	1,592	2,323	2,655	2,742	2,937
Salem Township	3,890	4,627	4,482	4,269	4,254
Shickshinny Borough	1,685	1,192	1,108	959	838
Slocum Township	858	1,015	1,170	1,096	1,115
Sugarloaf Township	2,035	3,202	3,534	3,652	4,211
Sugar Notch Borough	1,333	1,191	1,036	1,013	989
Swoyersville Borough	6,786	5,795	5,630	5,157	5,062
Union Township	1,253	1,828	2,028	2,100	2,042
Warrior Run Borough	816	784	664	634	584
West Hazleton Borough	6,059	4,871	4,136	3,543	4,594
West Pittston Borough	7,074	5,980	5,590	5,072	4,868
West Wyoming Borough	3,659	3,288	3,117	2,833	2,725
White Haven Borough	2,134	1,921	1,128	1,182	1,097
Wilkes-Barre City	58,856	51,551	47,523	43,123	41,498
Wilkes-Barre Township	3,535	4,244	3,572	3,235	2,967
Wright Township	3,179	4,797	4,685	5,593	5,651
Wyoming Borough	4,195	3,655	3,255	3,221	3,073
Yatesville Borough	407	555	517	649	607
Luzerne County Total	342,211	343,079	328,149	319,224	320,918
Lackawanna County Total	234,107	227,908	219,039	213,295	214,437
Bi-County Total	576,318	570,987	547,188	532,519	535,355
Pennsylvania Total	11,800,766	11,863,895	11,881,643	12,281,054	12,702,379
US Total	203,211,926	226,545,805	248,709,873	281,421,906	308,745,538

Source: U.S. Census Bureau (1990, 2000, & 2010 Decennial Census)
Source: Pennsylvania State Data Center (1960, 1970, & 1980 Decennial Census)

Population Change

The decades from 1970 to 2010 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
Percent Population Change, United States, Pennsylvania, and Bi-County



Source: U.S. Census Bureau (2000 & 2010 Decennial Census)
University of Virginia Library Geospatial and Statistical Data Center

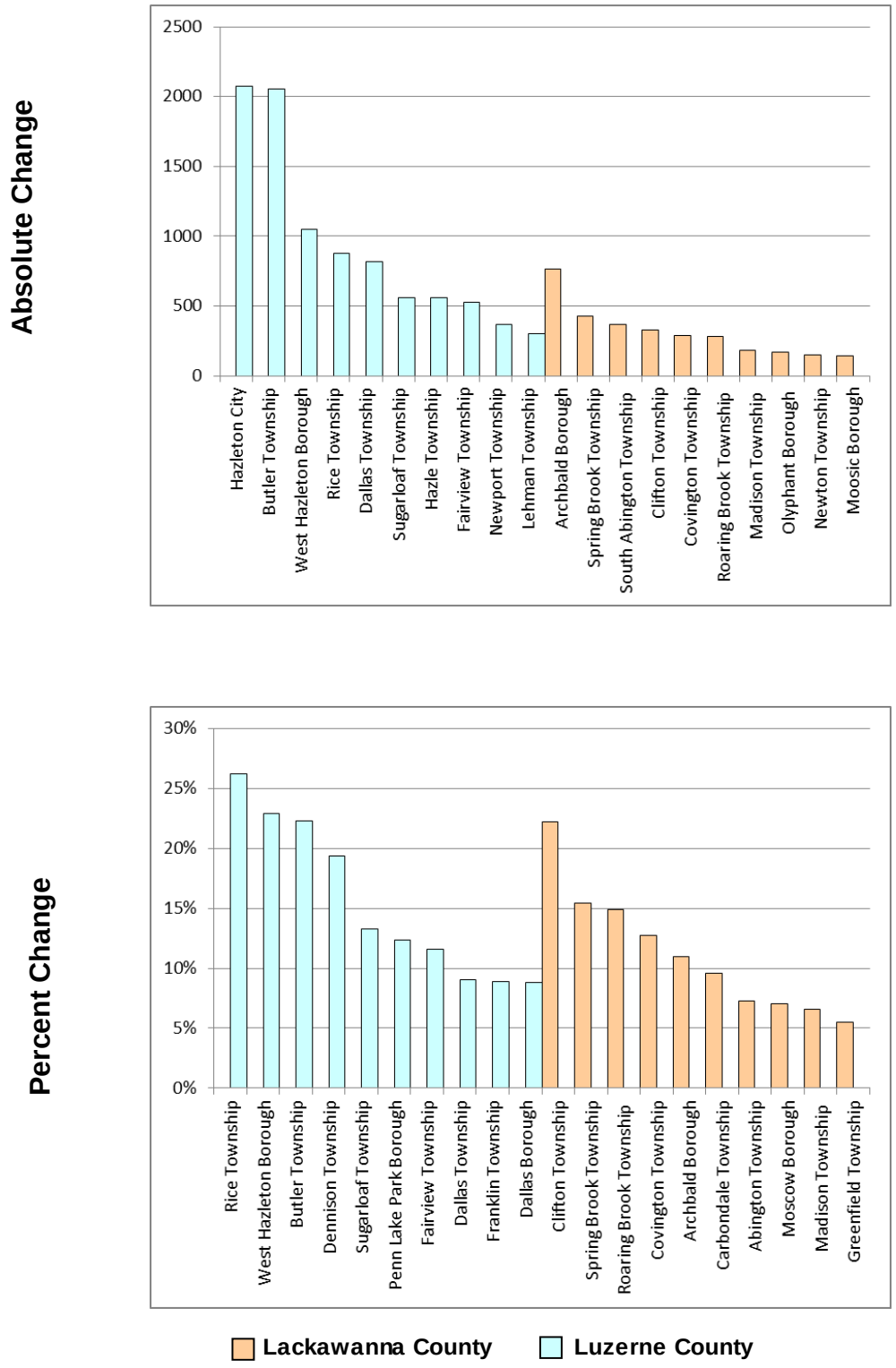
Recent population change for all municipalities in the two-county area is shown in *Table 4.3.5* and *Table 4.3.6*. These data can be used to identify the ten fastest growing and declining municipalities. During the 2000 to 2010 period, population growth in the region's townships was generally greater 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 2000 and 2010 in terms of absolute change included city, boroughs, and townships (*Figure 4.3.3*). In Lackawanna County the three highest increases occurred in the Borough of Archbald, with 764 new residents; Spring Brook Township, with 428 new residents; and South Abington Township, with 368 new residents. In Luzerne County, the three highest population increases were experienced by the City of Hazleton, with 2,076 new residents; Butler Township, with 2,055 new residents; and the Borough of West Hazleton, with 1,051
new residents.

Percent change indicates that the majority of the fastest growing municipalities were also townships. The five exceptions were the Boroughs of Archbald and Moscow in Lackawanna County and the Boroughs of West Hazleton, Penn Lake Park, and Dallas in Luzerne County. In Lackawanna County, Clifton Township was the fastest growing, with a 22.2 percent increase; followed by Spring Brook Township, with a 15.5 percent increase; and Roaring Brook Township, with a 14.9 percent increase. In Luzerne County, the top three fastest growing municipalities were Rice Township, at 26.2 percent; West Hazleton Township, with 22.9 percent; and Butler Township, with 22.3 percent.

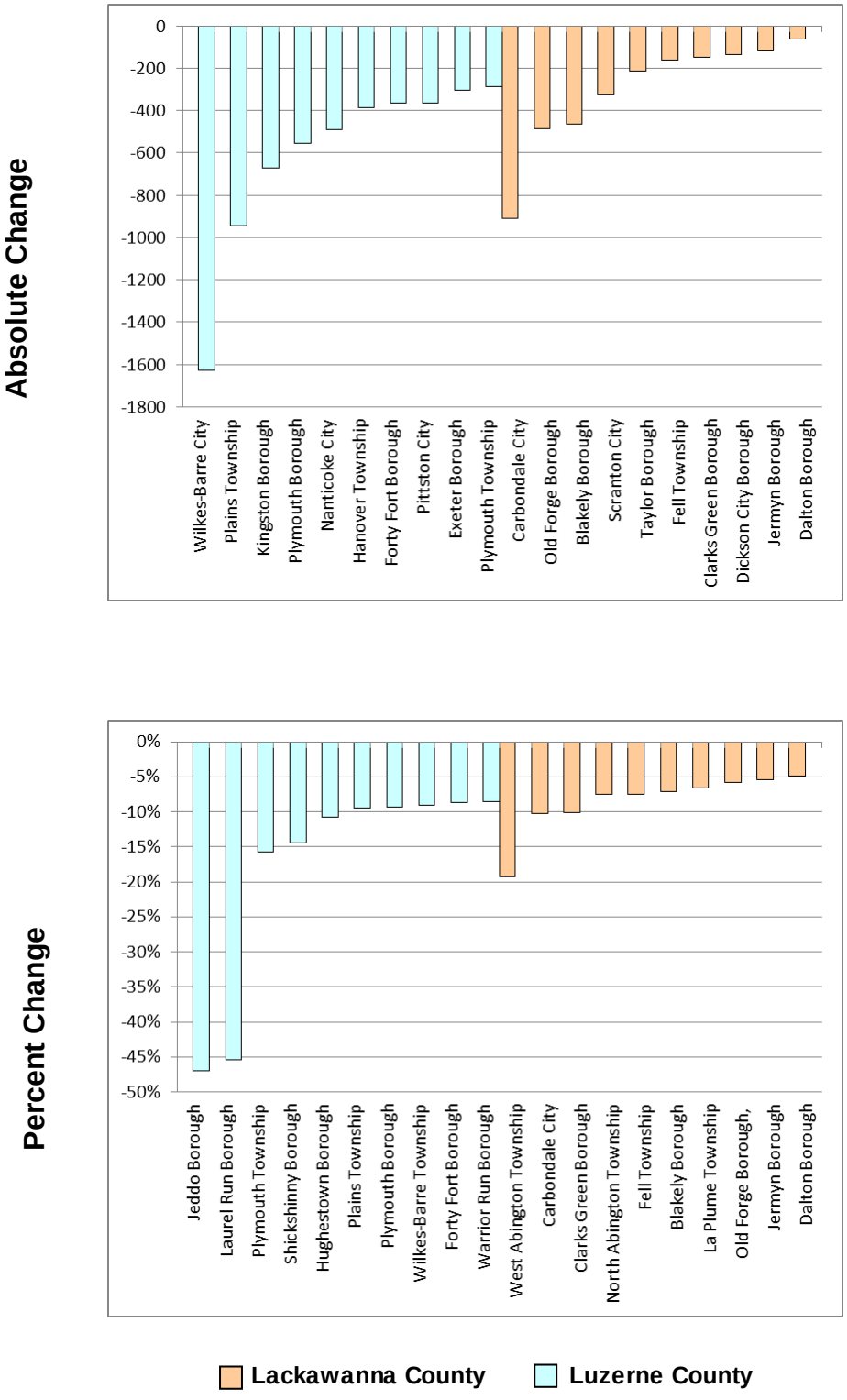
The two-county area's most urban municipalities were among the ten fastest declining municipalities in terms of absolute change between 2000 and 2010. In Luzerne County, the City of Wilkes-Barre experienced the fastest decline for both counties, with a decrease of 1,625 residents, while Plains Township had a decrease of 945 residents and the Borough of Kingston declined by 673 residents. In Lackawanna County, the highest population loss occurred in the City of Carbondale, with 909 residents lost; the Borough of Old Forge, with a loss of 485 residents; and the Borough of Blakely, with a loss of 463 residents.

Figure 4.3.3
Ten Fastest Growing Municipalities, in Each County, 2000-2010



Source: U.S. Census Bureau (2000 & 2010 Decennial Census)

Figure 4.3.4
Ten Fastest Declining Municipalities, in Each County, 2000-2010



Source: U.S. Census Bureau (2000 & 2010 Decennial Census)

Table 4.3.5

Population Change by Municipality, Lackawanna County,

Population Change by Municipality 1970-2010 Lackawanna County								
	1970-1980		1980-1990		1990-2000		2000-2010	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Abington Township	171	12.99%	28	1.88%	101	6.67%	127	7.29%
Archbald Borough	177	2.89%	-4	-0.06%	-71	-1.13%	764	10.94%
Benton Township	529	46.36%	167	10.00%	44	2.40%	27	1.42%
Blakely Borough	1,047	16.38%	-216	-2.90%	-195	-2.70%	-463	-7.05%
Carbondale City	-1,553	-12.13%	-591	-5.25%	-864	-8.10%	-909	-10.22%
Carbondale Township	422	69.18%	-107	-10.37%	83	8.97%	107	9.60%
Clarks Green Borough	188	11.23%	-259	-13.91%	23	1.43%	-150	-10.16%
Clarks Summit Borough	-104	-1.93%	161	3.05%	-370	-6.81%	53	1.04%
Clifton Township	329	62.55%	185	21.64%	112	10.77%	328	22.16%
Covington Township	398	27.26%	197	10.60%	-61	-2.97%	290	12.70%
Dalton Borough	101	7.88%	-14	-1.01%	-75	-5.48%	-60	-4.86%
Dickson City Borough	-999	-12.98%	-423	-6.31%	-71	-1.13%	-135	-2.22%
Dunmore Borough	-519	-3.00%	-1,378	-8.21%	-1,385	-8.99%	39	0.28%
Elmhurst Township	154	19.27%	-103	-10.81%	2	0.24%	42	4.70%
Fell Township	-146	-4.93%	-385	-13.67%	-92	-3.78%	-162	-7.44%
Glenburn Township	144	12.94%	-15	-1.19%	-30	-2.42%	34	2.73%
Greenfield Township	384	33.68%	225	14.76%	241	13.78%	115	5.46%
Jefferson Township	1,323	73.13%	287	9.16%	173	5.06%	139	3.73%
Jermyn Borough	-24	-0.99%	-148	-6.14%	24	1.06%	-118	-5.44%
Jessup Borough	26	0.53%	-369	-7.42%	113	2.45%	-42	-0.90%
La Plume Township	30	3.09%	-357	-35.66%	-2	-0.31%	-40	-6.64%
Lehigh Township	159	95.21%	161	49.39%	-	-	-	-
Madison Township	666	67.07%	551	33.21%	359	16.24%	181	6.58%
Mayfield Borough	-364	-16.73%	78	4.30%	-134	-7.09%	51	2.82%
Moosic Borough	1,795	42.01%	-729	-12.01%	236	4.42%	144	2.52%
Moscow Borough	106	7.41%	-9	-0.59%	356	23.31%	143	7.06%
Newton Township	-47	-1.83%	323	12.81%	-146	-5.13%	148	5.20%
North Abington Township	66	11.93%	73	11.79%	64	9.25%	-53	-7.54%
Old Forge Borough,	-218	-2.29%	-470	-5.05%	-36	-0.41%	-485	-5.83%
Olyphant Borough,	-218	-4.02%	18	0.35%	-244	-4.67%	173	3.36%
Ransom Township	310	25.92%	101	6.71%	-177	-11.01%	-10	-0.70%
Roaring Brook Township	510	36.82%	71	3.75%	-343	-17.45%	284	14.89%
Scott Township	821	21.59%	720	15.57%	-413	-7.73%	-26	-0.53%
Scranton City	-15,447	-14.92%	-6,312	-7.16%	-5,390	-6.59%	-326	-0.43%
South Abington Township	2,979	88.29%	24	0.38%	2,328	36.51%	368	4.06%
Spring Brook Township	567	35.95%	-47	-2.19%	243	11.59%	428	15.46%
Taylor Borough	269	3.86%	-305	-4.21%	-466	-6.71%	-212	-3.38%
Thornhurst Township								
Throop Borough	-141	-3.27%	-96	-2.30%	-60	-1.47%	78	1.91%
Vandling Borough	-76	-12.01%	97	17.41%	79	12.08%	18	2.40%
West Abington Township	-14	-4.53%	1	0.34%	2	0.68%	-48	-19.20%
Lackawanna County Total	-6,199	-2.65%	-8,869	-3.89%	-5,744	-2.62%	1,142	0.53%
Luzerne County Total	868	0.25%	-14,930	-4.35%	-8,925	-2.72%	1,694	0.53%
Bi-County Total	-5,421	-0.94%	-23,799	-4.17%	-14,669	-2.68%	2,836	0.53%
Pennsylvania Total	63,129	0.53%	17,748	0.15%	399,411	3.36%	421,325	3.32%
US Total	23,333,879	11.48%	22,164,068	9.78%	32,712,033	13.15%	27,323,632	8.85%

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, 1980-2010

Population Change by Municipality 1970-2010 Luzerne County								
	1970-1980		1980-1990		1990-2000		2000-2010	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Ashley Borough	-583	-14.24%	-221	-6.29%	-425	-12.91%	-76	-2.72%
Avoca Borough	-7	-0.20%	-639	-18.07%	-46	-1.59%	-190	-7.14%
Bear Creek Township	1,251	68.55%	-357	-11.61%	-139	-5.11%	194	6.99%
Bear Creek Village Borough								
Black Creek Township	182	10.43%	10	0.52%	195	10.07%	-116	-5.75%
Buck Township	103	35.03%	-20	-5.04%	20	5.31%	38	8.74%
Butler Township	1,775	47.18%	483	8.72%	1,146	19.04%	2,055	22.29%
Conyngham Borough	392	21.19%	-193	-8.61%	-91	-4.44%	-44	-2.30%
Conyngham Township	-30	-1.77%	-154	-9.26%	-124	-8.22%	68	4.68%
Courtdale Borough	-183	-17.82%	-78	-9.24%	25	3.26%	-59	-8.06%
Dallas Borough	-234	-8.03%	-71	-2.65%	-51	-1.96%	247	8.81%
Dallas Township	2,055	39.28%	338	4.64%	554	7.27%	815	9.06%
Dennison Township	-31	-3.95%	54	7.17%	100	12.39%	218	19.38%
Dorrance Township	620	51.28%	-51	-2.79%	332	18.67%	78	3.56%
Dupont Borough	29	0.85%	-476	-13.76%	-265	-8.88%	-8	-0.30%
Duryea Borough	151	2.87%	-546	-10.08%	-235	-4.83%	283	5.76%
Edwardsville Borough	96	1.70%	-330	-5.76%	-415	-7.69%	-168	-3.49%
Exeter Borough	823	17.62%	198	3.60%	264	4.64%	-303	-5.36%
Exeter Township	486	26.00%	102	4.33%	100	4.07%	-179	-7.53%
Fairmount Township	342	41.45%	44	3.77%	15	1.24%	50	3.92%
Fairview Township	250	9.41%	108	3.71%	979	32.46%	525	11.62%
Forty Fort Borough	-524	-8.57%	-541	-9.68%	-470	-9.31%	-365	-8.66%
Foster Township	664	25.60%	122	3.74%	16	0.47%	71	2.05%
Franklin Township	328	28.65%	-59	-4.01%	187	13.22%	156	8.88%
Freeland Borough	-499	-10.43%	-369	-8.61%	-273	-6.97%	-112	-3.17%
Hanover Township	493	4.07%	-551	-4.37%	-588	-4.88%	-386	-3.49%
Harveys Lake Borough	625	36.92%	428	18.46%	142	5.17%	-97	-3.48%
Hazle Township	1,876	24.62%	-187	-1.97%	-317	-3.41%	558	5.84%
Hazleton City	-3,108	-10.21%	-2,588	-9.47%	-1,466	-5.93%	2,076	8.19%
Hollenback Township	343	51.73%	192	19.09%	45	3.76%	-47	-3.93%
Hughestown Borough	376	26.72%	-49	-2.75%	-193	-11.13%	-149	-10.70%
Hunlock Township	737	43.82%	77	3.18%	72	2.88%	-125	-5.12%
Huntington Township	425	28.00%	-38	-1.96%	193	10.13%	146	6.51%
Jackson Township	985	50.36%	2,395	81.43%	-883	-16.55%	193	4.15%
Jeddo Borough	-49	-27.68%	7	5.47%	9	6.67%	-46	-46.94%
Jenkins Township	1,256	38.62%	232	5.15%	-156	-3.29%	-142	-3.20%
Kingston Borough	-2,644	-14.43%	-1,174	-7.49%	-652	-4.49%	-673	-5.11%
Kingston Township	339	5.47%	228	3.49%	382	5.65%	-146	-2.09%
Laflin Borough	1,251	313.53%	-163	-9.88%	15	1.01%	-15	-1.01%
Lake Township	451	33.86%	141	7.91%	186	9.67%	-61	-2.98%
Larksville Borough	473	12.01%	290	6.58%	-6	-0.13%	-214	-4.78%
Laurel Run Borough	398	121.71%	-5	-0.69%	7	0.97%	-227	-45.40%
Lehman Township	811	36.55%	5	0.17%	171	5.63%	302	8.61%
Luzerne Borough	-801	-17.78%	-497	-13.42%	-254	-7.92%	-107	-3.76%
Nanticoke City	-1,588	-10.85%	-777	-5.96%	-1,312	-10.70%	-490	-4.68%
Nescopeck Borough	-39	-2.16%	-117	-6.62%	-123	-7.45%	55	3.47%
Nescopeck Township	125	17.66%	239	28.69%	24	2.24%	59	5.11%
New Columbus Borough	65	43.62%	14	6.54%	-7	-3.07%	6	2.64%
Newport Township	-1,013	-16.88%	-396	-7.94%	413	8.99%	368	6.85%
Nuangola Borough	262	56.47%	-36	-4.96%	-4	-0.58%	-7	-1.03%
Penn Lake Park Borough			17	7.83%	36	15.38%	38	12.34%
Pittston City	-1,183	-10.65%	-541	-5.45%	-1,285	-13.69%	-365	-4.72%
Pittston Township	47	1.32%	-886	-24.54%	725	26.61%	-82	-2.43%
Plains Township	-143	-1.25%	-350	-3.09%	-82	-0.75%	-945	-9.49%
Plymouth Borough	-1,931	-20.25%	-471	-6.19%	-627	-8.79%	-556	-9.34%
Plymouth Township	-177	-6.77%	-664	-27.25%	324	18.27%	-285	-15.73%
Pringle Borough	66	5.71%	-42	-3.44%	-188	-15.95%	-12	-1.23%
Rice Township	994	105.63%	-28	-1.45%	553	29.00%	875	26.24%
Ross Township	731	45.92%	332	14.29%	87	3.28%	195	6.64%
Salem Township	737	18.95%	-145	-3.13%	-213	-4.75%	-15	-0.35%
Shickshinny Borough	-493	-29.26%	-84	-7.05%	-149	-13.45%	-121	-14.44%
Slocum Township	157	18.30%	155	15.27%	-74	-6.32%	19	1.70%
Sugarloaf Township	1,167	57.35%	332	10.37%	118	3.34%	559	13.27%
Sugar Notch Borough	-142	-10.65%	-155	-13.01%	-23	-2.22%	-24	-2.43%
Swoyersville Borough	-991	-14.60%	-165	-2.85%	-473	-8.40%	-95	-1.88%
Union Township	575	45.89%	200	10.94%	72	3.55%	-58	-2.84%
Warrior Run Borough	-32	-3.92%	-120	-15.31%	-30	-4.52%	-50	-8.56%
West Hazleton Borough	-1,188	-19.61%	-735	-15.09%	-593	-14.34%	1,051	22.88%
West Pittston Borough	-1,094	-15.47%	-390	-6.52%	-518	-9.27%	-204	-4.19%
West Wyoming Borough	-371	-10.14%	-171	-5.20%	-284	-9.11%	-108	-3.96%
White Haven Borough	-213	-9.98%	-793	-41.28%	54	4.79%	-85	-7.75%
Wilkes-Barre City	-7,305	-12.41%	-4,028	-7.81%	-4,400	-9.26%	-1,625	-3.92%
Wilkes-Barre Township	709	20.06%	-672	-15.83%	-337	-9.43%	-268	-9.03%
Wright Township	1,618	50.90%	-112	-2.33%	908	19.38%	58	1.03%
Wyoming Borough	-540	-12.87%	-400	-10.94%	-34	-1.04%	-148	-4.82%
Yatesville Borough	148	36.36%	-38	-6.85%	132	25.53%	-42	-6.92%
Luzerne County Total	868	0.25%	-14,930	-4.35%	-8,925	-2.72%	-137,684	-75.84%
Lackawanna County Total	-6,199	-2.65%	-8,869	-3.89%	-5,744	-2.62%	107,623	33.54%
Bi-County Total	-5,331	-0.93%	-23,799	-4.17%	-14,669	-2.68%	-30,061	-5.98%
Pennsylvania Total	63,129	0.53%	17,748	0.15%	399,411	3.36%	421,325	3.32%
US Total	23,333,879	11.48%	22,164,068	9.78%	32,712,033	13.15%	27,323,632	8.85%

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 1970 and 2010. Clarks Summit Borough has been Lackawanna County's most dense municipality, with 3,365 persons per square mile, followed by the City of Scranton at 2,989 persons per square mile and Clarks Green Borough, with 2,855 persons per square mile in 2010. West Abington Township is the county's least dense municipality, with 46 persons per square mile, followed by Thornhurst Township, with 49 persons per square mile, and Ransom Township, with 74 persons per square mile.

The largest percent increases in density between 1990 and 2010 occurred in Clifton Township (42.3 percent), South Abington Township (42.3 percent), and Moscow Borough (32.7 percent). The City of Carbondale experienced the highest percent decline in density (-16.6 percent), followed by West Abington Township (-15.5 percent), and Ransom Township (-11.6 percent) over the same time span.

In Luzerne County, the City of Wilkes-Barre has been most dense, with approximately 14,398 persons per square mile, followed by 6,042 persons per square mile in Kingston Borough and 5,123 persons per square mile in West Pittston Borough, according to the 2010 census. From the same census, Buck Township had the lowest population density of 26 persons per square mile, followed by Fairmount Township, having 28 persons per square mile, and Dennison Township, with 32 persons per square mile. Rice Township (74.9 percent), Butler Township (53.2 percent), and Fairview Township (49.9 percent) experienced the greatest percent increase in density countywide between 1980 and 2000. Laurel Run Borough (-30.6 percent), Jeddo Borough (-27.4 percent), and Shickshinny Borough (-24.4 percent) experienced the greatest percent decrease in density in the county.

Table 4.3.7

Population Density and Density Changes by Municipality, Lackawanna County, 1970-2010

Source: U.S. Census Bureau and Pennsylvania State Data Center (1970-2010 Decennial Census)

Population Density Changes 1970-2010 (persons per square mile) Lackawanna County									
	1970	1980	1990	2000	2010	Change 1970-1990		Change 1990-2010	
Abington Township	272	307	313	334	360	41	15.12%	47	15.05%
Archbald Borough	362	372	372	368	413	10	2.83%	41	11.02%
Benton Township	46	67	74	75	76	28	61.00%	3	3.86%
Blakely Borough	1,663	1,935	1,879	1,828	1,708	216	13.00%	-171	-9.11%
Carbondale City	4,003	3,517	3,333	3,063	2,778	-670	-16.74%	-554	-16.63%
Carbondale Township	44	74	66	72	80	23	51.64%	14	20.54%
Clarks Green Borough	3,238	3,602	3,101	3,145	2,855	-137	-4.24%	-246	-7.92%
Clarks Summit Borough	3,536	3,468	3,574	3,331	3,365	37	1.06%	-209	-5.83%
Clifton Township	27	44	54	60	77	27	97.72%	23	42.31%
Covington Township	60	76	84	82	94	24	40.75%	9	11.14%
Dalton Borough	413	446	441	417	398	28	6.79%	-44	-9.86%
Dickson City Borough	1,639	1,426	1,336	1,321	1,292	-303	-18.47%	-44	-3.28%
Dunmore Borough	1,953	1,895	1,739	1,583	1,587	-214	-10.97%	-152	-8.74%
Elmhurst Township	423	505	450	451	473	27	6.38%	23	5.18%
Fell Township	189	180	155	149	139	-34	-17.92%	-16	-10.44%
Glenburn Township	245	276	273	266	274	28	11.59%	1	0.32%
Greenfield Township	54	72	82	93	99	29	53.42%	17	20.35%
Jefferson Township	53	92	101	106	110	47	89.00%	9	9.13%
Jermyn Borough	3,152	3,121	2,929	2,960	2,807	-223	-7.06%	-122	-4.15%
Jessup Borough	731	735	680	697	691	-51	-6.93%	10	1.54%
La Plume Township	412	424	273	272	255	-139	-33.68%	-18	-6.52%
Lehigh Township									
Madison Township	58	97	130	151	161	71	122.56%	32	24.43%
Mayfield Borough	889	740	772	717	738	-117	-13.14%	-34	-4.39%
Moosic Borough	649	922	811	847	869	162	24.95%	58	7.12%
Moscow Borough	516	554	551	679	730	35	6.78%	180	32.68%
Newton Township	116	114	129	122	129	13	10.75%	0	0.07%
North Abington Township	59	66	74	81	75	15	25.14%	1	1.59%
Old Forge Borough,	2,799	2,735	2,597	2,587	2,444	-202	-7.23%	-153	-5.90%
Olyphant Borough,	992	952	955	911	942	-37	-3.69%	-13	-1.36%
Ransom Township	62	79	84	75	74	21	34.36%	-10	-11.64%
Roaring Brook Township	62	85	88	73	86	26	41.95%	-3	-3.00%
Scott Township	137	167	193	178	177	56	40.52%	-16	-8.21%
Scranton City	4,069	3,462	3,214	3,002	2,989	-855	-21.01%	-225	-6.99%
South Abington Township	393	739	742	1,013	1,056	349	89.00%	314	42.28%
Spring Brook Township	44	59	58	65	76	14	32.97%	19	32.00%
Taylor Borough	1,347	1,399	1,340	1,250	1,209	-7	-0.52%	-131	-9.77%
Thornhurst Township				36	49				
Throop Borough	852	824	805	793	809	-47	-5.50%	4	0.44%
Vandling Borough	468	412	484	542	556	16	3.32%	72	14.83%
West Abington Township	56	54	54	54	46	-2	-4.21%	-8	-15.54%

Table 4.3.8

Population Density and Density Changes by Municipality, Luzerne County, 1970-2010

Source: U.S. Census Bureau and Pennsylvania State Data Center (1970-2010 Decennial Census)

Population Density Changes 1970-2010 (persons per square mile) Luzerne County									
	1970	1980	1990	2000	2010	Change 1970-1990		Change 1990-2010	
Ashley Borough	4,440	3,808	3,568	3,107	3,025	-872	-19.63%	-543	-15.22%
Avoca Borough	3,370	3,363	2,755	2,711	2,531	-614	-18.23%	-224	-8.15%
Bear Creek Township	27	45	40	38	41	13	48.99%	1	2.02%
Bear Creek Village Borough	-	-	-	137	126	0			
Black Creek Township	71	79	79	87	82	8	11.00%	3	4.08%
Buck Township	17	24	22	24	26	5	28.23%	3	15.38%
Butler Township	112	165	179	213	274	67	60.02%	95	53.17%
Conyngham Borough	1,780	2,157	1,971	1,883	1,841	191	10.76%	-130	-6.59%
Conyngham Township	101	99	90	82	86	-11	-10.87%	-3	-3.71%
Courtdale Borough	1,003	824	748	773	715	-255	-25.41%	-33	-4.44%
Dallas Borough	1,223	1,125	1,095	1,073	1,177	-128	-10.47%	82	7.52%
Dallas Township	279	389	407	436	480	128	45.74%	73	17.95%
Dennison Township	22	21	23	25	32	1	2.93%	9	39.41%
Dorrance Township	50	75	73	87	90	23	47.06%	17	23.06%
Dupont Borough	2,331	2,351	2,027	1,847	1,842	-304	-13.03%	-185	-9.15%
Duryea Borough	906	932	838	797	846	-68	-7.50%	8	0.99%
Edwardsville Borough	4,604	4,682	4,412	4,073	3,936	-191	-4.15%	-476	-10.80%
Exeter Borough	937	1,102	1,141	1,194	1,133	205	21.86%	-8	-0.69%
Exeter Township	139	175	182	190	176	44	31.46%	-6	-3.22%
Fairmount Township	18	25	26	26	28	8	46.79%	1	5.37%
Fairview Township	281	308	319	423	478	38	13.47%	159	49.87%
Forty Fort Borough	4,017	3,673	3,318	3,009	2,769	-700	-17.42%	-549	-16.54%
Foster Township	58	72	75	76	77	17	30.30%	2	2.57%
Franklin Township	88	113	108	123	135	21	23.49%	26	24.26%
Freeland Borough	6,867	6,151	5,621	5,229	5,069	-1,246	-18.14%	-553	-9.83%
Hanover Township	630	656	627	597	577	-3	-0.48%	-51	-8.08%
Harveys Lake Borough	274	375	445	468	452	171		7	1.64%
Hazle Township	169	211	207	200	212	37	22.17%	5	2.59%
Hazleton City	5,061	4,544	4,114	3,870	4,215	-947	-18.72%	101	2.47%
Hollenback Township	745	1,130	1,346	1,396	1,343	601	80.69%	-2	-0.17%
Hughestown Borough	93	118	114	102	92	22	23.24%	-23	-19.72%
Hunlock Township	81	116	119	123	117	39	48.39%	-3	-2.12%
Huntington Township	52	67	66	72	77	13	25.49%	12	17.80%
Jackson Township	147	220	400	334	348	253	172.80%	-52	-12.93%
Jeddo Borough	627	453	478	510	347	-149	-23.73%	-131	-27.41%
Jenkins Township	233	324	340	329	319	107	45.76%	-21	-6.29%
Kingston Borough	8,400	7,188	6,650	6,351	6,042	-1,750	-20.83%	-607	-9.13%
Kingston Township	450	474	491	518	508	41	9.15%	17	3.49%
Laflin Borough	302	1,247	1,124	1,136	1,124	823	272.68%	0	0.00%
Lake Township	50	67	72	79	77	22	44.44%	5	6.50%
Larksville Borough	811	908	968	967	923	157	19.38%	-45	-4.68%
Laurel Run Borough	63	140	139	141	97	76	120.18%	-43	-30.56%
Lehman Township	96	131	131	138	151	35	36.77%	20	15.58%
Luzerne Borough	6,456	5,308	4,595	4,231	4,078	-1,860	-28.82%	-517	-11.26%
Nanticoke City	4,099	3,654	3,436	3,069	2,932	-663	-16.16%	-505	-14.69%
Nescopeck Borough	1,544	1,511	1,411	1,306	1,353	-133	-8.63%	-58	-4.12%
Nescopeck Township	38	45	58	59	62	20	51.41%	4	7.74%
New Columbus Borough	50	71	76	74	76	26	53.02%	0	-0.44%
Newport Township	349	290	267	291	313	-82	-23.48%	45	17.00%
Nuangola Borough	384	600	571	567	562	187	48.71%	-9	-1.59%
Penn Lake Park Borough	-	138	149	171	195	149		47	31.62%
Pittston City	6,456	5,769	5,454	4,708	4,496	-1,002	-15.51%	-959	-17.57%
Pittston Township	256	260	196	248	242	-60	-23.54%	46	23.60%
Plains Township	869	858	831	825	754	-37	-4.29%	-78	-9.35%
Plymouth Borough	8,081	6,445	6,046	5,514	5,043	-2,036	-25.19%	-1002	-16.58%
Plymouth Township	159	149	108	128	110	-51	-32.17%	2	2.20%
Pringle Borough	2,505	2,648	2,557	2,149	2,123	52	2.08%	-434	-16.96%
Rice Township	84	173	171	220	299	87	102.66%	128	74.88%
Ross Township	36	53	60	62	67	24	66.77%	6	10.62%
Salem Township	131	155	151	143	143	20	15.22%	-8	-5.09%
Shickshinny Borough	3,435	2,430	2,259	1,955	1,708	-1,176	-34.24%	-550	-24.37%
Slocum Township	86	101	117	109	111	31	36.36%	-5	-4.70%
Sugarloaf Township	91	143	157	163	188	67	73.66%	30	19.16%
Sugar Notch Borough	1,234	1,102	959	938	916	-275	-22.28%	-44	-4.54%
Swoyersville Borough	3,047	2,602	2,528	2,315	2,273	-519	-17.04%	-255	-10.09%
Union Township	62	91	100	104	101	38	61.85%	1	0.69%
Warrior Run Borough	1,087	1,045	885	845	778	-203	-18.63%	-107	-12.05%
West Hazleton Borough	4,047	3,253	2,762	2,366	3,068	-1,284	-31.74%	306	11.07%
West Pittston Borough	7,445	6,293	5,883	5,338	5,123	-1,562	-20.98%	-760	-12.92%
West Wyoming Borough	1,009	907	860	781	752	-149	-14.81%	-108	-12.58%
White Haven Borough	1,711	1,540	904	947	879	-806	-47.14%	-25	-2.75%
Wilkes-Barre City	20,421	17,886	16,489	14,962	14,398	-3,932	-19.26%	-2090	-12.68%
Wilkes-Barre Township	484	581	489	443	406	5	1.05%	-83	-16.94%
Wright Township	239	360	352	420	424	113	47.37%	73	20.62%
Wyoming Borough	2,676	2,332	2,077	2,055	1,960	-600	-22.41%	-116	-5.59%
Yatesville Borough	725	989	921	1,157	1,082	196	27.03%	160	17.41%

Housing Unit and Household Characteristics

The supply and occupancy status of existing housing stock was examined, along with data on household size, from 1980 through 2010. With an increase of 2.2 percent in new housing between 2000 and 2010, 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: 11.5%. This number contrasts to that for Lehigh County, for example, which had a vacancy rate of 5.7% in 2010. In 2010, Scranton had more than 4,500 vacant units, Wilkes-Barre, had 2,800 vacant units and Hazleton had 1,900 vacant units. All of these figures are increases from 2000. Overall, the entire 2-county area saw an increase of 5,000 vacant units from 2000 to 2010. Of the 5,200 new units added through new construction over the decade, 95 percent of that number were being left vacant over the same period (*Table 4.3.10*).

Lackawanna County had over 86,200 occupied housing units in 2010 while Luzerne County had roughly 130,900 occupied units that year. Between 2000 and 2010, owner occupancy status for the region decreased by 1,700 units or 1.1 percent. For Lackawanna County, the percentage of owner occupancy in 2010 was 66.1 percent of occupied housing units, with 33.9 percent renter occupancy. In Luzerne County, 70.0 percent of occupied units had an owner occupancy and 30.0 percent had renter occupancy.

Table 4.3.9

Housing Units in Structure, Two-County Area, 1990-2010

Source: U.S. Census Bureau (2000 Decennial Census) & American Community Survey (2010)

Housing Units by Units in Structure, Bi-County Area 2000-2010					
Housing Units, Luzerne County					
	No. of Units		**% of Units**		**% Change (2000-2010)**
Units in Structure	**2000**	**2010**	**2000**	**2010**	
Total Housing Units	144,686	148,515	100.0%	100.0%	2.6%
1 - Unit Detached	88,406	92,955	61.1%	62.6%	5.1%
1 - Unit Attached	17,468	19,784	12.1%	13.3%	13.3%
2-4 Units	20,683	18,545	14.3%	12.5%	-10.3%
5 + Units	12,208	12,005	8.4%	8.1%	-1.7%
Mobile Home, Boat, RV, Van, etc	5,924	5,226	4.1%	3.5%	-11.8%
Housing Units, Lackawanna County					
	No. of Units		**% of Units**		**% Change (2000-2010)**
Units in Structure	**2000**	**2010**	**2000**	**2010**	
Total Housing Units	95,362	96,771	100.0%	100.0%	1.5%
1 - Unit Detached	57,277	60,479	60.1%	62.5%	5.6%
1 - Unit Attached	3,930	5,311	4.1%	5.5%	35.1%
2-4 Units	23,154	20,348	24.3%	21.0%	-12.1%
5 + Units	8,262	8,190	8.7%	8.5%	-0.9%
Mobile Home, Boat, RV, Van, etc	2,739	2,443	2.9%	2.5%	-10.8%
Housing Units, Bi County					
	No. of Units		**% of Units**		**% Change (2000-2010)**
Units in Structure	**2000**	**2010**	**2000**	**2010**	
Total Housing Units	240,048	245,286	100.0%	100.0%	2.2%
1 - Unit Detached	145,683	153,434	60.7%	62.6%	5.3%
1 - Unit Attached	21,398	25,095	8.9%	10.2%	17.3%
2-4 Units	43,837	38,893	18.3%	15.9%	-11.3%
5 + Units	20,470	20,195	8.5%	8.2%	-1.3%
Mobile Home, Boat, RV, Van, etc	8,663	7,669	3.6%	3.1%	-11.5%

Table 4.3.10

Occupancy Status, Pennsylvania, Two-County Area, 2000-2010

Source: U.S. Census Bureau (2000 & 2010 Decennial Census)

Occupancy Status, 2000-2010

	Pennsylvania		Bi-County Area		Luzerne County		Lackawanna County	
	2000	2010	2000	2010	2000	2010	2000	2010
Total:	5,249,750	5,537,308	240,048	245,286	144,686	148,515	95,362	96,771
Occupied	4,777,003	4,940,581	216,905	217,173	130,687	130,855	86,218	86,318
Vacant	472,747	596,727	23,143	28,113	13,999	17,660	9,144	10,453

	2000-2010		2000-2010		2000-2010		2000-2010	
	Change	Percent	Change	Percent	Change	Percent	Change	Percent
Total:	287,558	5.48%	5,238	2.18%	3,829	2.65%	1,409	1.48%
Occupied	163,578	3.42%	268	0.12%	168	0.13%	100	0.12%
Vacant	123,980	26.23%	4,970	21.48%	3,661	26.15%	1,309	14.32%

	Pennsylvania		Bi-County Area		Luzerne County		Lackawanna County	
	2000	2010	2000	2010	2000	2010	2000	2010
Total:	4,777,003	4,940,581	216,905	217,173	130,687	130,855	86,218	86,318
Owner occupied	3,406,337	3,508,612	150,157	148,538	91,914	91,484	58,243	57,054
Renter occupied	1,370,666	1,431,969	66,748	68,635	38,773	39,371	27,975	29,264

	2000-2010		2000-2010		2000-2010		2000-2010	
	Change	Percent	Change	Percent	Change	Percent	Change	Percent
Total:	163,578	3.42%	268	0.12%	168	0.13%	100	0.12%
Owner occupied	102,275	3.00%	-1,619	-1.08%	-430	-0.47%	-1,189	-2.04%
Renter occupied	61,303	4.47%	1,887	2.83%	598	1.54%	1,289	4.61%

	Pennsylvania		Bi-County Area		Luzerne County		Lackawanna County	
	2000	2010	2000	2010	2000	2010	2000	2010
Total:	472,747	548,411	23,143	26,422	9,144	16,816	13,999	9,606
For rent	105,585	135,262	6,411	6,336	2,666	3,887	3,745	2,449
For sale only	55,891	64,818	2,865	3,272	1,121	2,184	1,744	1,088
Rented or sold, not occupied	37,494	29,517	2,110	1,436	554	934	1,556	502
For seasonal, recreational, or occasional use	148,230	161,582	4,432	5,448	1,915	3,412	2,517	2,036
Other vacant	125,161	157,232	7,318	9,930	2,888	6,399	4,430	3,531

	2000-2010		2000-2010		2000-2010		2000-2010	
	Change	Percent	Change	Percent	Change	Percent	Change	Percent
Total:	75,664	16.01%	3,279	14.17%	7,672	83.90%	-4,393	-31.38%
For rent	29,677	28.11%	-75	-1.17%	1,221	45.80%	-1,296	-34.61%
For sale only	8,927	15.97%	407	14.21%	1,063	94.83%	-656	-37.61%
not occupied	-7,977	-21.28%	-674	-31.94%	380	68.59%	-1,054	-67.74%
For seasonal, recreational, or occasional use	13,352	9.01%	1,016	22.92%	1,497	78.17%	-481	-19.11%
Other vacant	32,071	25.62%	2,612	35.69%	3,511	121.57%	-899	-20.29%

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 2.7 persons per household in 1980 to 2.35 persons per household in 2010 (***Figure 4.3.5***). This number has been steadily declining for both counties, as well as statewide from 1980 to 2000; however, from 2000 to 2010 the numbers are relatively unchanged. (***Table 4.3.11***)

Figure 4.3.5
Average Persons per Household, United States, Pennsylvania, and Region, 1980-2010
Source: U.S. Census Bureau (1990 & 2000 Decennial Census),
University of Virginia Library Geospatial and Statistical Data Center

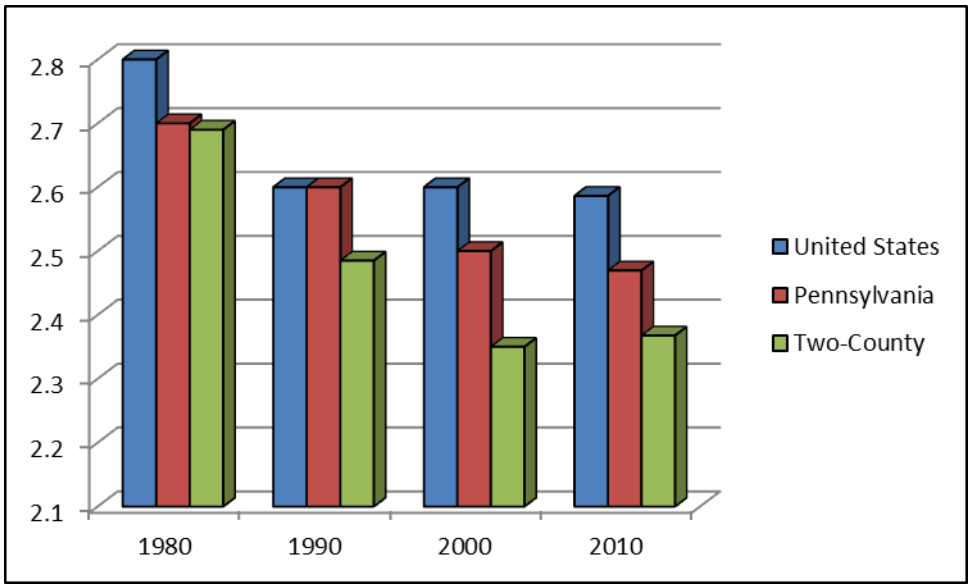
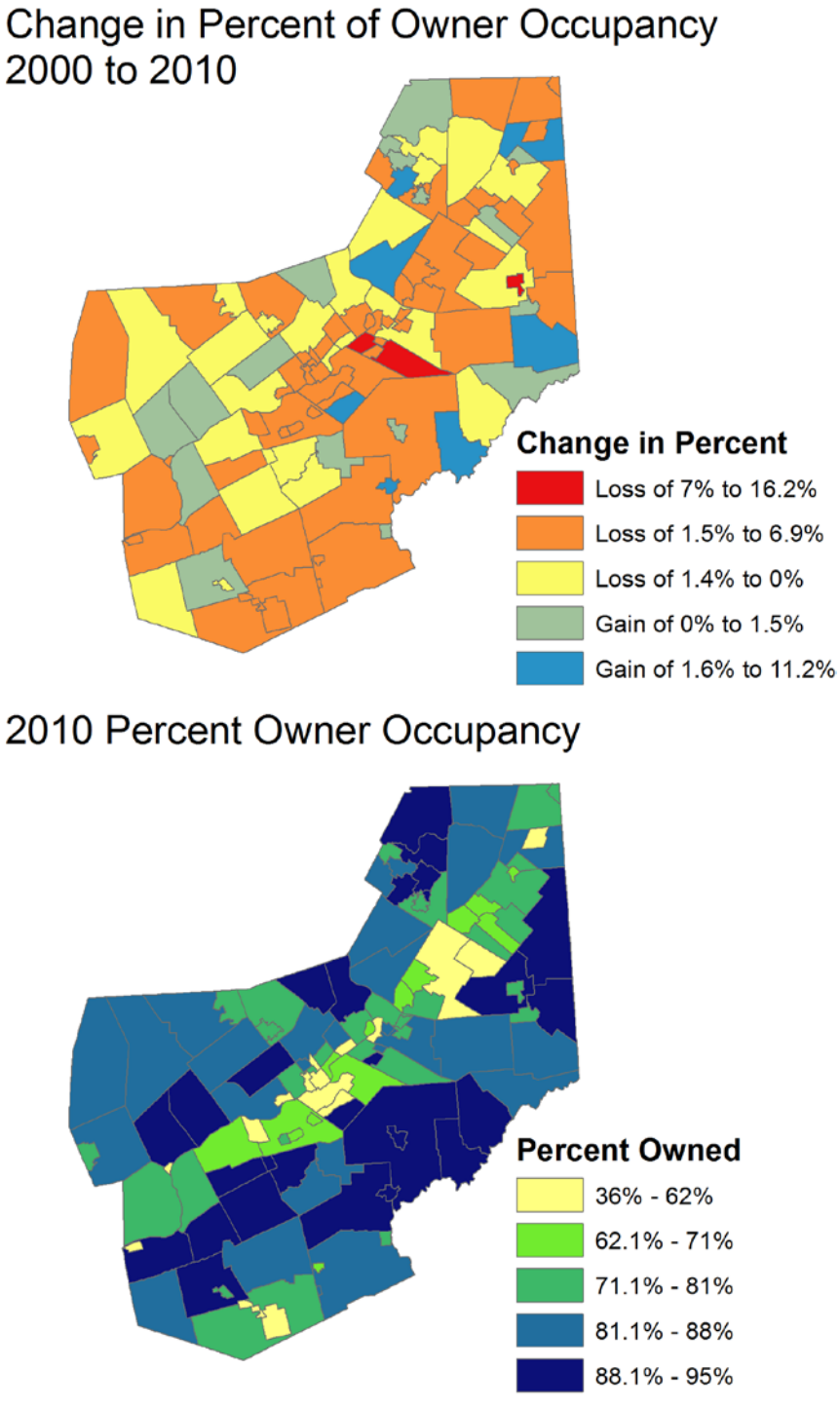


Figure 4.3.6
Percent (2010) and Change (2000-2010) in Owner Occupancy



Source: Census Bureau (2000 and 2010 Decennial Census)
Data Universe: Occupied Housing Units

Table 4.3.11

Households, Persons per Household, Percent Change Two-County Area, 1980-2010

Source: U.S. Census Bureau (1980-2010 Decennial Census)

Households and Persons per Household, Bi-County 1980-2010				
Population in Households				
	1980	**1990**	**2000**	**2010**
Luzerne County	335,735	317,568	306,387	309,127
Lackawanna County	221,727	211,738	205,460	206,374
Bi-County Area	557,462	529,306	511,847	515,501
Pennsylvania	11,566,626	11,881,643	11,847,607	12,276,266
United States	220,796,157	242,012,129	273,643,273	300,758,215
HOUSEHOLDS				
Luzerne County	125,502	128,483	130,687	131,932
Lackawanna County	82,056	84,528	86,218	87,226
Bi-County Area	207,558	213,011	216,905	219,158
Pennsylvania	4,219,606	4,495,966	4,777,003	5,018,904
United States	80,389,673	91,947,410	105,480,101	116,716,292
PERSONS PER HOUSEHOLDS				
Luzerne County	2.7	2.5	2.3	2.4
Lackawanna County	2.7	2.5	2.4	2.4
Bi-County Area	2.7	2.5	2.4	2.4
Pennsylvania	2.7	2.6	2.5	2.5
United States	2.8	2.6	2.6	2.6
Population in Households - Percent Changes				
		1980-1990	**1990-2000**	**2000-2010**
Luzerne County		-5.4%	-3.5%	0.9%
Lackawanna County		-4.5%	-3.0%	0.4%
Bi-County Area		-5.1%	-3.3%	0.7%
Pennsylvania		2.7%	-0.3%	3.6%
United States		9.6%	13.1%	9.9%
HOUSEHOLDS				
Luzerne County		2.4%	1.7%	1.0%
Lackawanna County		3.0%	2.0%	1.2%
Bi-County Area		2.6%	1.8%	1.0%
Pennsylvania		6.5%	6.3%	5.1%
United States		14.4%	14.7%	10.7%
PERSONS PER HOUSEHOLDS				
Luzerne County		-7.8%	-6.9%	2.9%
Lackawanna County		-7.4%	-4.0%	-1.2%
Bi-County Area		-7.6%	-5.4%	0.8%
Pennsylvania		-3.7%	-3.8%	-1.2%
United States		-7.1%	0.0%	-0.5%

Income Characteristics

Household income for 2010 in the two-county area is presented in ***Table 4.3.12*** and ***Table 4.3.13***. The median household income was $43,673 in Lackawanna County and $42,224 in Luzerne County. For the State of Pennsylvania, median household income was $50,398 and for the nation it was $51,914.

Most households were in the $50,000 to $74,999 bracket, with a total of 41,126 households (18.9%) in the two-county area, followed by the $35,000 to $49,999 bracket with 31,954 (14.7%) of households. Over 33,000 households earned less than $15,000 annually. (***Figure 4.3.7)***

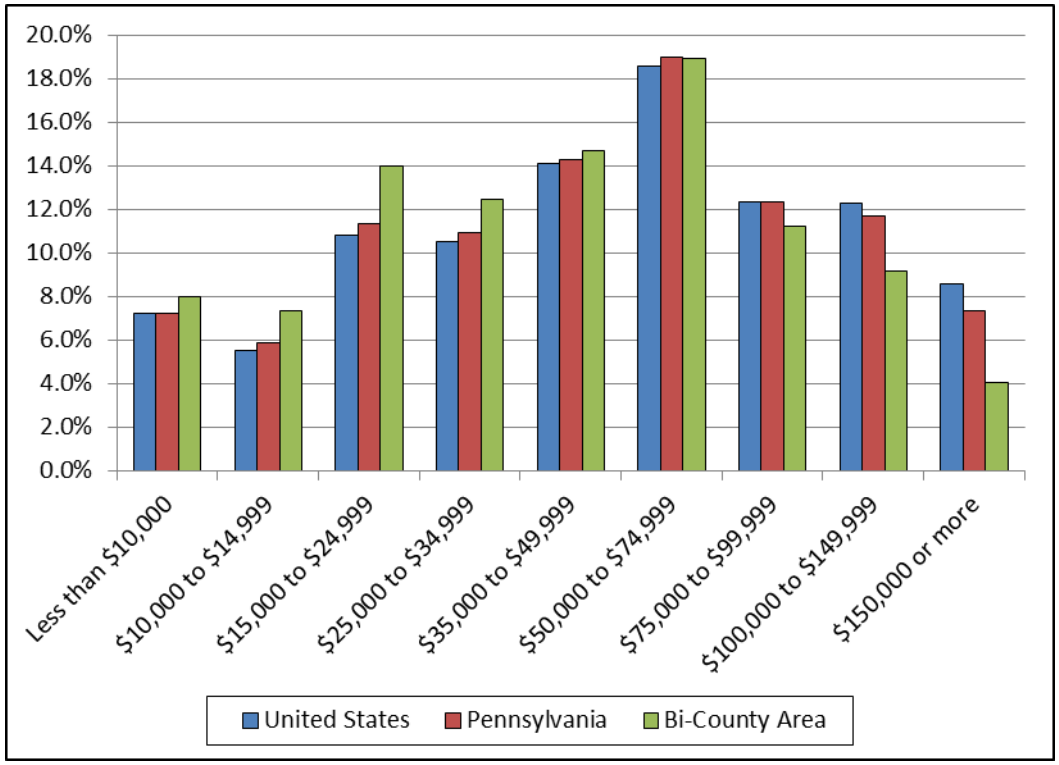
Table 4.3.12
Household Income in Absolute Value, Lackawanna County, Luzerne County, Two-County Area, State and Nation, 2010
Source: U.S. Census Bureau (2000, 2010 Decennial Census)

Household Income, Absolute Value, 2010					
	Luzerne County	Lackawanna County	Bi-County Area	Pennsylvania	United States
Total:	130,855	86,318	217,173	4,940,581	114,235,996
Less than $10,000	10,695	6,705	17,400	358,330	8,274,388
$10,000 to $14,999	10,290	5,736	16,026	289,547	6,294,748
$15,000 to $24,999	18,204	12,233	30,437	559,425	12,340,738
$25,000 to $34,999	16,622	10,453	27,075	539,934	12,043,840
$35,000 to $49,999	19,162	12,792	31,954	705,090	16,132,902
$50,000 to $74,999	25,091	16,035	41,126	938,866	21,201,711
$75,000 to $99,999	14,588	9,836	24,424	610,403	14,097,295
$100,000 to $149,999	11,297	8,582	19,879	577,062	14,065,756
$150,000 or more	4,906	3,946	8,852	361,924	9,784,618
Median household income in 2010	$42,224	$43,673	$42,949	$50,398	$51,914
Median household income in 1999	$33,771	$34,438	$34,036	$40,106	$41,994

Table 4.3.13
Household Income in Percent,
Lackawanna County, Luzerne County, Bi-County Area, State and Nation, 2010
Source: U.S. Census Bureau (2010 Decennial Census)

Household Income, Percent, 2010					
	Luzerne County	Lackawanna County	Bi-County Area	Pennsylvania	United States
Total:	100%	100%	100%	100%	100%
Less than $10,000	8.17%	7.77%	8.01%	7.25%	7.24%
$10,000 to $14,999	7.86%	6.65%	7.38%	5.86%	5.51%
$15,000 to $24,999	13.91%	14.17%	14.02%	11.32%	10.80%
$25,000 to $34,999	12.70%	12.11%	12.47%	10.93%	10.54%
$35,000 to $49,999	14.64%	14.82%	14.71%	14.27%	14.12%
$50,000 to $74,999	19.17%	18.58%	18.94%	19.00%	18.56%
$75,000 to $99,999	11.15%	11.40%	11.25%	12.35%	12.34%
$100,000 to $149,999	8.63%	9.94%	9.15%	11.68%	12.31%
$150,000 or more	3.75%	4.57%	4.08%	7.33%	8.57%

Figure 4.3.7
Percent of Household Income
Bi-County Area, Pennsylvania, and United States, 2010
Source: U.S. Census Bureau



Employment Characteristics

There were 248,023 persons employed in the two-county area in 2010, with 100,737 employed people in Lackawanna County and 147,286 employed individuals in Luzerne County. This was an increase of 8,241 employed persons in the two-county area since 2000. However, the region also experienced an increase in the unemployment percentage from 5.9 percent to 10.6, with a total number of 18,020 unemployed civilians, an increase of 4,322 individuals since 2000. (*Table 4.3.14*) (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 2010 (*Table 4.3.15* and *Figure 4.3.8*) showed a distribution of jobs by sector for the two-county area that emphasizes educational, health, and social services (25.1% of all jobs), followed by manufacturing (13.0%), and retail trade (13.3%). Of the preceding three, only education, health and social services have increased significantly in numbers of employees since 2000, adding 8,012 individuals over the decade. Agriculture, forestry, hunting, and mining (0.6%) for 2000 was the smallest sector, with 1,280 employees across the two-county area, a 16 percent decrease since 2000.

Table 4.3.14
Change in Population Employed, Two-County Area, 2000-2010
Source: U.S. Census Bureau (2000-2010 Decennial Census)

Bi-County				
	2000	2010	Change	
	Number	Number	Number	Percent
TOTAL EMPLOYED	239,782	248,023	8,241	3.44%
TOTAL UNEMPLOYED	13,698	18,020	4,322	31.55%

Table 4.3.15
Employment by Industry,
Lackawanna County, Luzerne County and Region, 2010
Source: American Community Survey (2010)

Employment by Industry, 2010						
	Luzerne County		Lackawanna County		Bi-County	
	Number	Percent	Number	Percent	Number	Percent
TOTAL EMPLOYED INDUSTRY	147,286	100.00%	100,737	100.00%	248,023	100%
Agriculture, forestry, fishing, hunting & mining	901	0.61%	379	0.38%	1,280	0.5%
Construction	8,148	5.53%	5,389	5.35%	13,537	5.5%
Manufacturing	20,108	13.65%	12,253	12.16%	32,361	13.0%
Wholesale trade	5,563	3.78%	3,331	3.31%	8,894	3.6%
Retail trade	20,153	13.68%	12,850	12.76%	33,003	13.3%
Transportation, warehousing & utilities	8,660	5.88%	5,287	5.25%	13,947	5.6%
Information	3,887	2.64%	2,046	2.03%	5,933	2.4%
Finance, insurance, real estate & rentals/leasing	8,310	5.64%	6,449	6.40%	14,759	6.0%
Professional, scientific, management, administrative & waste	10,845	7.36%	6,944	6.89%	17,789	7.2%
Educational, health & social services	34,934	23.72%	27,249	27.05%	62,183	25.1%
Arts, entertainment, recreation, accommodation & food services	11,815	8.02%	7,835	7.78%	19,650	7.9%
Other services	6,041	4.10%	4,564	4.53%	10,605	4.3%
Public Administration	7,921	5.38%	6,161	6.12%	14,082	5.7%

Figure 4.3.8
Employment by Industry, Lackawanna and Luzerne Counties, 2010
Source: American Community Survey (2010)

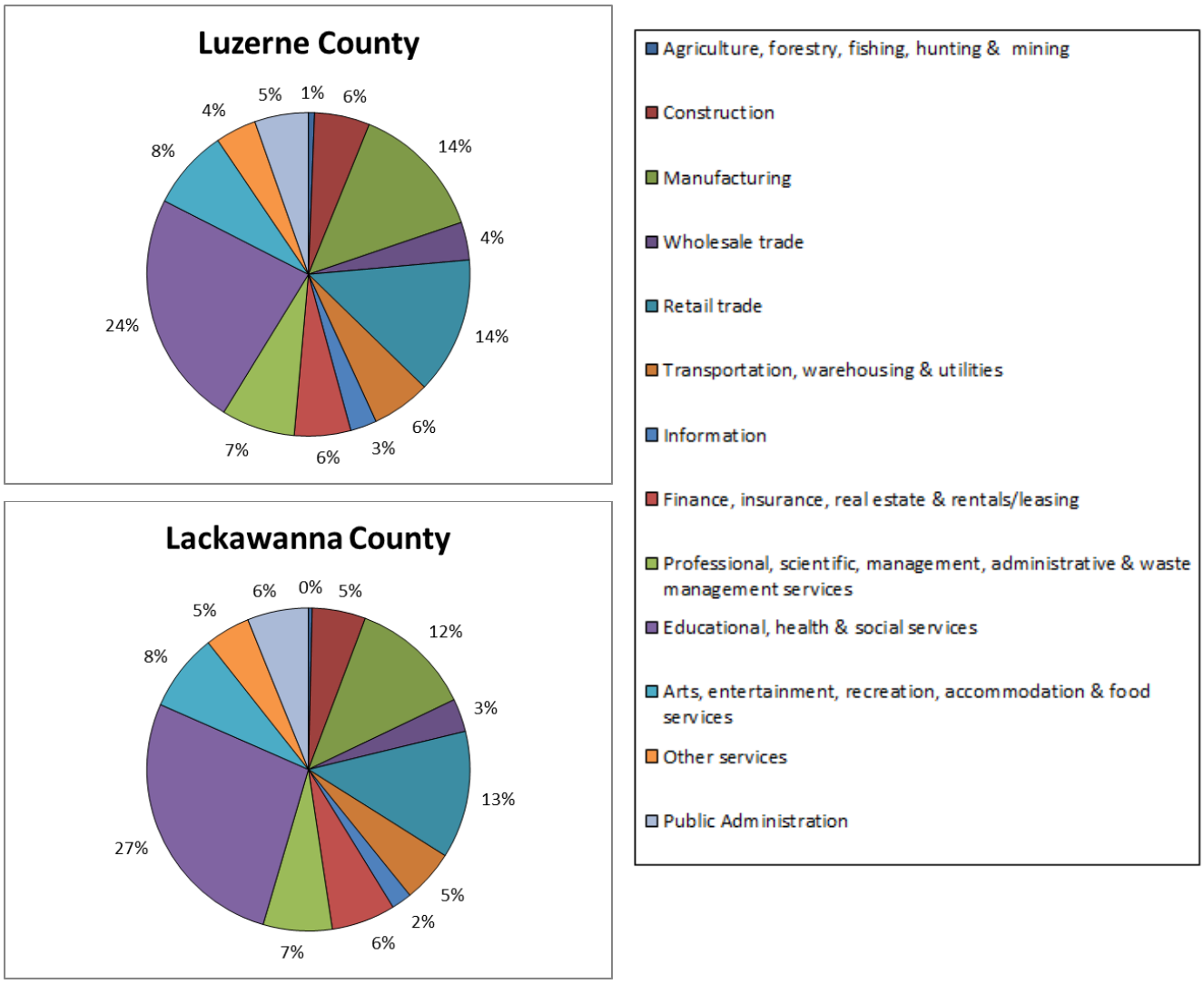


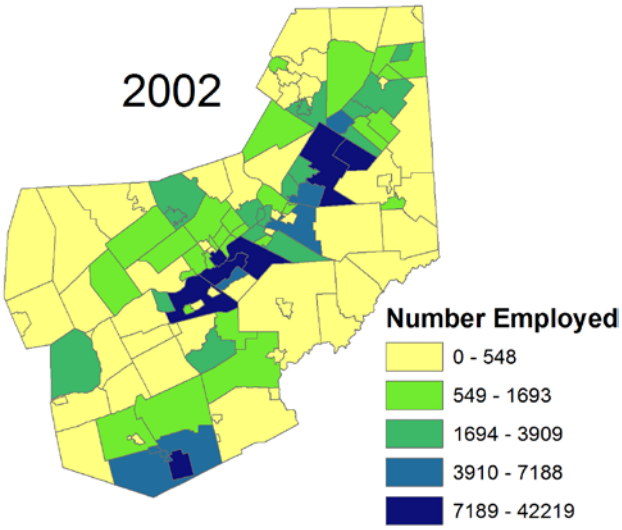
Table 4.3.16
Means of Transportation, Journey to Work, Lackawanna County, Luzerne County, Bi-County Area, 2010
Source: American Community Survey (2010)

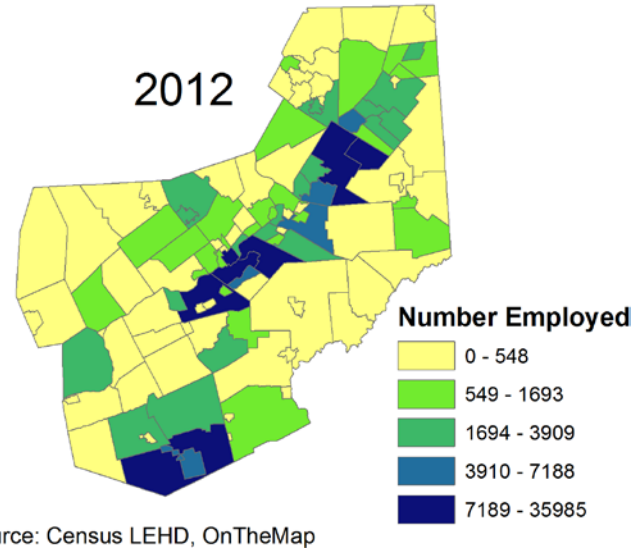
Means of Transportation, Journey to Work, Bi-County Area, 2010		
Luzerne County		
	Number	**Percent**
Total Workers Age 16+	**143,079**	**100.0%**
Car, Truck, or Van:	132,205	92.4%
Drove Alone	116,037	81.1%
Carpooled	16,168	11.3%
Public Transportation	1,431	1.0%
Bicycle	286	0.2%
Walked	4,579	3.2%
Other Means	858	0.6%
Worked at Home	3,720	2.6%
Lackawanna County		
	Number	**Percent**
Total Workers Age 16+	**94,532**	**100.0%**
Car, Truck, or Van:	86,024	91.0%
Drove Alone	75,247	79.6%
Carpooled	10,777	11.4%
Public Transportation	1,323	1.4%
Bicycle	189	0.2%
Walked	3,687	3.9%
Other Means	567	0.6%
Worked at Home	2,741	2.9%
Bi-County Region		
	Number	**Percent**
Total Workers Age 16+	**237,611**	**100.0%**
Car, Truck, or Van:	218,229	91.8%
Drove Alone	191,285	80.5%
Carpooled	26,945	11.3%
Public Transportation	2,754	1.2%
Bicycle	475	0.2%
Walked	8,265	3.5%
Other Means	1,426	0.6%
Worked at Home	6,461	2.7%

Journey to work information is shown in **Table 4.3.16.** The means of transportation or journey to work in 2010 indicated that 91.8 percent of workers above the age of 16 commuted by private vehicle (car, truck, or van). Of this amount, 11.3 percent or 26,945 out of 237,611 individuals carpooled. Public transportation in Lackawanna and Luzerne Counties totaled 2,754 journey-to-work riders or roughly 1.2 percent of the two-county area's workforce. Over 8,000 individuals walked to work (3.5%) and 6,461 or 2.7 percent worked from home. Commuting by bicycle amounted to 475 individuals or 0.2 percent of the total workforce.

Figure 4.3.9 illustrates the distribution of employed people within the two-county area in 2002 and 2012. In Lackawanna County, employment tends to be concentrated along the lower half of the Lackawanna Valley. In Luzerne County the majority of employed individuals work along the central portions of the Susquehanna River Valley (with highest concentrations in Wiles-Barre Township), along the Route 309 corridor north of Kingston Borough, and in the Greater Hazleton Area in the southern portion of the county. The distribution of employed persons remained largely unchanged from 2002 to 2012 in both Lackawanna and Luzerne County.

Figure 4.3.9
Locations Where People Work, 2002 & 2012





Source: Census LEHD, OnTheMap

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
Data from 2011 Plan

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
Data from 2011 Plan

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
Data from 2011 Plan

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 Geisinger Health System. Major health systems in Luzerne County include Greater Hazleton Health Alliance, Geisinger Health System, and Commonwealth 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 Wyoming Avenue (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
Data from 2011 Plan

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
Data from 2011 Plan

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
Data from 2011 Plan

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
Data from 2011 Plan

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
Data from 2011 Plan

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
Data from 2011 Plan

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.

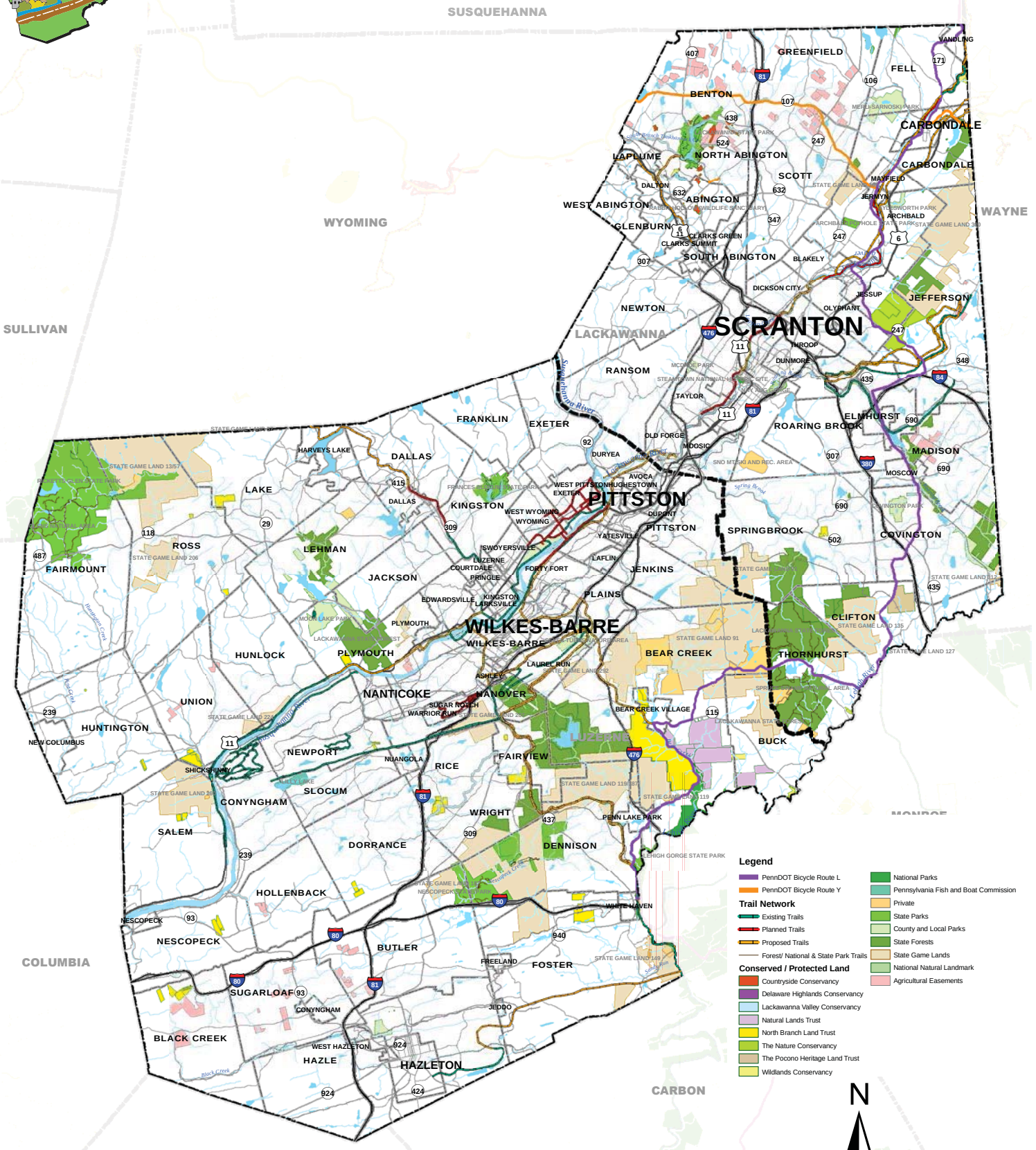
State Game Lands

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.

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

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

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Data from 2011 Plan

Table 4.5.2
State Game Lands in the Two-County Area
Data from 2011 Plan

LACKAWANNA COUNTY	Acres	*LUZERNE COUNTY*	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
Data from 2011 Plan

LACKAWANNA 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
Data from 2011 Plan

TWO-COUNTY AREA		
Trail	**Location**	**Acres**
Countryside Trail	Abington	6 Miles
Ashley Planes Heritage Park	Ashley Borough and Hanover Twp.	*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

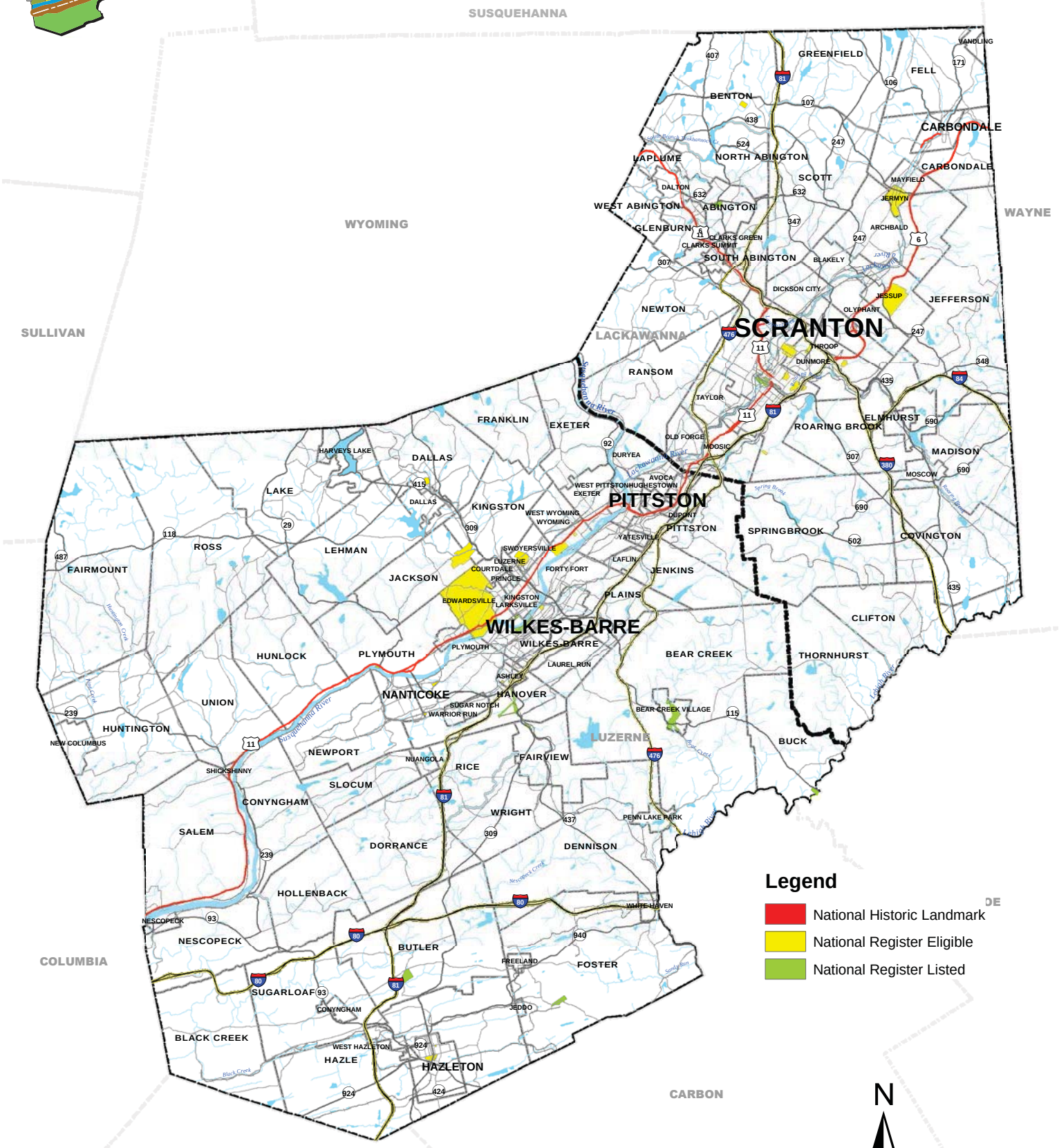
Economic success continued into the beginning of the twentieth century. By the 1930s, however, labor strikes, the exploitation of oil discoveries, and the decline of local steelmaking during the Depression, took a large toll on the two counties' economy. Local industrial production increased during World 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*.

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

HISTORIC FEATURES

Figure 4.6.1



Data from 2011 Plan

September, 2008
Source: CRGIS, Pennsylvania Historical & Museum Commission Bureau for Historic Preservation.

Table 4.6.1
Historic Properties and Districts as of March 23, 2011
Data from 2011 Plan

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

Table 4.6.1 Historic Properties and Districts continued

Historical Property Name	Municipality	County
National Register Eligible		
Clark Property	Scranton	Lackawanna
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

Table 4.6.1 Historic Properties and Districts continued		
Historical Property Name	**Municipality**	**County**
National Register Eligible		
Scranton Technical High School	Scranton	Lackawanna
Scranton Tribune Building	Scranton	Lackawanna
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

Table 4.6.1 Historic Properties and Districts continued		
Historical Property Name	**Municipality**	**County**
National Register Eligible		
Liebowitz, S. & Son Shirt Factory	Hazleton	Luzerne
Pioneer Fire Company No. 1	Hazleton	Luzerne
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

Table 4.6.1 Historic Properties and Districts continued		
Historical Property Name	**Municipality**	**County**
National Register Eligible		
Lehigh & Wilkes-Barre Coal Company Building	Wilkes Barre	Luzerne
Lehigh Valley Railroad: Wilkes-Barre Section	Wilkes Barre	Luzerne
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

Table 4.6.1 Historic Properties and Districts continued		
Historical Property Name	**Municipality**	**County**
National Register Listed		
Bear Creek Village Historic District	Bear Creek Village	Luzerne
Stoddartsville Historic District	Buck	Luzerne
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
Data from 2011 Plan

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
Data from 2011 Plan

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%

Lackawanna-Luzerne Transportation Study
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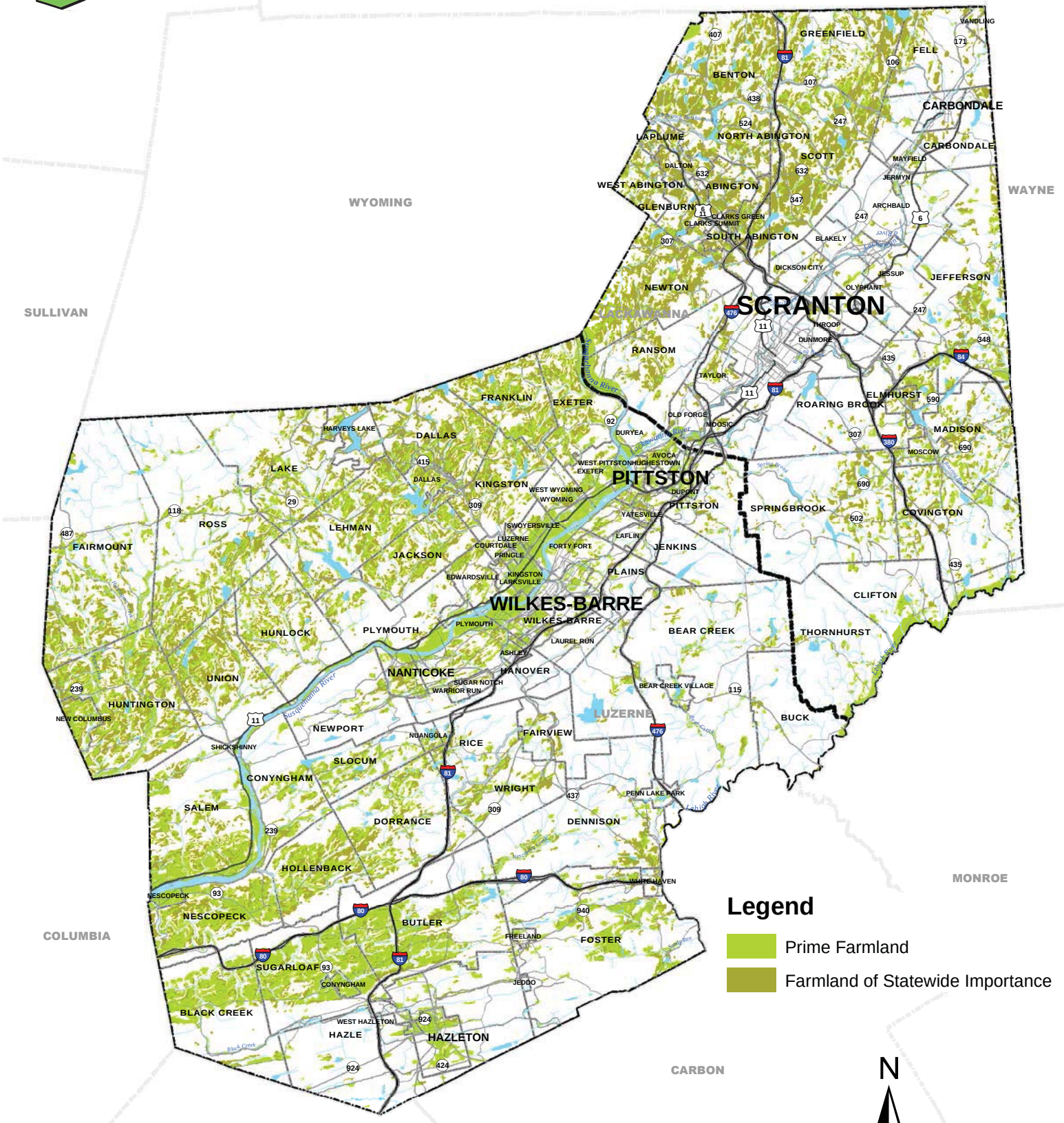
AGRICULTURAL LANDS

Figure 4.7.1



Legend

- Prime Farmland
- Farmland of Statewide Importance

N

0 1 2 4 6 8 Miles

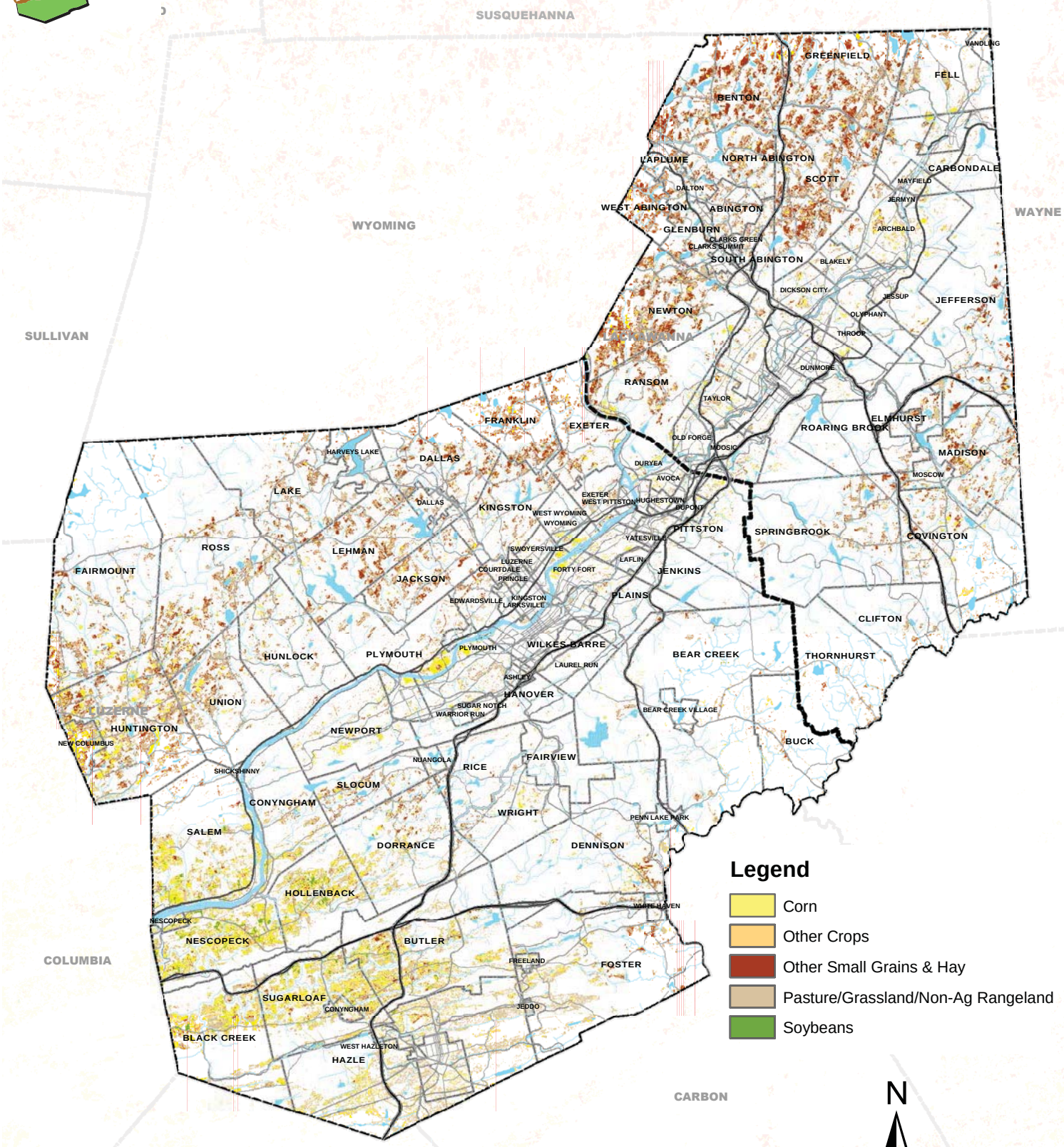
Data from 2011 Plan

September 2008
Source: Luzerne/Lackawanna County Open Space Plan, Lackawanna County Conservation District & Luzerne County Planning Commission

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

AGRICULTURAL LAND COVER AND CROPLAND TYPES

Figure 4.7.2



Legend

- Corn
- Other Crops
- Other Small Grains & Hay
- Pasture/Grassland/Non-Ag Rangeland
- Soybeans

N

0 1 2 4 6 8
Miles

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

McCORMICK TAYLOR

Data from 2011 Plan

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.

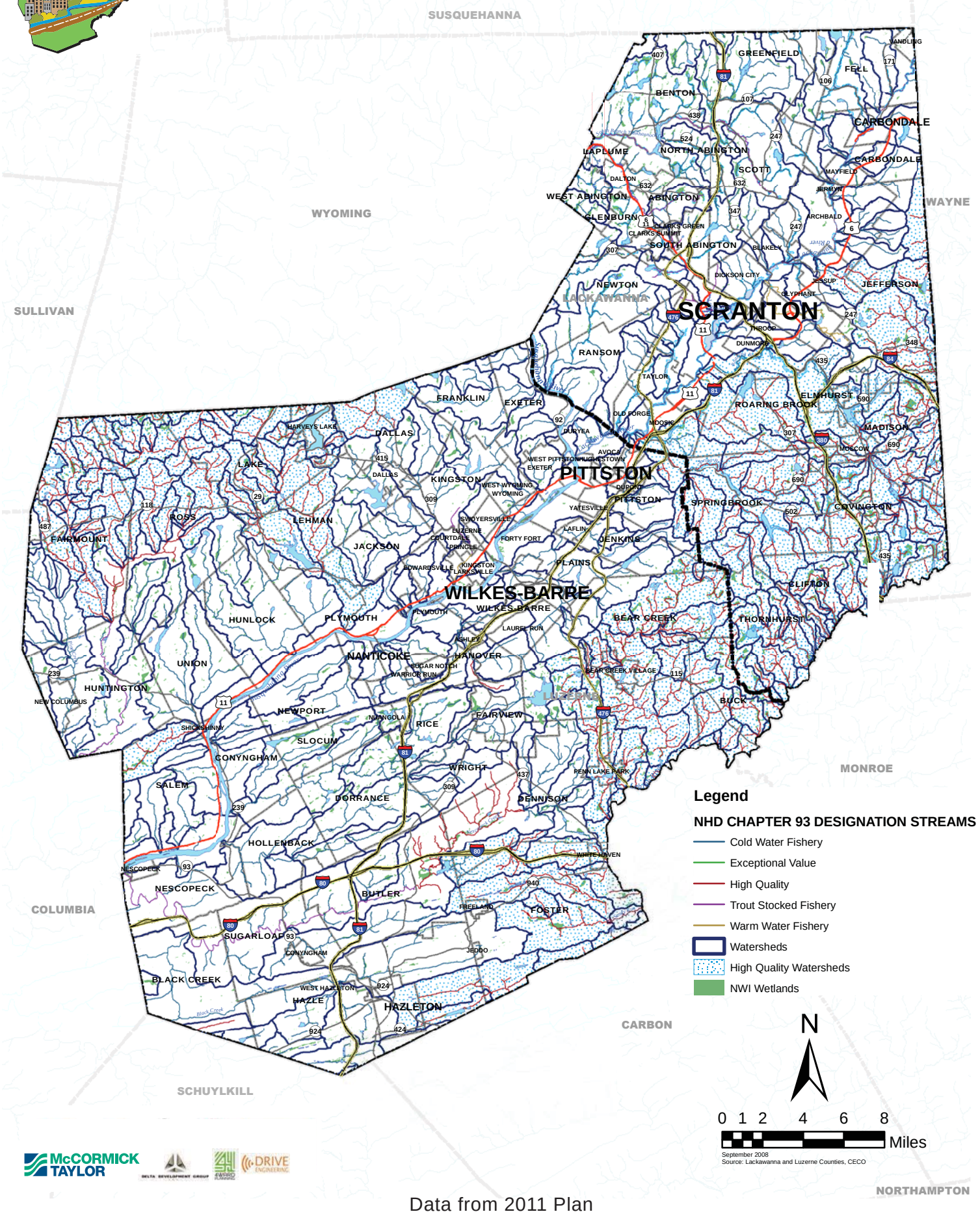
Hydrology

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***).

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

HYDROLOGIC FEATURES

Figure 4.8.1



Legend

NHD CHAPTER 93 DESIGNATION STREAMS

- Cold Water Fishery
- Exceptional Value
- High Quality
- Trout Stocked Fishery
- Warm Water Fishery
- Watersheds
- High Quality Watersheds
- NWI Wetlands

N

0 1 2 4 6 8 Miles

September 2008
Source: Lackawanna and Luzerne Counties, CECO

McCORMICK TAYLOR · DELTA DEVELOPMENT GROUP · DRIVE ENGINEERING

Data from 2011 Plan

Table 4.8.1 Major Streams in the Two-County Area
Source: Bi-County Open Space, Greenways & Outdoor Recreation Master Plan
Data from 2011 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 loss 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 to 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 represented by 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.

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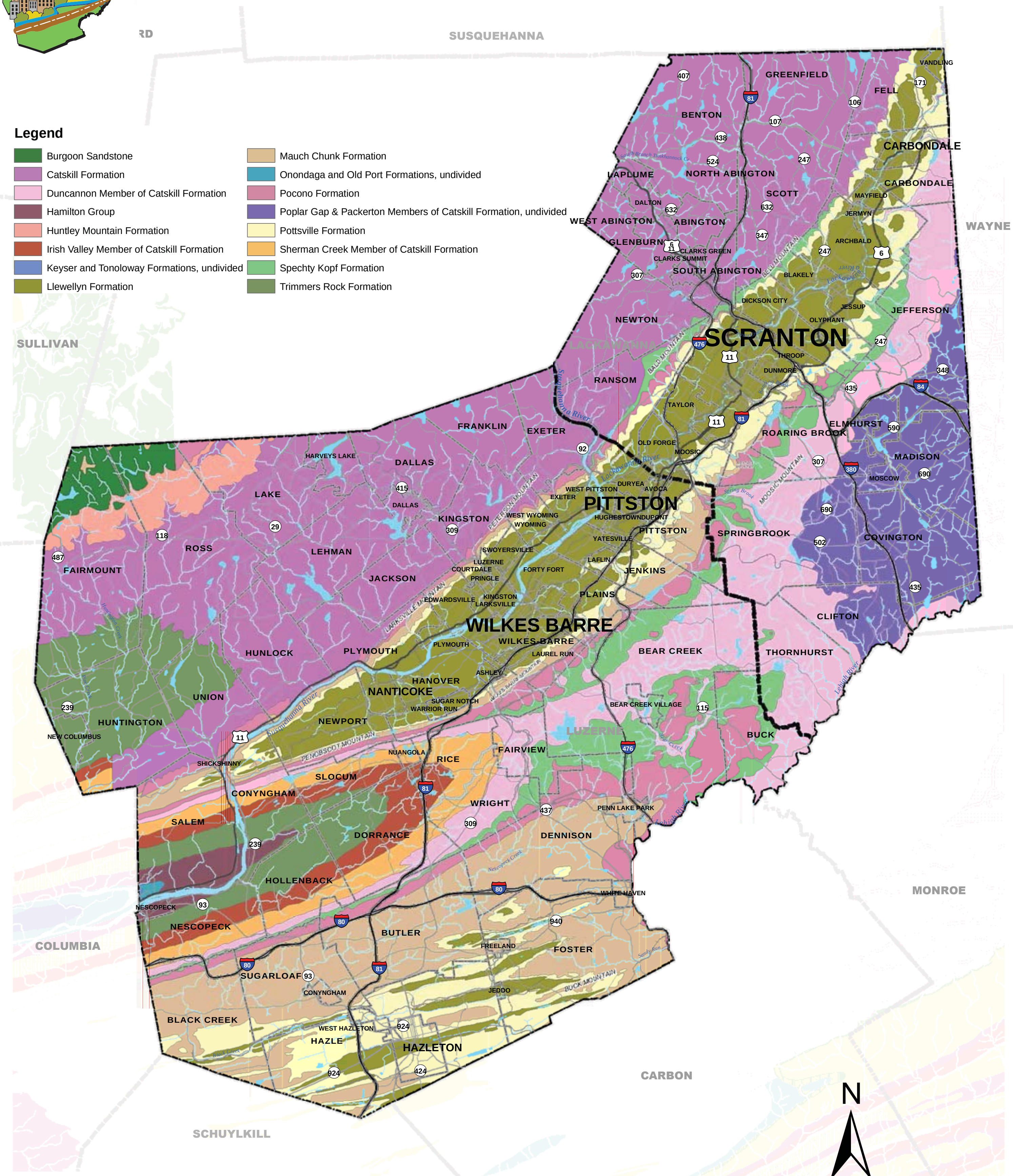
GEOLOGY

Figure 4.8.2



September 2007

Source: Pennsylvania Bureau of Topographic and Geologic Survey, Department of Conservation and Natural Resources, 2001

McCORMICK TAYLOR

Data from 2011 Plan

Figure 4.8.2a Geology

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.

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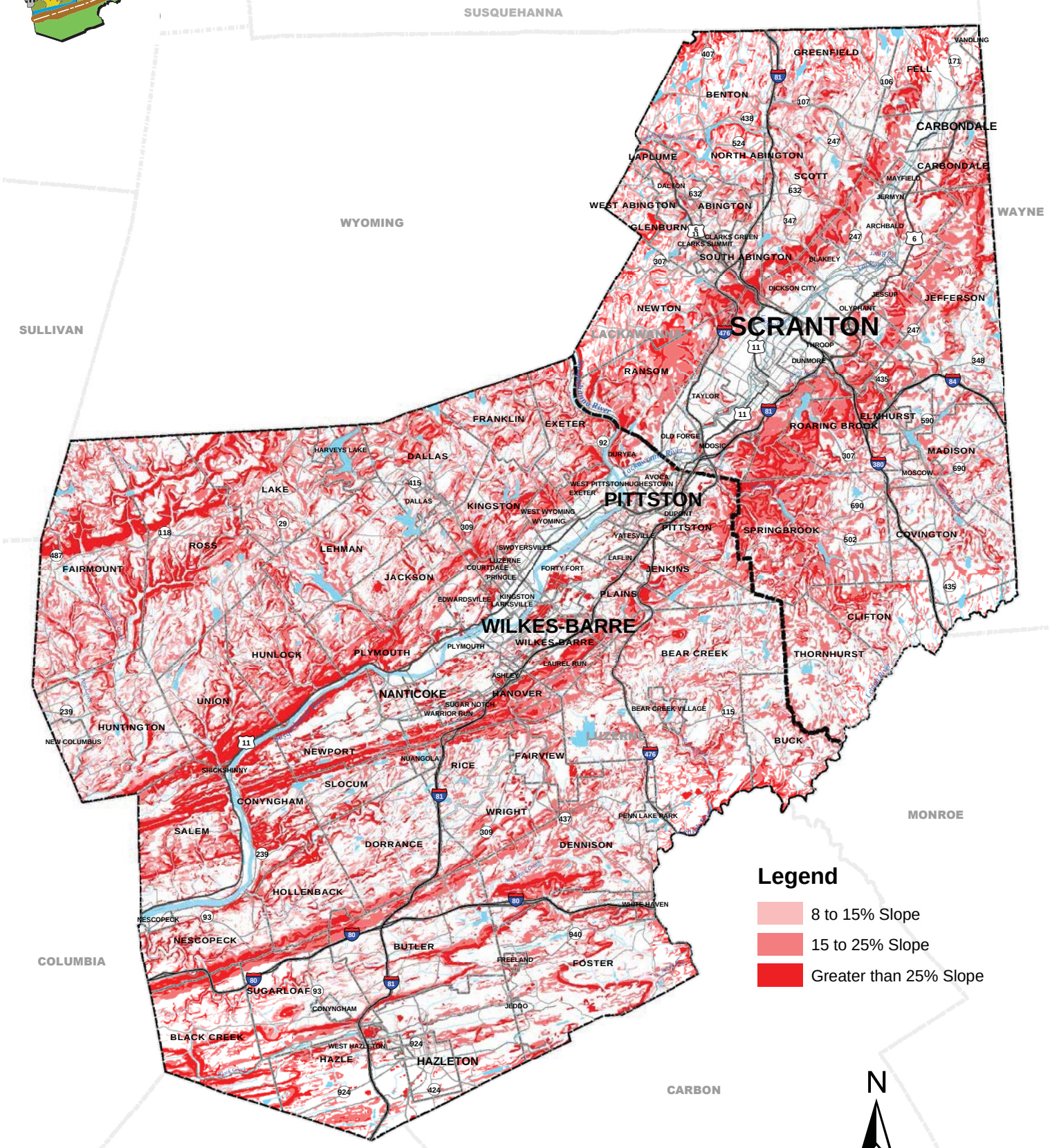
STEEP SLOPES

Figure 4.8.3



Legend

- 8 to 15% Slope
- 15 to 25% Slope
- Greater than 25% Slope

N

0 1 2 4 6 8 Miles

March 2008
Source: U.S. Department of Agriculture, Natural Resources Conservation Service
Soil Survey Geographic (SSURGO) database

McCORMICK TAYLOR

Data from 2011 Plan

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.

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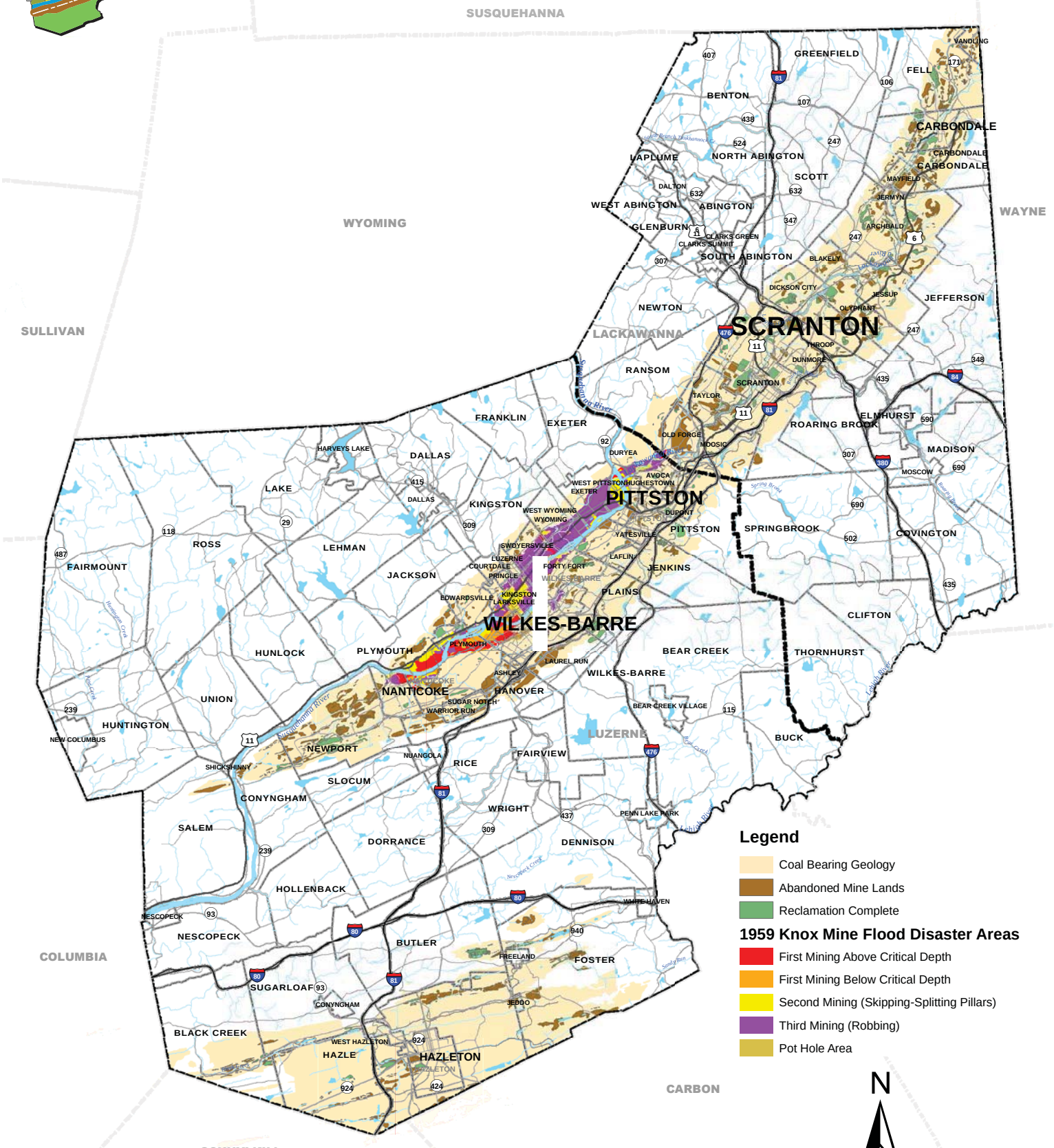
MINING LANDS

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

Data from 2011 Plan

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.

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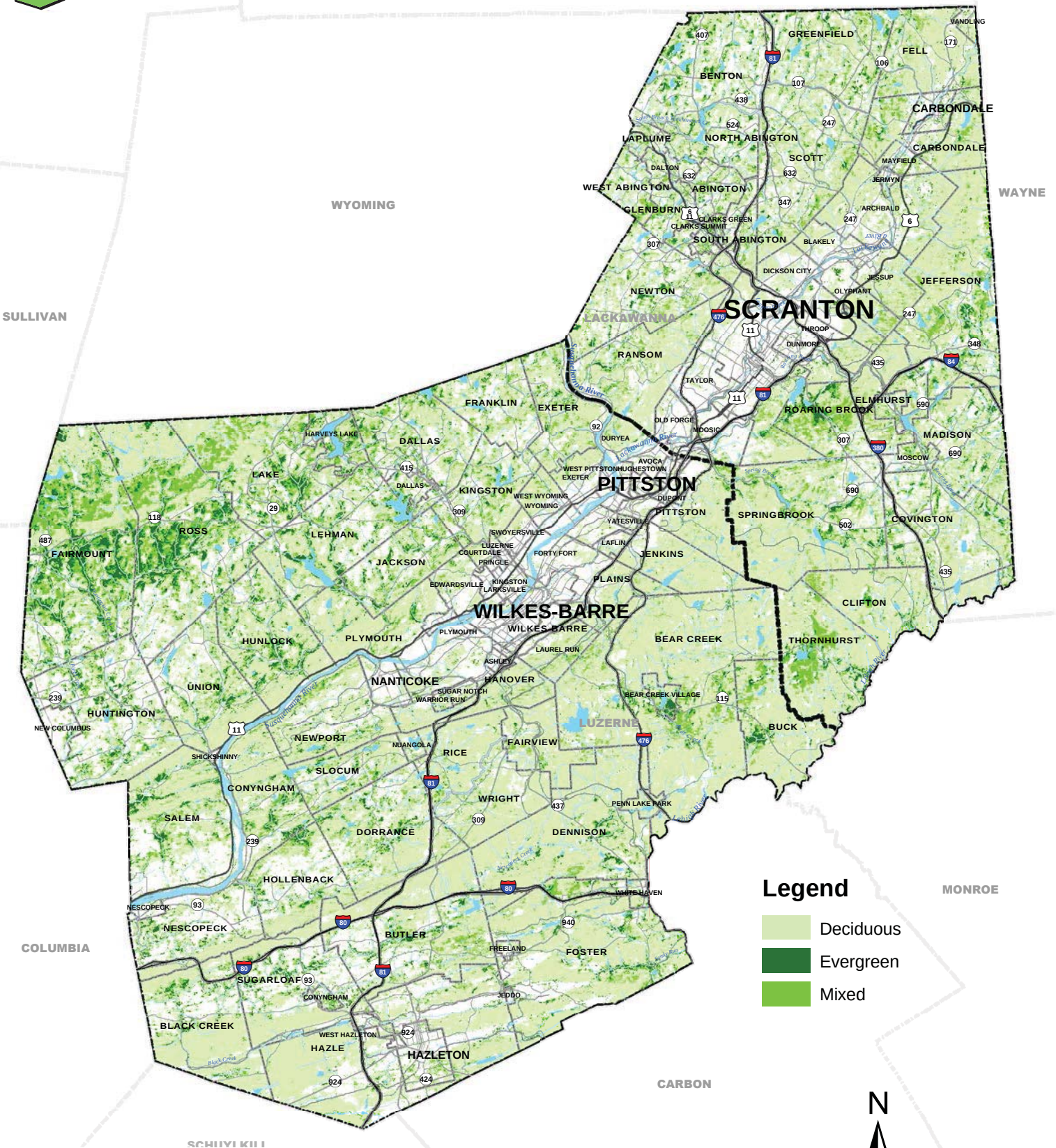
FORESTED AREAS

Figure 4.8.5



Data from 2011 Plan

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.

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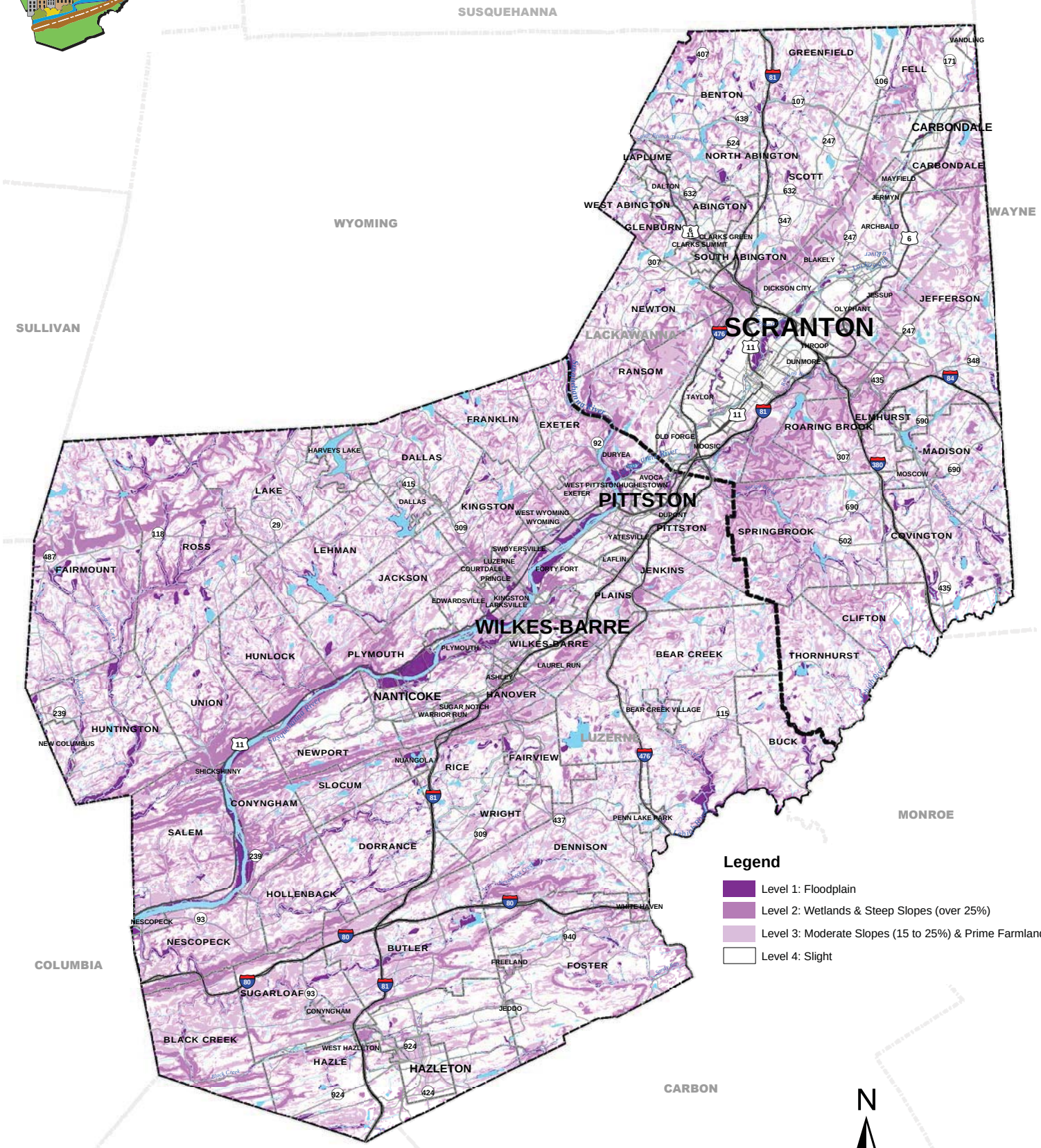
Figure 4.8.6

COMPOSITE CONSTRAINTS



Legend

- Level 1: Floodplain
- Level 2: Wetlands & Steep Slopes (over 25%)
- Level 3: Moderate Slopes (15 to 25%) & Prime Farmland
- Level 4: Slight

N

0 1 2 4 6 8 Miles

March 2008
McCormick Taylor combination of various data sets

McCORMICK TAYLOR

Data from 2011 Plan

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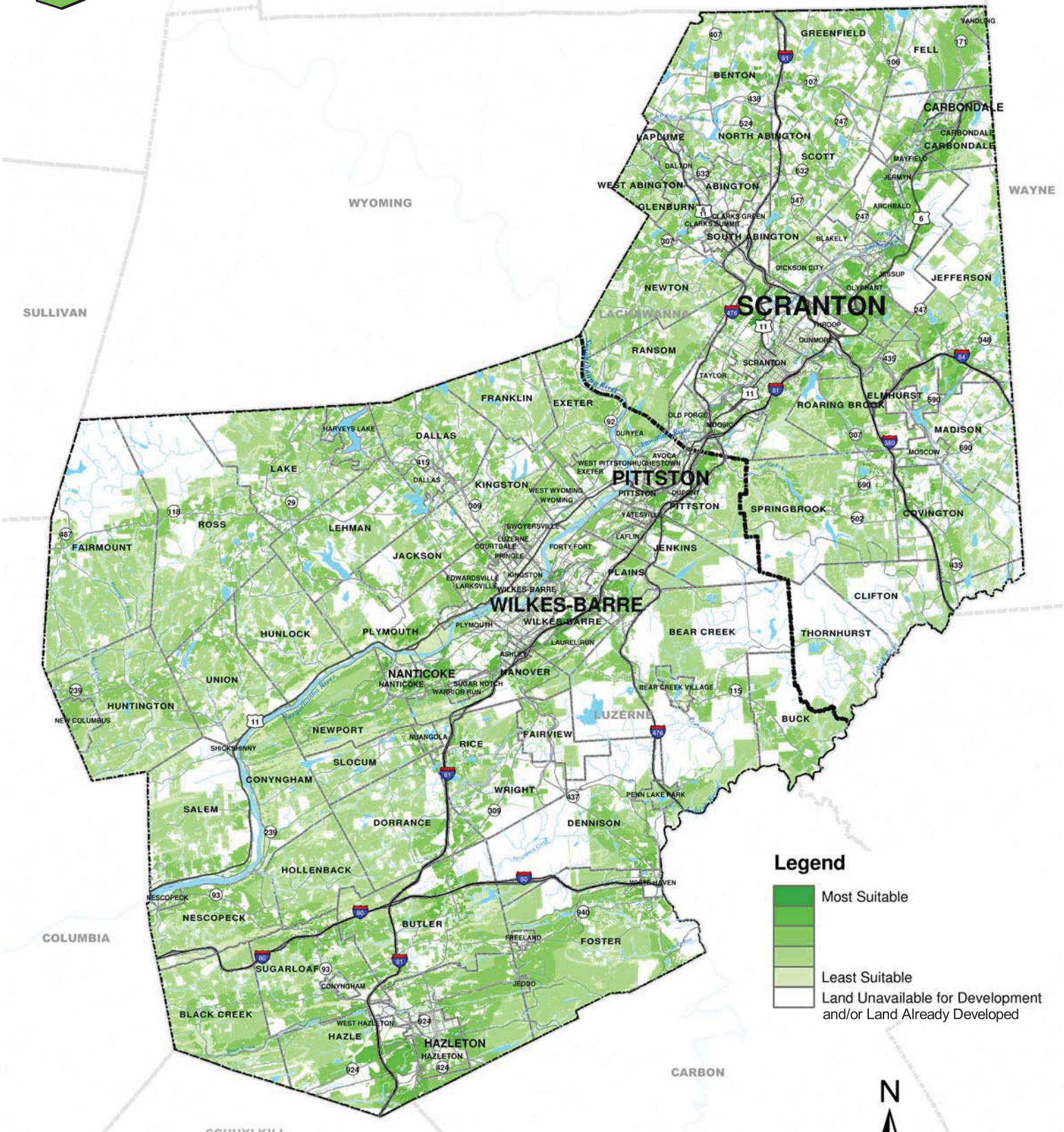
SUITABILITY FOR DEVELOPMENT

Figure 4.8.7



Data from 2011 Plan

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.

Table 4.9.1
Water Usage in the Two-County Area
Data from 2011 Plan

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.

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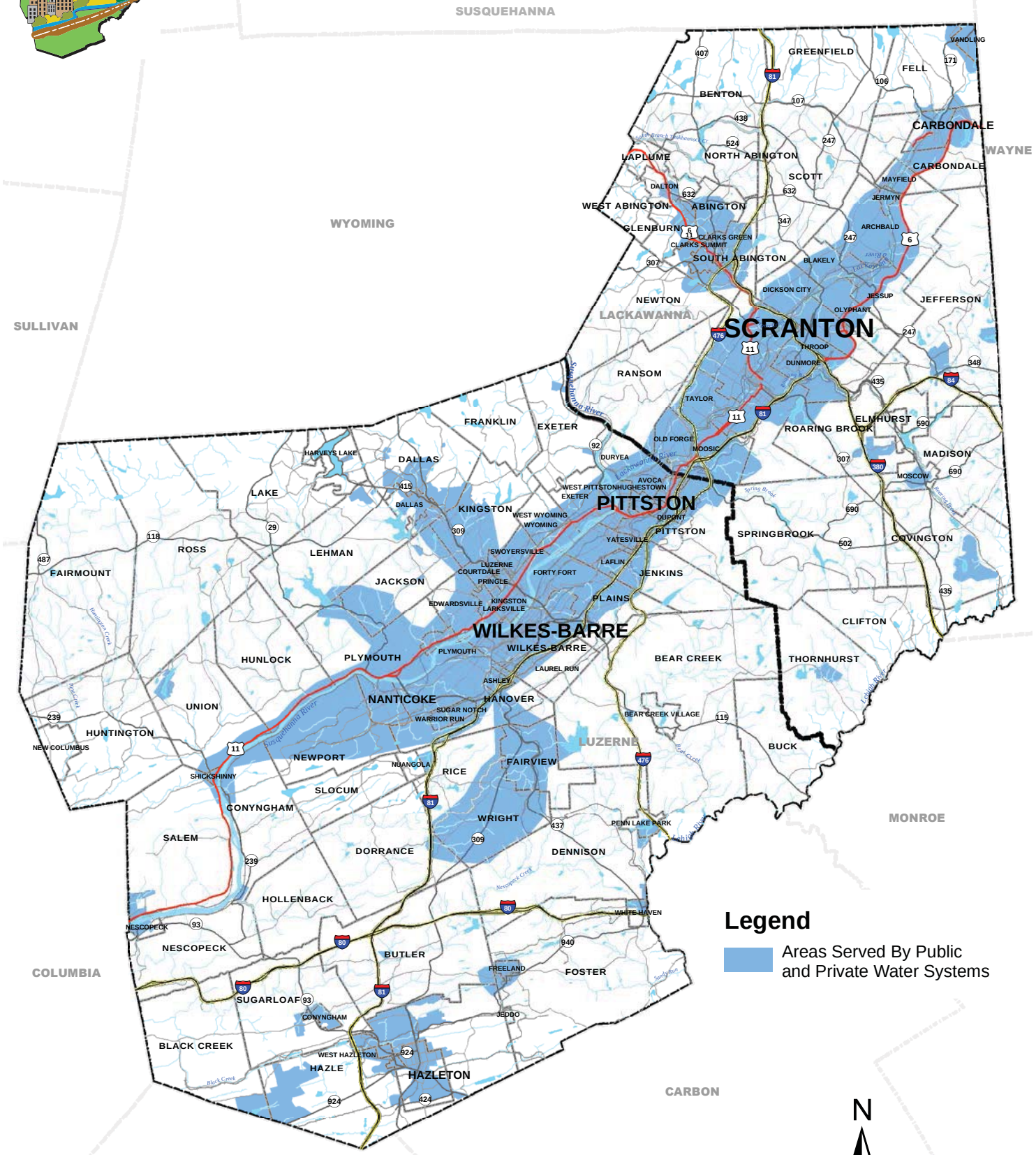
WATER SUPPLY

Figure 4.9.1



Data from 2011 Plan

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
Data from 2011 Plan

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

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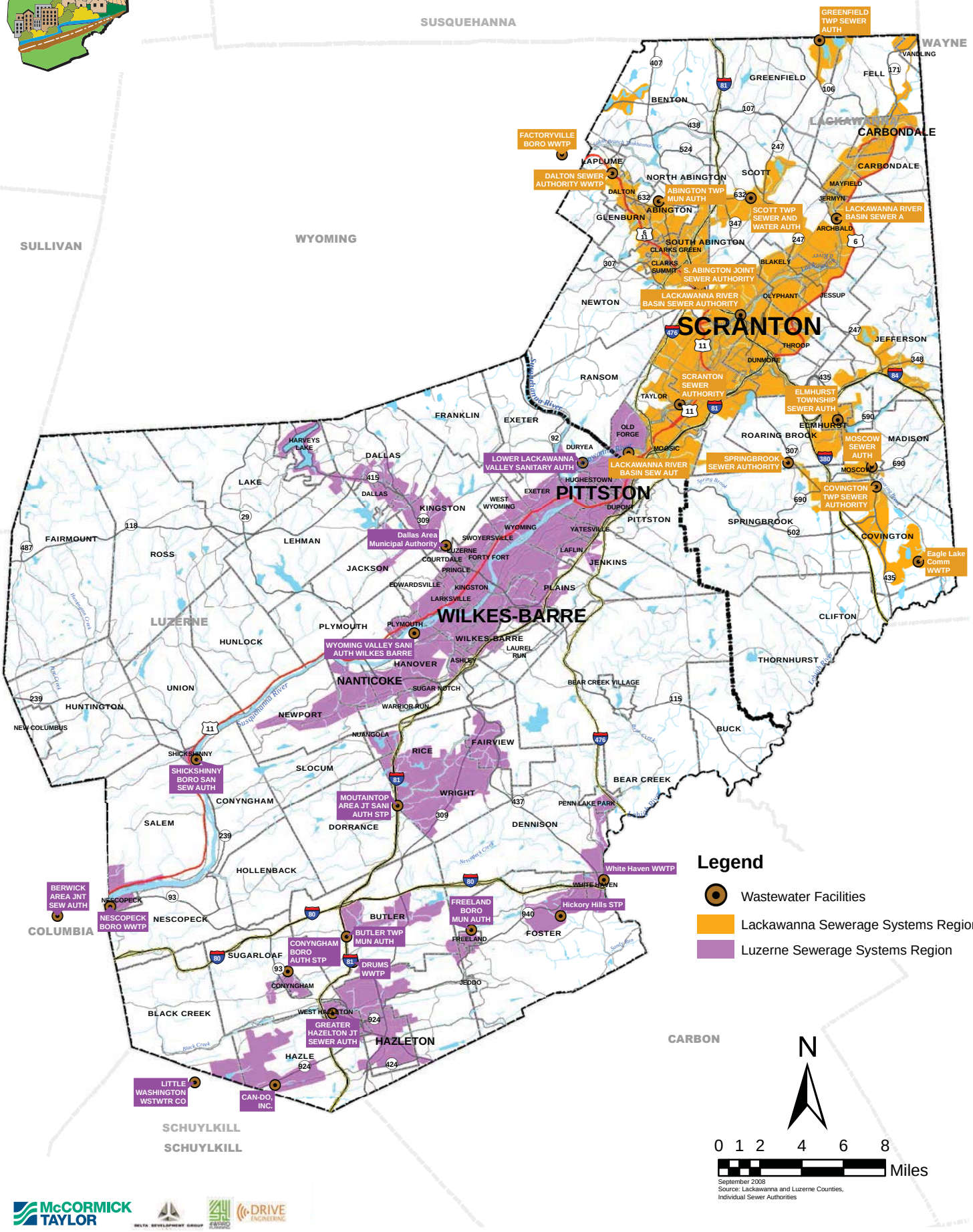
SEWER SERVICE

Figure 4.9.2



Data from 2011 Plan

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** 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

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/Pending Development and Public Improvements

Between 2009 and 2014, approximately 9,600 acres of land throughout the Lackawanna County has been developed. Of this total, over 65 percent constitutes residential use, nearly 10 percent is commercial use, and roughly 25 percent is industrial, institutional, educational, public municipal and non-municipal, religious and public Although data was not available for Luzerne County, the trends noted above were similar for the two county area in the previous LRTP.

Public improvements also occurred over the same period 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 14,500 new housing units have been constructed between 2000 and 2013 in Lackawanna and Luzerne Counties[23]. Recent average residential density for this new construction in Lackawanna County has been 3.4 acres per unit a marked increase since the last plan.

Demand for new residential units in Lackawanna and Luzerne Counties is primarily 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. The Highlands at Archbald continues to develop with various types of mixed use housing and includes a small commercial area to serve the

[23] SELECTED HOUSING CHARACTERISTICS, 2009-2013 American Community Survey 5-Year Estimates, DP04

development. Buildout of this development in Archbald Borough would result in over 500 additional residential units. Eagle Rock Resort in Hazel Township and Yalick Farms in Dallas Township are residential developments that are continuing to build out.

A small movement toward downtowns such as Wilkes Barre is evidenced by recent redevelopment of existing office buildings to condominiums as particular population groups look to live downtown, including students, young professionals, empty nesters and senior citizens.

Commercial Use

In Lackawanna County from 2009 to 2014, roughly 1,000 acres or 10 percent of recently developed lands in the Lackawanna County area became new commercial office, retail, and/or mixed-use development. Although data was not available from Luzerne County, these trends are similar to the trends for the two county area from the last plan and are anticipated to be similar for the current two-county area. 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.

The area of Business Route 6/Viewmont Drive/Commerce Boulevard in both Dickson City and Scranton continues to develop with additional commercial uses such of specialty retail as well as movie theaters, hotels, fast food and sit down restaurants. Wilkes Barre Township's recent development has included two hotels off of Highland Park Boulevard.

Industrial/Institutional Use

Over 2,300 acres of additional industrial, institutional development was built from 2009 to 2014 in Lackawanna County. 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. Over the years a number of industrial parks were developed with site ready lots or "on spec" buildings constructed. In the past five years a number of these previously developed building sites or buildings have seen tenants move in, including McLane Trucking and TMG Health Care in the Valley View Park in Jessup Borough with over 1,200 new jobs.

The Grimes Industrial Park and the Centerpoint Commerce and Trade Park East and West in Pittston Twp are two of the largest sites in this area. The Airport Access Road is under construction, featuring the areas first roundabouts, and will improve access from these developments by connecting I-81 to Commerce Boulevard. This infrastructure improvement will provide direct access to the interstate and airport while removing trucks from PA 315.

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.

Mixed Use Developments

Mixed use developments in the area generally include larger residential or industrial sites with complimentary commercial development. The Scranton Lackawanna Building Company is proposing a mixed use development of restaurants, a hotel and other shops to service the Mid-Valley, Valley View and Jessup Small Business Center Parks in Jessup Borough along PA 247. A land use study is underway in Taylor Borough to re-use hundreds of abandoned mine lands along Main Street. The vision is for development of a village with shops and over 200 residential units.

4.11 Scenario Analysis & Transportation Program Development

Implications of the Trend Scenario

The last planning effort in the region which was completed in 2011 developed a combined comprehensive plan, hazard mitigation plan and long range transportation plan. As noted in that plan and updated with this plan, the travel trends and land use patterns are similar and therefore the scenario analysis has not been adjusted for purposes of this update. The concurred upon comprehensive plan is still in effect and should influence development patterns moving forward. Projects and transportation investments are continuing to be prioritized to support the agreed to land use plan and therefore will take several years to evolve. This transportation plan update continues to acknowledge the work that was completed in the last comprehensive plan efforts and will continue to support that plan moving forward.

As a lead into the Visioning phase of Plan preparation in 2010, 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 - TRIPS PER DAY - TREND SCENARIO
Data from 2011 Plan

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**

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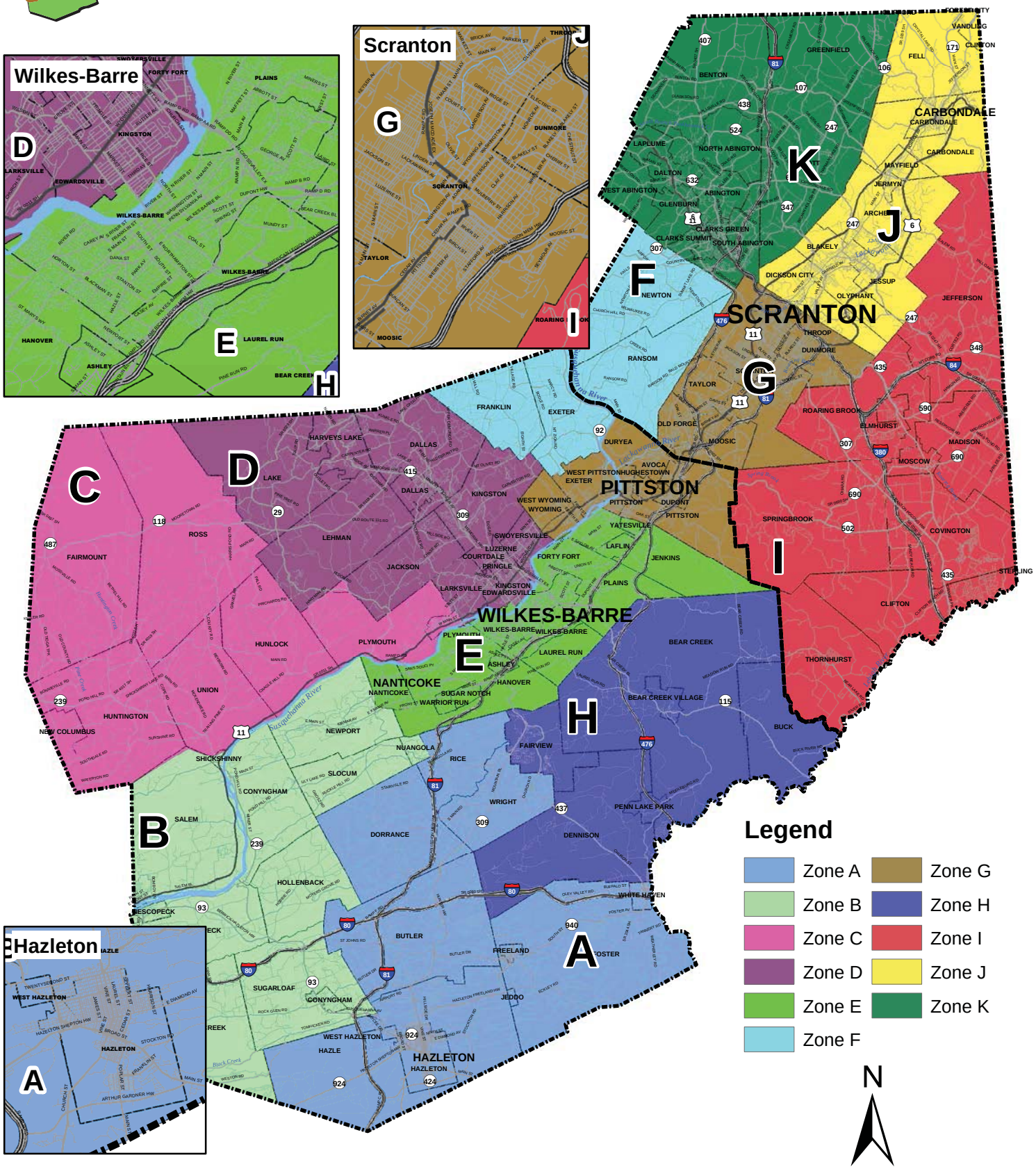
Figure 4.11.1

CORRIDOR TRAVEL ZONES



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

Data from 2011 Plan

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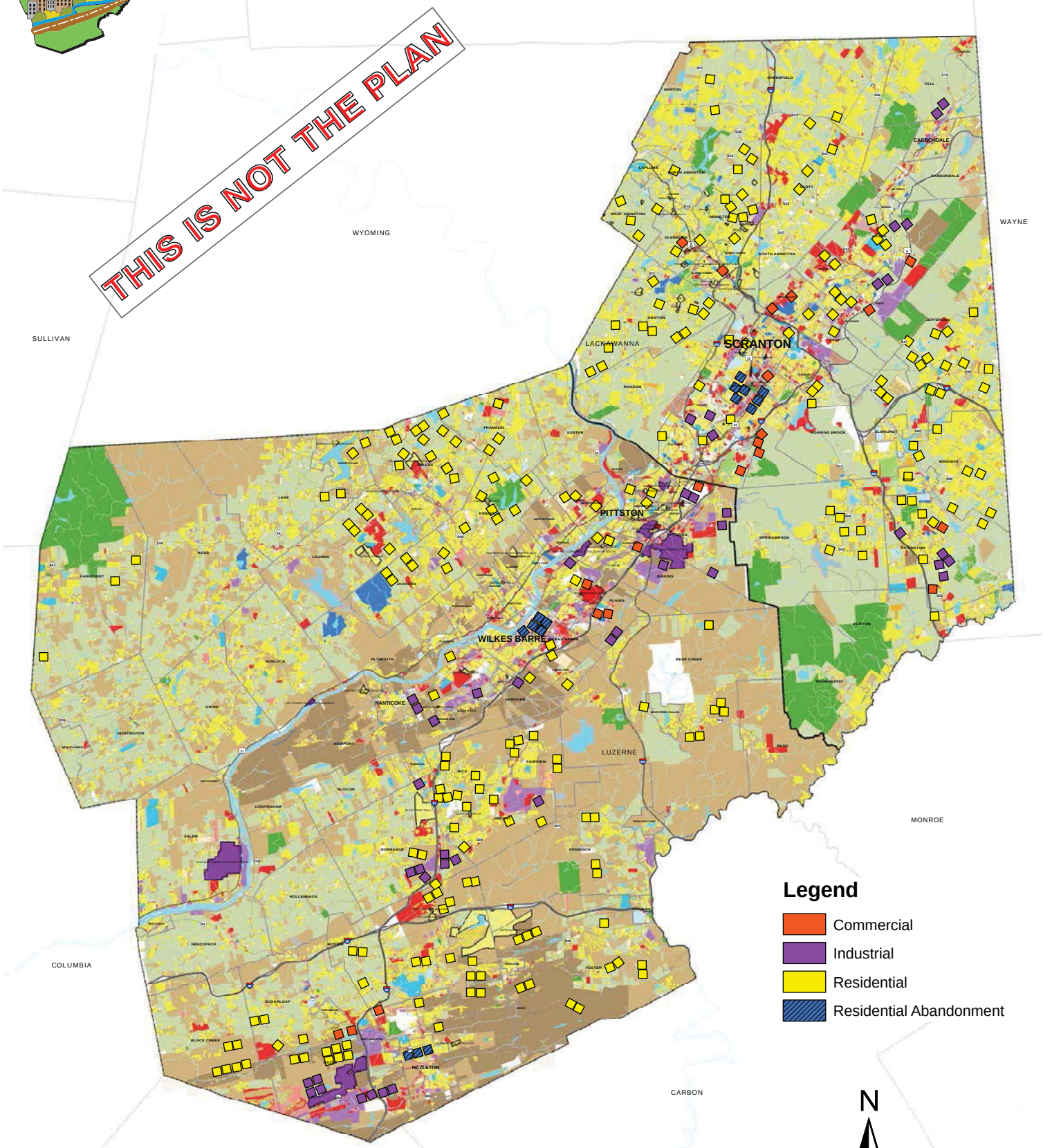
TREND SCENARIO, 2008 - 2030

Figure 4.11.2



September 2008
Source: Luzerne/Lackawanna County Open Space Plan, Lackawanna Planning Commission & Luzerne County

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Data from 2011 Plan

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
Data from 2011 Plan

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 Data from 2011 Plan			
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 Data from 2011 Plan			
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**

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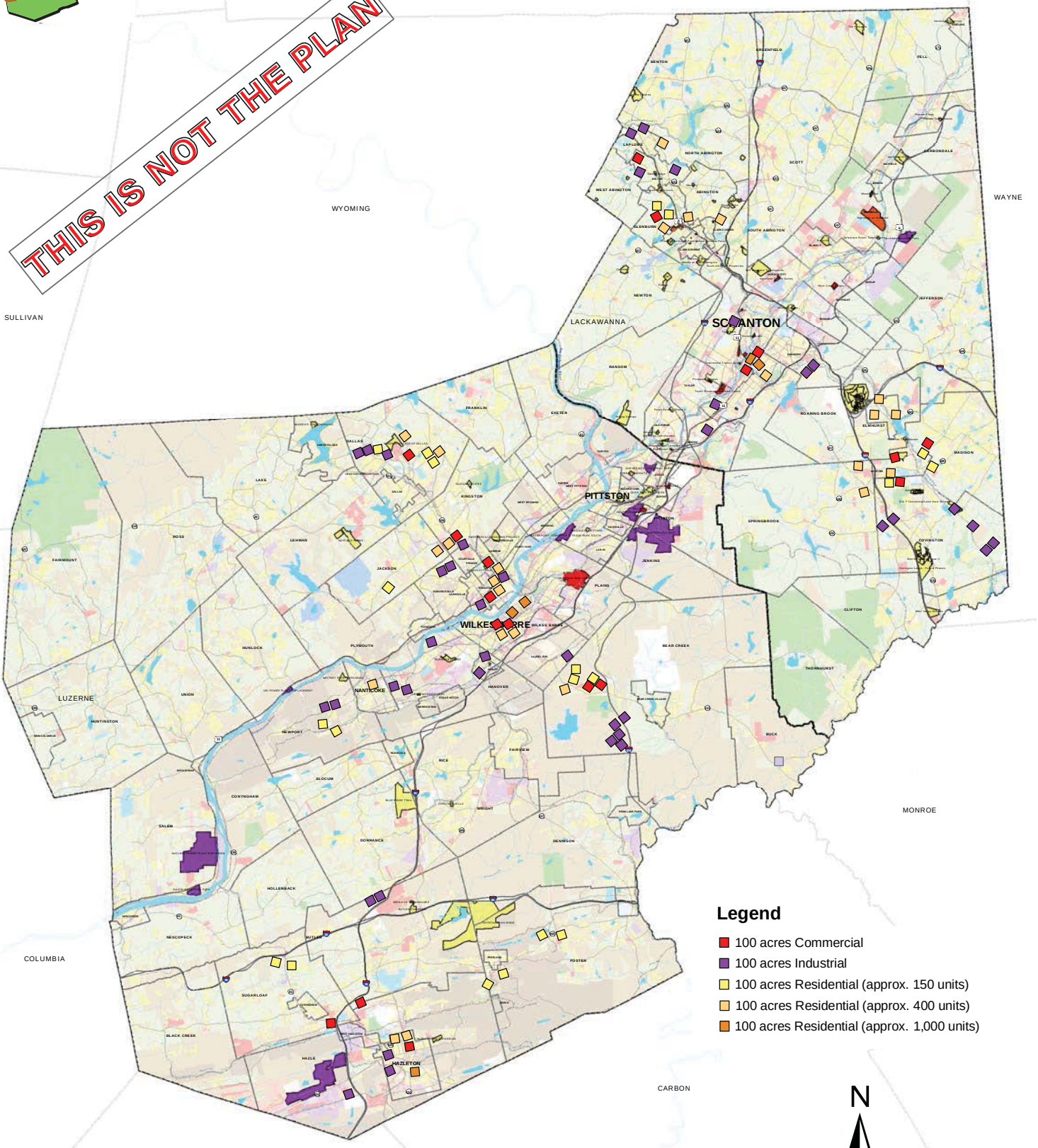
CROSS-VALLEY CORRIDORS ALTERNATIVE, 2008 - 2030

Figure 4.11.3

THIS IS NOT THE PLAN



November 2008

Source: Luzerne/Lackawanna County Open Space Plan, Lackawanna Planning Commission & Luzerne County

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Data from 2011 Plan

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Figure 4.11.4

VALLEY NODES ALTERNATIVE, 2008 - 2030

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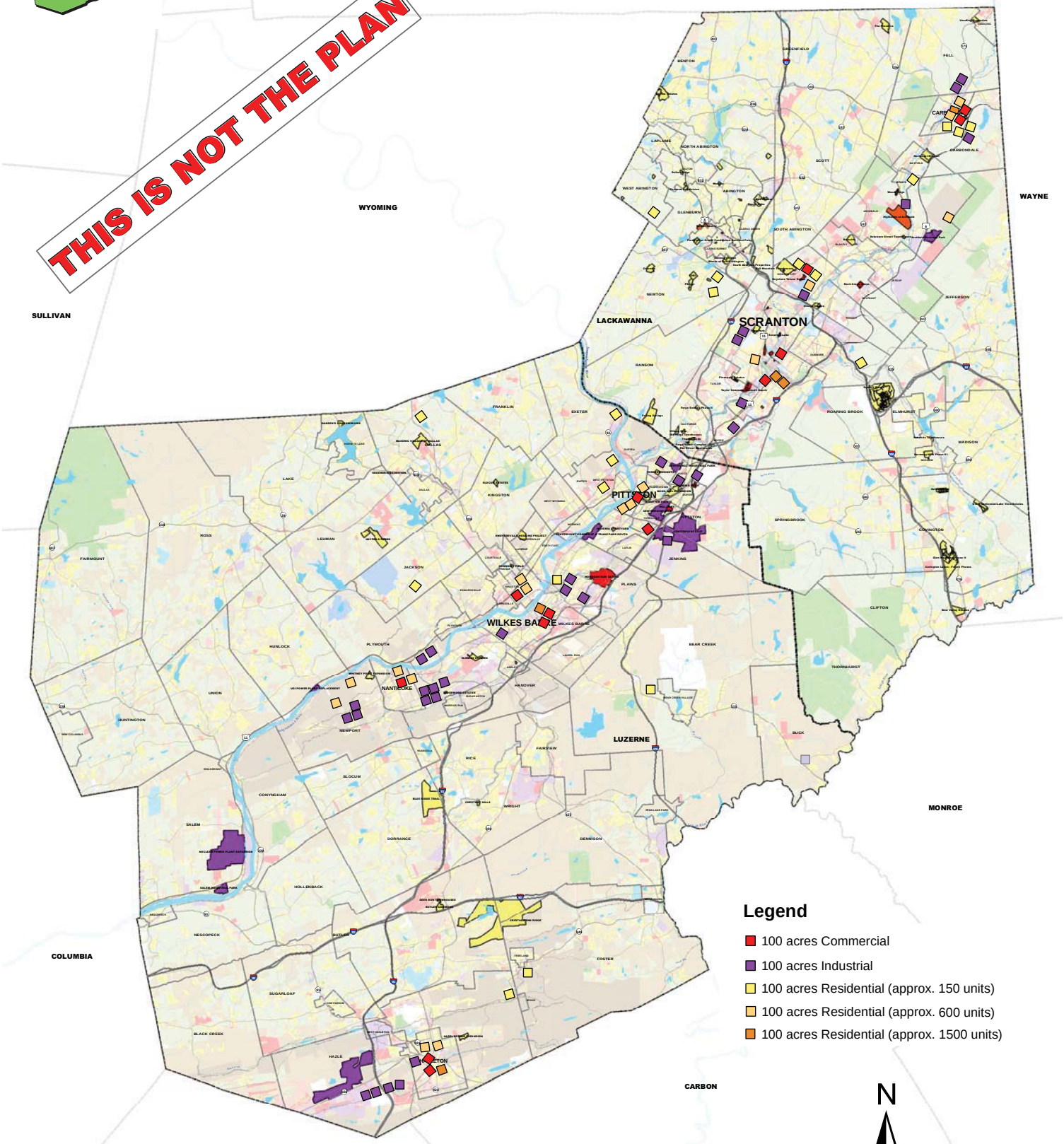

Legend

- 100 acres Commercial
- 100 acres Industrial
- 100 acres Residential (approx. 150 units)
- 100 acres Residential (approx. 600 units)
- 100 acres Residential (approx. 1500 units)

N

0 1 2 4 6 8 Miles

November 2008
Source: Luzerne/Lackawanna County Open Space Plan, Lackawanna Planning Commission & Luzerne County

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Data from 2011 Plan

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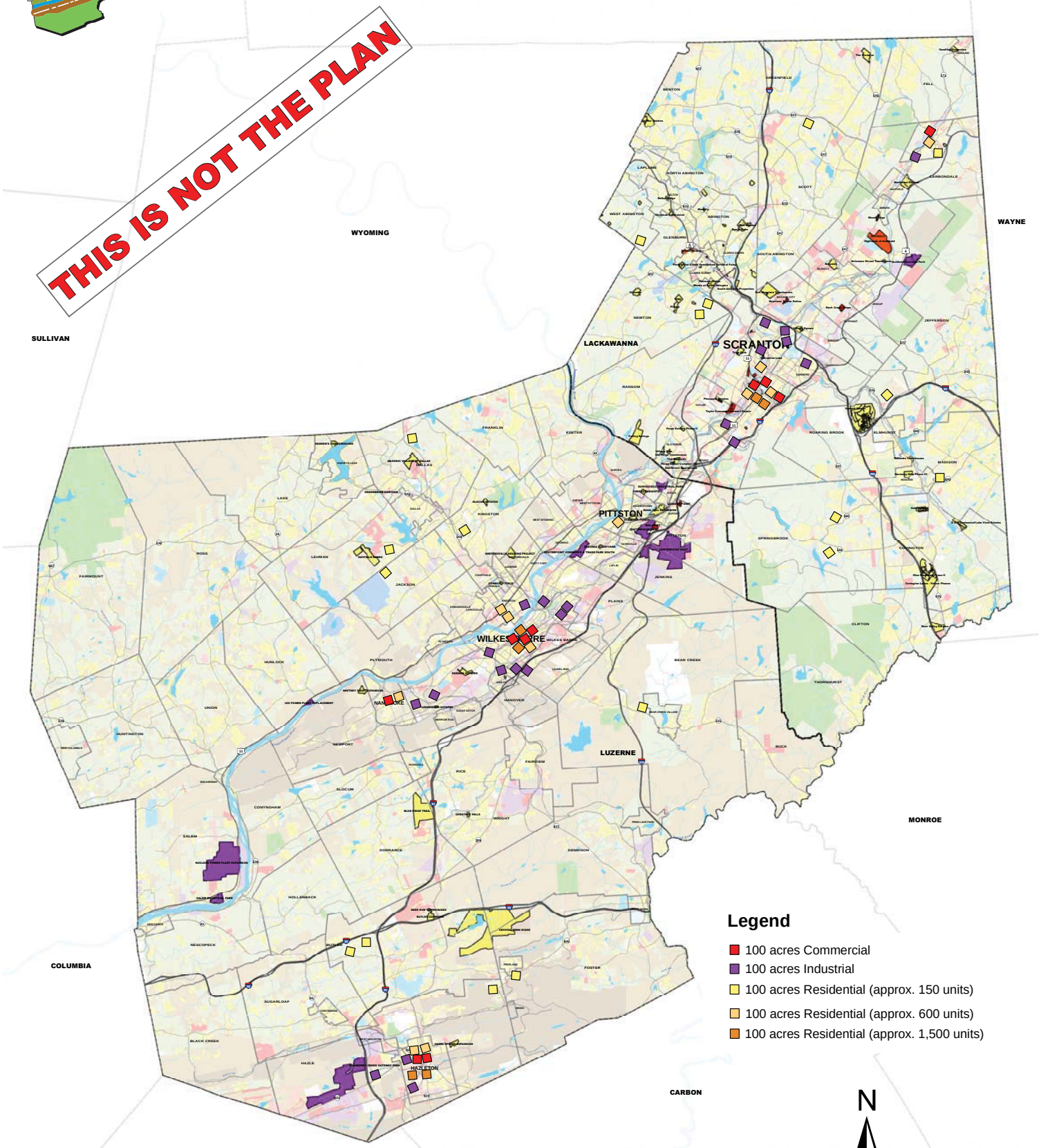
URBAN CENTERS ALTERNATIVE, 2008 - 2030

Figure 4.11.5



November 2008

Source: Luzerne/Lackawanna County Open Space Plan, Lackawanna Planning Commission & Luzerne County

Data from 2011 Plan

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Transportation Needs Assessment

The Lackawanna Luzerne MPO has developed an asset management focus to its project selection and deployment scheme to be consistent with 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 these line items, the PennDOT Asset Management Reports were reviewed and ***Table 4.11.5*** and ***Table 4.11.6***. were each developed. Table 4.11.5 summarized the total asset planning need for the region. This table shows that the annual pavement needs alone for the bi-county area exceed $126 million. 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
Asset Management – SPLIT Steady State Capitol, Backlog Capitol and Steady State Maintenance
Source: PennDOT LPN007 Asset Management County Needs, 2012 (as of 5/30/13)

County Name	CO. No.	Pavement			
		Steady State Capital	Backlog Capital	Steady State Maintenance	Total Annual Costs
Lackawanna	35	$38,301,370	$14,241,452	$2,004,828	$54,547,650
Luzerne	40	$51,953,680	$17,241,541	$3,064,197	$72,259,418
		Bridge			
Lackawanna	35	$28,596,220	$3,545,136		$32,141,356
Luzerne	40	$38,633,627	$6,238,097		$44,871,724
		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	$70,892,929	$17,786,588	$3,821,480	$92,500,997
Luzerne	40	$96,128,968	$23,479,638	$5,877,176	$125,485,782

Table 4.11.6

Asset Management – Required Annual Bridge Work to Manage Existing Bridge Network

Lackawanna

State or Local	BPN	Count	SD DA Goal	Years to Goal	Annual SD DA Reduction (Msf)	Annual DA Bridge Improv. (SDON) (Msf)	Total Bridge Improv DA (Msf)	Total Annual Bridge Work Required to Reach SD Goals: BPN	Count	Annual SD Bridge Imp (Count)	Annual SD Bridge Impr (DA-Msf)	Annual Non SD Bridge Rehab (Count)	Annual Non SD Bridge Rehab (DA-Msf)	Annual Non-SD Preserv ($M)	Total Annual Funding Need for Bridges ($M)
Annual Bridge Work to Address SD Backlog															
State≥8	1	100	5.00%	8	0.0098	0.0072	0.0169	1	100	2	0.0169	0	0.0021	$1.45	$12.45
State≥8	2	54	5.00%	8	0.0019	0.0027	0.0045	2	54	1	0.0045	0	0.0026	$0.57	$4.55
State≥8	3	150	10.00%	8	0.0050	0.0046	0.0095	3	150	2	0.0095	1	0.0027	$0.89	$8.14
State≥8	4	114	10.00%	8	0.0000	0.0019	0.0019	4	114	1	0.0019	1	0.0031	$0.41	$2.88
Local≥20		65	23.83%	18	0.0027	0.0030	0.0057		65	2	0.0057	0	0.0000	$0.18	$3.89
Local≤20		33	8.00%	18	0.0000	0.0002	0.0002		33	0	0.0002	0	0.0001	$0.03	$0.22
Total		**516**	**61.83%**	**68**	**0.0194**	**0.0196**	**0.0387**		**516**	**8**	**0.0387**	**2**	**0.0106**	**$3.53**	**$32.13**

Luzerne

State or Local	BPN	Count	SD DA Goal	Years to Goal	Annual SD DA Reduction (Msf)	Annual DA Bridge Improv. (SDON) (Msf)	Total Bridge Improv DA (Msf)	Total Annual Bridge Work Required to Reach SD Goals: BPN	Count	Annual SD Bridge Imp (Count)	Annual SD Bridge Impr (DA-Msf)	Annual Non SD Bridge Rehab (Count)	Annual Non SD Bridge Rehab (DA-Msf)	Annual Non-SD Preserv ($M)	Total Annual Funding Need for Bridges ($M)
Annual Bridge Work to Address SD Backlog															
State≥8	1	109	5.29%	8	0.0082	0.0046	0.0128	1	109	2	0.0128	0	0.0000	$0.91	$9.23
State≥8	2	36	5.00%	8	0.0039	0.0057	0.0096	2	36	0	0.0096	0	0.0055	$1.21	$9.69
State≥8	3	230	10.00%	8	0.0107	0.0095	0.0203	3	230	4	0.0203	1	0.0052	$1.85	$17.10
State≥8	4	192	10.00%	8	0.0000	0.0019	0.0019	4	192	1	0.0019	2	0.0032	$0.41	$2.93
Local≥20		109	22.44%	18	0.0036	0.0043	0.0079		109	3	0.0079	0	0.0000	$0.28	$5.41
Local≤20		75	8.00%	18	0.0000	0.0006	0.0006		75	1	0.0006	0	0.0002	$0.07	$0.51
Total		**751**	**60.73%**	**68**	**0.0264**	**0.0266**	**0.0531**		**751**	**11**	**0.0531**	**3**	**0.0141**	**$4.73**	**$44.87**

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 15 plus 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 2015 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 January 2016.

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. ***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	157 total SD bridges in Two-County Area (i.e., SUFF_RATE < 50.00). • 87 SD bridges are on state roadway segments; 99 state roadway segments with SD Bridges were selected. • 70 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	188 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). • 85 segments in Lackawanna County. • 103 segments in Luzerne County.
Segment intersects a top 20 per county crash intersection. Top 20 is on the basis of number of fatal or injury crashes occurring at the intersection.	76 total segments in the Two-County Area overlap with a Top 20 per county crash intersection. • 21 segments in Lackawanna County. • 55 segments in Luzerne County.
Segment with surface pavement that is more than 20 years old	483 total segments in the Two-County Area have surface pavement that is more than 20 years old (i.e., YR_RESURF < 1995). • About 18% 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"	840 total segments in the Two-County Area have an IRI rating of "Poor" (i.e., IRI_RANGE = "poor")
Segment that is within or crosses the boundary of a "Priority Infill Area" on the Land Use Plan	494 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, 2015

Table 4.11.8
Segments of Importance by Number of Criteria Met

Number of Criteria Met	Number of Roadway Segments
0	2,358
1	1,845
2	479
3	63
4	12
5	1
Total Segments	**4,758**

Source: PennDOT, 2015

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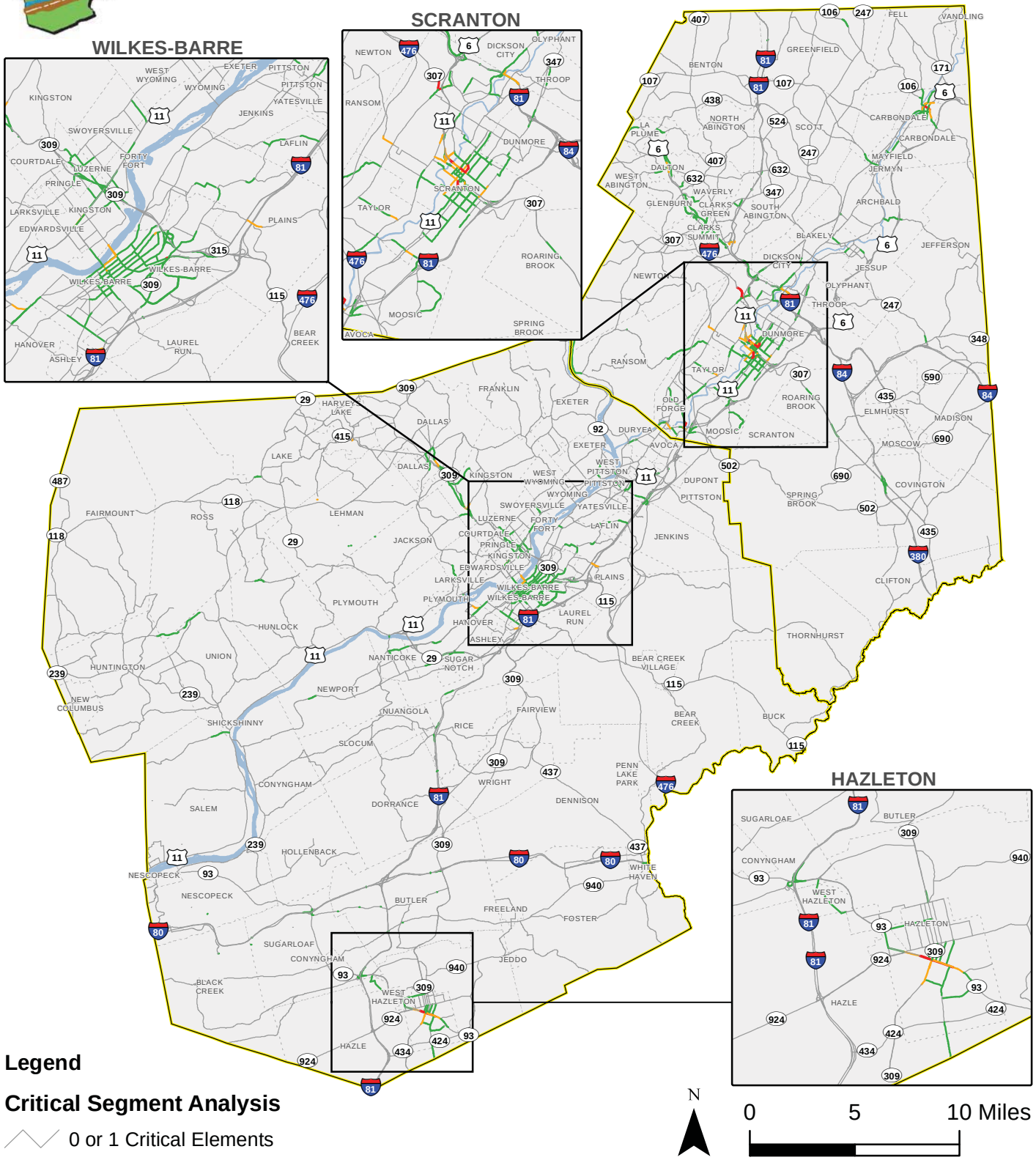
FIGURE 4.11.6
CRITICAL SEGMENTS



Source: PennDOT PA State Roads Feb. 2015

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.

Finally, local governments, the public and other stakeholders were asked to submit any candidate problems or projects for consideration in the plan through the Transportation Issues Forums which were held in two separate sessions in Scranton and Forty Fort on April 2, 2015.

The State Transportation Commission solicited input for the PennDOT update of the 2017 Twelve Year Transportation Program (TYP) from April 16, 2015 to May 29, 2015, which were received late in this planning process. There were over 450 comments made for the Lackawanna Luzerne planning region. General themes included:

- Need for passenger rail between Scranton and NJ/NY/Philadelphia
- Improved transit service
- Improved roadway conditions
- Improvements to I-81
- More trails and connections
- Need for bike lanes
- Safety improvements
- Improved pedestrian access and safety

These comments will be reviewed in more detail as projects are scoped to identify if improvements can be incorporated into existing projects as well as identifying additional projects for future updates.

Project Evaluation and Prioritization

Using the GIS layers and representatives for the MPO, each candidate project was evaluated in a series of meetings and online using the Decision Lens tool which compiles the data and provides a score for each project. The criteria either required direct input from the scoring committee or was auto scored based on GIS data and GIS analysis. This analysis has been documented in the GIS data book and included as an appendix to this document.

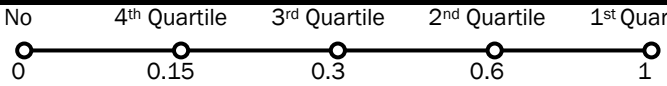
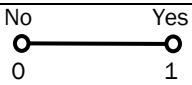
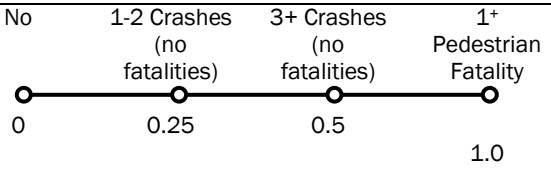
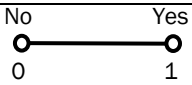
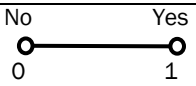
The following seven criteria were utilized to place all candidate projects in a priority order for potential programming on the Long Range Plan. This priority takes into account the scores provided in each criteria as well as the weight assigned to each criteria. Once projects had been prioritized, funding levels and matching funds would enable projects to be selected from that list.

Project Scoring Criteria

In accordance with the goals and objectives of the long range plan steering committee and the goals and objectives of MAP 21 and the Mobility Plan, project ranking criteria was developed as shown below. The project ranking criteria was developed to identify measurable parameters against which projects could be scored. These criteria are noted below each criteria. The importance of each criteria was weighted by the steering committee using a pairwise comparison method which determined the importance of each criteria relative to each other. System Management and Preservation ranked the highest with a score weighting 34.4% followed by Transportation Safety with a weighting score of 23.4%.

Category & Criteria Descriptions	Criteria Scale Lesser benefit or priority . . . . . Higher benefit or priority
1. Economic Vitality – Score Weighting 12.4%	
1.A. Coordinated Economic Development Contributes to a stated economic development goal (CEDS, County Action Plans, etc.).	No (0) — Indirectly (0.5) — Directly (1)
1.B. Recreation & Tourism Supports access, promotes/expands activity, or improves the attractiveness of recreational, tourism, or event destinations.	No (0) — Indirectly (0.5) — Directly (1)
1.C. Economic Development Indicators Provides economic benefit to the region. (Economic benefit indicator score, by quartile).	No (0) — 4th Quartile (0.15) — 3rd Quartile (0.3) — 2nd Quartile (0.6) — 1st Quartile (1)
1.D. Vicinity to Designated Growth Area Project is located in the vicinity of a designated growth area (Priority Area, Infill Area, KOZ, reclamation site) and enhances transportation access, mobility, or service to that area.	No (0) — Infill, KOZ or Other (0.5) — Priority (1.0)

2. Transportation Security– Score Weighting 9.4%	
2.A. Coordinated Hazard Mitigation Contributes to a stated hazard mitigation or other security goal (Hazard Mitigation Plan, security plans, etc.).	No Indirectly Directly 0 0.5 1
2.B. Emergency Services Access Improves emergency transportation access for police, fire, ambulance, etc.	No Yes 0 1
2.C. System Resilience Project enhances system resiliency by adding redundancy, creating fault-tolerance, or improving [proactively] an infrastructure element that benefits system recovery.	No Yes 0 1
2.D. Detour Routes Project is located on an emergency detour route and enhances or otherwise provides benefit on the emergency route.	No Yes 0 1
Category & Criteria Descriptions	**Criteria Scale** **Lesser benefit or priority . . . . . Higher benefit or priority**

3. Transportation Safety – Score Weighting 23.7%	
3.A. Vehicular Crashes For projects that have potential to reduce vehicular crashes: Vehicular crash rate in the vicinity of the project (by quartile).	
3.B. Crash Hot Spots For projects that have potential to reduce vehicular crashes at a crash hot spot Project improves a top 25 hot spot.	
3.C. Non-Vehicular Crashes For projects that have potential to reduce non-vehicular crashes (e.g., pedestrian crashes) Non-vehicular crash rate in the vicinity of the project (by quartile).	
3.D. Highway-Railroad Grade Crossings For projects at railroad grade crossings that have potential to reduce crashes and/or resolve a hazardous condition at the crossing.	
3.E. Schools For projects in the vicinity of a school, within a school zone, or on a school route Project improves operations related to school activities.	

4. Passenger Transportation & Mode Choice – Score Weighting 6.1%	
4.A. Mode Choice & Connectivity Project expands existing service or adds new modal choices (e.g., vanpool, BRT) available and/or the connectivity of alternative modes and tends to increase multi-modal trips.	No (0) — Any Area (0.25) — Infill Area (0.5) — Priority Area (1)
4.B. Pedestrian & Bicycle (Non-Motorized) Mobility Project enhances non-recreational bike and pedestrian mobility by creating more efficient travel paths (modal separation, reduced impediments, access management, etc.).	No (0) — Any Area (0.25) — Infill Area (0.5) — Priority Area (1)
4.C. Transit System Maintenance & Enhancement Project addresses fleet maintenance, vehicle replacement, transit stop enhancement, or other facilities modernization goal.	No (0) — Yes (1)

Category & Criteria Descriptions	Criteria Scale Lesser benefit or priority . . . . . Higher benefit or priority
5. Freight Transportation & Modal Integration– Score Weighting 5.9%	
5.A.1 Freight Access – Highway Mode Project creates, expands, or enhances transportation access in such a way that benefits freight movement. Daily weekday truck traffic volume (AADTT) at the project location.	N/A or < 100 (0) — 100 to 500 (0.15) — 500 to 1,000 (0.3) — 1,000 to 2,500 (0.6) — > 2,500 (1)
5.A.2 Freight Access – Non-Highway Mode Project creates, expands, or enhances transportation access in such a way that benefits freight movement.	No (0) — Low Impact (0.25) — Moderate Impact (0.5) — High Impact (1)
5.B. Intermodal Transportation Project creates, expands, or enhances intermodal freight connectivity among highway, rail, and/or air modes.	No (0) — Low Impact (0.25) — Moderate Impact (0.5) — High Impact (1)
5.C. Rail Mobility Project improves rail mobility by reducing impediments (at-grade crossings, rail conflict points), improving track alignments, or creating more efficient track connections.	No (0) — Yes (1)

Category & Criteria Descriptions	Criteria Scale Lesser benefit or priority . . . . . Higher benefit or priority
6. Environment, Community & Quality of Life – Score Weighting 8.1%	
6.A. Local Community Planning & Priorities Project is identified in an existing municipal plan (comprehensive plan, official map, ordinance) or is supported by a local entity through a plan, study, or advocacy campaign.	No (0) — Yes (1)
6.B. Environment Project specifically protects and/or preserves sensitive environmental, cultural, or historic features, mitigates the impact of another project, or creates a "mitigation bank".	No (0) — Indirectly (0.5) — Directly (1)
6.C. Reduction of Vehicular Impacts Project reduces the environmental impact of motorized travel (reduces traffic volume, emissions, noise, fuel consumption, water pollution, etc.).	No (0) — Indirectly (0.5) — Directly (1)
6.D. Recreation Project provides new or enhanced recreational opportunities.	No (0) — Yes (1)
6.E. EJ & Traditionally Underserved Populations Project is located near an Environmental Justice Population and/or other Traditionally Underserved Population and will provide that population with benefits.	No (0) — One Population (0.5) — Multiple Populations (1)
6.F. Plan Consistency Project supports the objectives of the Regional Land Use Plan and is located in one of the Priority or Infill areas.	No (0) — Yes (1)

Category & Criteria Descriptions	Criteria Scale Lesser benefit or priority . . . . . Higher benefit or priority
7. System Management & Preservation – Score Weighting 34.4%	
7.A. National Highway System Project is located on the National Highway System.	No (0) — Yes (1)
7.B. Total Traffic Service Volume Daily traffic volume (AADT) at the project location.	N/A or < 2,500 (0) — 2,500 to 5,000 (0.15) — 5,000 to 10,000 (0.3) — 10,000 to 25,000 (0.6) — > 25,000 (1)
7.C. Maintenance Project improves the maintainability of the system.	No (0) — Short-Term (0.25) — Mid-Term (0.5) — Long-Term (1)
7.D. Operations Project optimizes utilization of the transportation system through the use of technology (ITS), information/communications (web, apps), or other innovative strategy.	No (0) — Low Impact (0.5) — High Impact (1)
7.E.1a System Deficiencies – Bridges Project addresses an SD bridge or pavement condition deficiency. SD bridge sufficiency rating (SD bridges only by quartile, worst first). Bridge	N/A (0) — 4th Quartile (0.55) — 3rd Quartile (0.7) — 2nd Quartile (0.85) — 1st Quartile (1)
7.E.1b System Deficiencies – Pavement Project addresses an SD bridge or pavement condition deficiency. IRI condition (by rating category). Pavement	N/A (0) — Excellent (0.10) — Good (0.3) — Fair (0.75) — Poor (1)
7.E.2 System Deficiencies – Other Elements Project addresses one or more system deficiencies—traffic congestion, drainage, ADA, guiderail, traffic control (signs, signals, pavement markings), etc.	None (0) — One (0.5) — Multiple (1)

Project Candidate's Summary & Tracking

Linking Planning and NEPA (LPN) Level 2 forms were created for each project that was included in the plan 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

Project: SR 1036 ov Leonards Cr

Project # 9024

County: LUZERNE ***State Route:*** 1036 ***Classification:*** Bridge

Description:

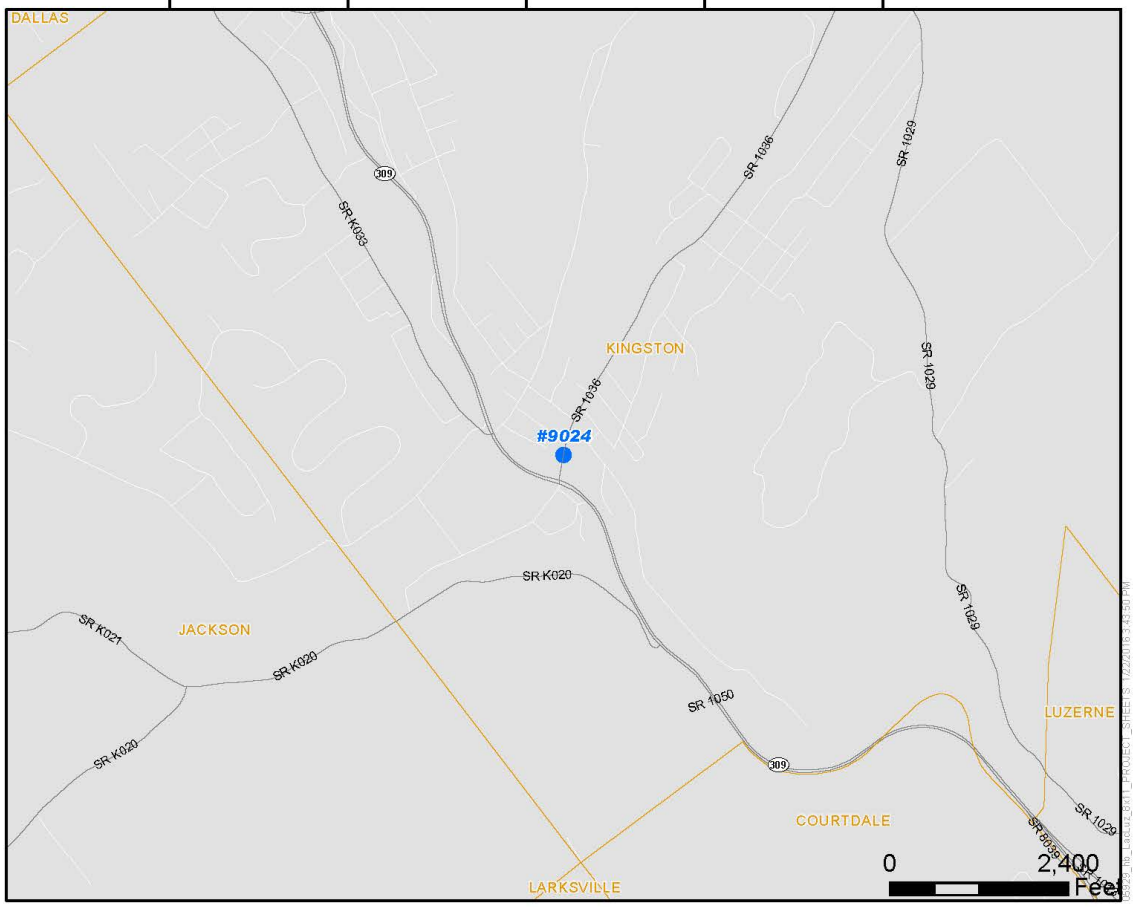
Bridge preservation on State Route 1036 (Caverton Road) over Leonards Creek, in Kingston Township, Luzerne County.

AADT: 6478
ADTT: 208
2015 V/C: 0.3787
2040 V/C: 0.391541
Truck Percent: 3

NHS: NO
Fuctional Class: 16
Pavement IRI: Poor
SD Bridge: No
Crash DELTA: 8.0982

Inset

2015-2018	2019-2020	2021-2022	2023-2026	2027-2040	
$0	$402,500	$350,000	$1,400,000	$0	$2,152,500.00



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

Project Cost Estimate Summary

2015-155 Glenmaura National Blvd - Roadway Reconstruction	Base Year	2016
	Build Year	2016
	Annual Cost Percent Increase	3.00%

Urban or Rural	Urban

EB Approach	Existing Cross Section		Widening Cross Section		
	Length	9385	Length	0	No. of Lanes (total)
	Width	65	Width	0	6
Description of work:					
WB Approach	Existing Cross Section		Widening Cross Section		
	Length	9385	Length		No. of Lanes (total)
	Width	65	Width		6
Description of work:					

Mill/Overlay (SY)	135561	Widening (SY)	0

Description	Quantity or Level of Work	Unit Cost	Total Cost
Clearing and Grubbing (Level)	1	$6,000.00	$6,000.00
Mill and Overlay of Existing Pavement (SY)	135561	$30.00	$4,066,833.33
Pavement Markings(LF)	9385	$8.10	$76,018.50
Erosion & Sedimentation Control (LF)	18770	$7.50	$140,775.00
Stormwater Management (Level)	1	$10,000.00	$10,000.00
Construction Stakeout (Level)	1	$18,000.00	$18,000.00
Maintenance and Protection of Traffic (LS) (8% Suggested) 8%	1	$345,410.15	$345,410.15

	SUBTOTAL	$4,657,036.98
MOBILIZATION (4% SUGGESTED)	4%	$186,281.48
CONTINGENCY (25% SUGGESTED)	25%	$1,164,259.25
CONSTRUCTION ENGINEERING AND INSPECTION (15% SUGGESTED)	15%	$698,555.55
	SUBTOTAL	$6,706,133.25
DESIGN COSTS AND CLEARANCES (15% SUGGESTED)	5%	$335,306.66
UTILITY RELOCATION ESTIMATE		$0.00
RIGHT-OF-WAY COST ESTIMATE		$0.00
	TOTAL	$7,041,439.91

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).

The federal transportation conformity rule (40 CFR Parts 51 and 93) requires air quality conformity determinations for transportation plans, programs, and projects in "non-attainment or maintenance areas for transportation-related criteria pollutants for which the area is designated non-attainment or has a maintenance plan" (40 CFR 93.102(b)). Transportation-related criteria pollutants, as specified in the conformity rule, include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), and particulate matter less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$, respectively). Regional conformity requirements apply for plans and programs, while project-level hot-spot analysis requirements apply for projects. However, the Lackawanna Luzerne MPO area is currently designated as attainment for all of the NAAQS. As a result of this attainment designation, the Long Range Transportation Plan is exempt from federal transportation conformity 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 while also 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 2040. 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 current TIP (2015-2018) are developed in one year time periods. The next four years of the TYP are allocated in two, two year periods (2019-2020 and 2021-2022). The last four years of the TYP is included in the 2023-2026 time period. The final thirteen years of the LRTP are included in the 2027-2040 time frame.

Revenue Assumptions and Estimates

Preparation of this financial plan revenue estimate included a review of historical data and trends, including the Pennsylvania's 2015 Transportation Program Financial Guidance documents, previous statewide transportation improvement programs (STIPs) information from state DOTs and transit agencies, FHWA MAP 21 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 Year of Expenditure (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).

A lot has changed relative to transportation funding since the last LRTP Update in 2011. On July 6, 2012, the nation's current transportation bill, Moving Ahead for Progress in the 21st Century Act (MAP-21), supplanted the previous transportation bill, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Pennsylvania House Bill 1060 was signed into law the following year on November 25, 2013 resulting in comprehensive state transportation funding.

These bills imparted new objectives and areas of focus for transit, and, in the case of the state, additional funding for key initiatives.

Federal Funding

The current federal transportation bill, MAP-21 was a two-year authorization covering fiscal years 2013-2014 that provided $40.4 and $40.0 billion for fiscal year 2013 and 2014 in highway trust funding as well as $10.6 billion and $10.7 billion respectively for public transportation. The bill expired May 31, 2015 and has since been extended twice by Congress, most recently until October 29, 2015.

Financial projections of federal funding from Pennsylvania's 2015 Transportation Program Financial Guidance document indicated 0% growth in Federal funds from 2015 to 2018, therefore for purposes of this plan, 0% growth was assumed through to 2040.

Highway Funding

MAP-21 restructures core highway formula programs. Activities carried out under some existing formula programs – the National Highway System Program, the Interstate Maintenance Program, the Highway Bridge Program, and the Appalachian Development Highway System Program – are incorporated into the following new core formula program structure:

- National Highway Performance Program (NHPP)
- Surface Transportation Program (STP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Highway Safety Improvement Program (HSIP)
- Railway-Highway Crossings (set-aside from HSIP)
- Metropolitan Planning

It creates two new formula programs:

- Construction of Ferry Boats and Ferry Terminal Facilities – replaces a similarly purposed discretionary program.

- Transportation Alternatives (TA) – a new program, with funding derived from the NHPP, STP, HSIP, CMAQ and Metropolitan Planning programs, encompassing most activities funded under the Transportation Enhancements, Recreational Trails, and Safe Routes to School programs under SAFETEA-LU

Transit Funding

According to the American Public Transportation Association, the extension does not increase funding for "…public transportation infrastructure, which has an $88 billion backlog in needed repairs."[24]

The changes introduced by MAP-21 center mostly on safety, state of good repair, performance and program efficiency. Significant emphasis is placed on replacing and/or restoring public transportation's aging assets and infrastructure. To ensure agencies' assets comply with a state of good repair, the Federal Transit Administration (FTA) established a "needs-based formula" program for funding as well as new asset maintenance requirements. The bill authorized the following national funding levels relative to this priority:[25]

- State of Good Repair Formula Apportionment - $2 billion based on formula high intensity fixed guideway and high intensity motorbus

MAP-21 also expands safety guidelines to encompass bus-only agencies. Previously, agencies that operated rail systems were the only agencies required to develop safety plans and comply with national guidelines. But over the next two years, FTA will be rolling out its regulations and minimum standards for bus agencies' safety plans. FTA's Safety Oversight Program Formula Apportionment is $18.5 million nationwide including $1.12 million for Pennsylvania, which is established on a formula of base tier, modal tier, passenger miles, vehicle revenue miles, directional miles.[26]

State Funding

ACT 89, implemented in 2014, increased funding for all transportation by $2.3 billion annually. This includes an additional $1.65 billion per year for highway and bridges and about $480 million per year for public transit. The new transportation package eliminates the flat 12-cent gas tax uncaps the wholesale, Oil Company Franchise Tax (OCFT). Funding for public transportation operations, sourced by Turnpike funds, will eventually shift to sales tax on motor vehicles as the primary source. Turnpike revenues will be used to help fund transit capital projects until the Turnpike as a revenue source for transit operating and capital sunsets in 2021, according to the Act.

The full increase in funding will be realized by 2018 with some fees adjusted for inflation over time. The Commonwealth anticipates that this increased investment will help transit agencies evade inevitable service cuts and meet critical capital needs. Like the FTA's focus on State of Good Repair, one of ACT 89's objectives is to "maximize the benefits of capital

[24] http://www.progressiverailroading.com/passenger_rail/news/APTA-MAP21-extension-bill-falls-short-of-infrastructure-needs--44517
[25] http://www.fta.dot.gov/12853_16495.html
[26] http://www.fta.dot.gov/12853_16495.html

investment for all modes of transportation" by providing funds for initiatives that improve transit infrastructure thereby improving the effectiveness of the transit network.

The ACT also encourages investments in alternative energy projects. As such, the Commonwealth authorized up to $60 million from 1514 discretionary capital for these project types as well as establishment of an "Alternative Energy Capital Investment Program for public transportation providers to invest in equipment and facility upgrades to utilize alternative technologies such as hybrid and natural gas."[27]

Pennsylvania's 2015 Transportation Program Financial Guidance document projected increases in state funding from 2015 to 2018 but indications draft 2017 guidance indicates a 7.5 % per year decline in state funding is anticipated from 2018 to 2020 due to additional costs associated with the State Police pension fund. Therefore for purposes of this plan, state revenue declines to 2020 and then continues with no change from 2021 to 2040.

Estimated Revenue for the Plan

As noted above, a short term decline in state revenue is projected with no change in federal funding over the term of the plan. Based on financial guidance distributed by the Program Center a three percent YOE was used for all project estimates.

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 $1.7 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***

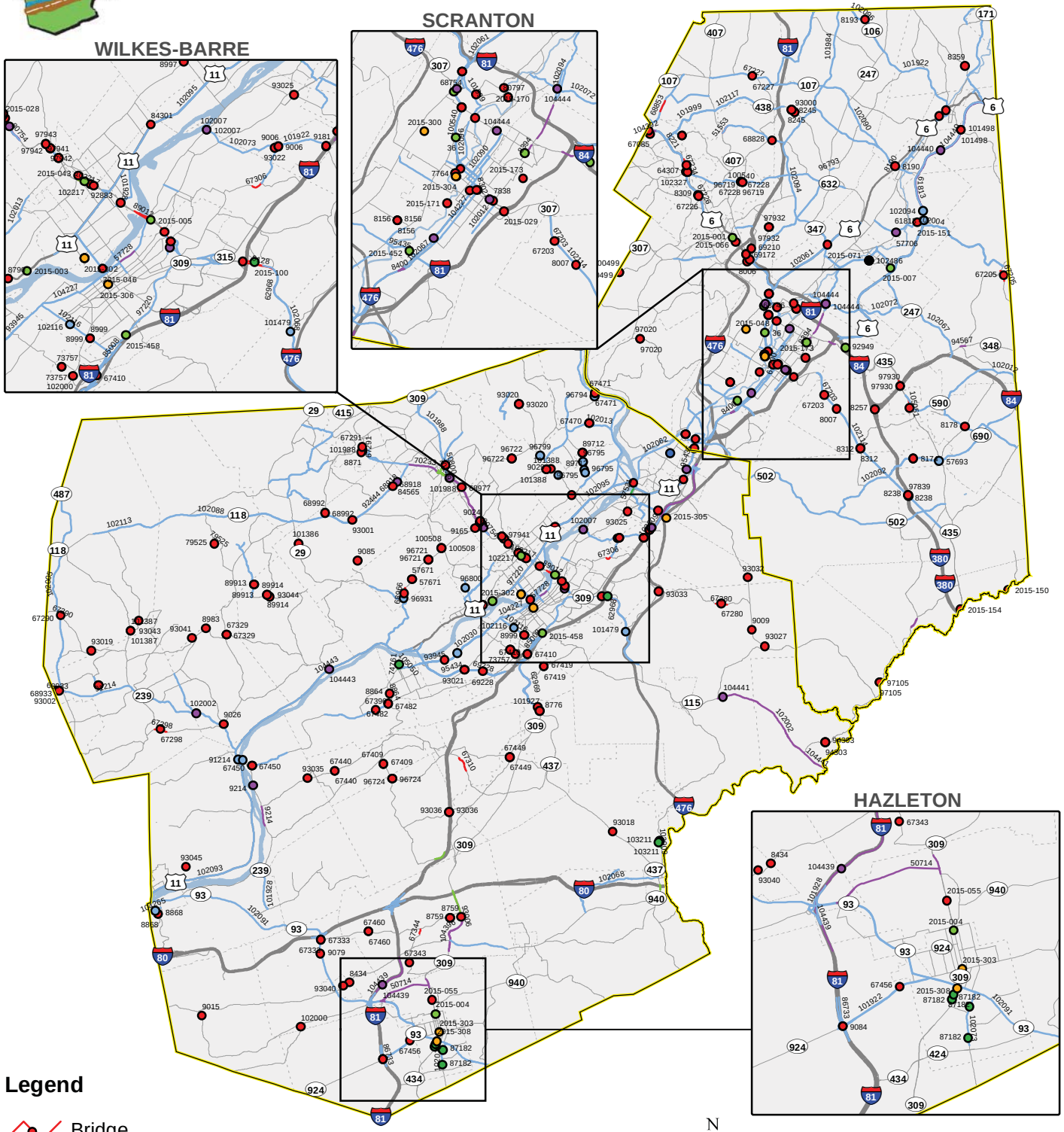
[27] http://www.dot.state.pa.us/public/pdf/TRANSPLAN/FINAL_Trans_Funding_Plan_Summary.pdf

Projects on the Plan

Figure 4.12.1 present the projects on the fiscally constrained Long Range Transportation Plan by project category. This list is based on the prioritization process noted above along with consultation with the MPO and will be used in guiding the MPO through the next Transportation Improvement Program update.

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

FIGURE 4.12.1
PROJECTS



Legend

- Bridge
- Congestion
- Transportation Enhancement
- Highway
- Safety Improvement
- Transit
- Study
- Rail Highway Grade Crossing

McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
4WARD PLANNING
DRIVE ENGINEERING

Table 4.12.1 Revenue

FUNDING		2015	2016	2017	2018	2019-2020	2021-2022	2023-2026	2027-2040	TOTALS
Base Allocation		61,722,000	66,378,000	72,399,000	69,701,175	132,103,047	129,794,721	259,589,441	908,563,045	1,700,250,429
Federal Transit (Capital)		5,671,000	5,671,000	5,671,000	5,671,000	11,342,000	11,342,000	22,684,000	79,394,000	147,446,000
State Transit (Operating)		14,837,000	14,837,000	14,837,000	14,837,000	29,674,000	29,674,000	59,348,000	207,718,000	385,762,000
NHPP Allocation		17,886,000	17,886,000	17,886,000	17,886,000	35,772,000	35,772,000	71,544,000	250,404,000	465,036,000
STP Allocation		6,133,000	6,133,000	6,133,000	6,133,000	12,266,000	12,266,000	24,532,000	85,862,000	159,458,000
STP-Urban		6,211,000	6,211,000	6,211,000	6,211,000	12,422,000	12,422,000	24,844,000	86,954,000	161,486,000
State Highway		12,200,000	16,496,000	22,010,000	20,359,250	36,252,190	34,839,767	69,679,533	243,878,366	455,715,105
State Bridge		9,942,000	10,302,000	10,809,000	9,998,325	17,803,267	17,109,634	34,219,267	119,767,436	229,950,929
Off-System Bridge		3,152,000	3,152,000	3,152,000	2,915,600	5,191,590	4,989,321	9,978,641	34,925,244	67,456,395
HSIP		2,375,000	2,375,000	2,375,000	2,375,000	4,750,000	4,750,000	9,500,000	33,250,000	61,750,000
CMAQ		3,439,000	3,439,000	3,439,000	3,439,000	6,878,000	6,878,000	13,756,000	48,146,000	89,414,000
TAP		384,000	384,000	384,000	384,000	768,000	768,000	1,536,000	5,376,000	9,984,000
										0
										0
TOTAL		61,722,000	66,378,000	72,399,000	69,701,175	132,103,047	129,794,721	259,589,441	908,563,045	1,700,250,429
2015 to 2017 $ and 2018 non-State $ based on Pennsylvania's 2015 Transportation Program Fiancial Guidance										
2018 to 2020 $ assume a 7.5% decline/year in State funds (State Highway, Bridge, Off-System Bridge)										
0% increase in Federal Funds from 2019-2040, and State funds from 2021 to 2040										

Table 4.12.2 Expenditures

EXPENDITURES	2015	2016	2017	2018	2019-2020	2021-2022	2023-2026	2027-2040	TOTALS
NHPP PROJECTS	82,390,943				35,348,870	27,456,510	61,870,370	155,325,940	362,392,633
STP/STU PROJECTS	49,480,623				22,313,640	12,872,720	38,678,650	138,668,460	262,014,093
STATE HIGHWAY PROJECTS	70,942,080				36,212,000	27,087,650	55,247,170	62,324,140	251,813,040
STATE BRIDGE PROJECTS	38,309,923				17,559,890	15,307,570	33,475,640	108,526,909	213,179,932
OFF-SYSTEM BRIDGE PROJECTS	9,929,667				5,030,670	4,936,400	8,635,670	11,298,070	39,830,477
SAFETY (HSIP) PROJECTS	12,478,838				4,551,830	3,011,580	8,527,670	14,087,460	42,657,378
CONGESTION (CMAQ) PROJECTS	12,514,750				5,947,150	5,868,170	12,911,000	15,229,410	52,470,480
TRANSPORTATION ALTERNATIVE PROJECTS	768,000				0	0	0	0	768,000
NHPP RESERVE	2,188,677				423,130	8,315,490	9,673,630	95,078,060	115,678,987
STP/STU RESERVE	1,511,085				2,374,360	11,815,280	10,697,350	34,147,540	60,545,615
STATE HIGHWAY RESERVE	1,613,920				40,190	7,752,117	14,432,363	181,554,226	205,392,815
STATE BRIDGE RESERVE	4,987,507				243,377	1,802,064	743,627	11,240,527	19,017,102
OFF-SYSTEM BRIDGE RESERVE	3,121,433				160,920	52,921	1,342,971	23,627,174	28,305,418
SAFETY (HSIP) RESERVE	1,641,162				198,170	1,738,420	972,330	19,162,540	23,712,622
CONGESTION (CMAQ) RESERVE	1,241,250				930,850	1,009,830	845,000	32,916,590	36,943,520
TAP RESERVE	768,000				768,000	768,000	1,536,000	5,376,000	9,216,000
TOTAL PROJECTS	276,814,824				126,964,050	96,540,600	219,346,170	505,460,389	1,225,126,033
TOTAL RESERVE	17,073,034				5,138,997	33,254,121	40,243,271	403,102,656	498,812,079
TOTAL PROJECTS + RESERVE	293,887,858				132,103,047	129,794,721	259,589,441	908,563,045	1,723,938,112
	108.8%				100.0%	100.0%	100.0%	100.0%	
TOTAL ALLOCATION	270,200,175				132,103,047	129,794,721	259,589,441	908,563,045	1,700,250,429
TRANSIT PROJECTS	43,487,000				62,554,021	26,523,923	43,533,533	102,646,179	278,744,656
TRANSIT RESERVE	-				-	-	-	-	-
TOTAL TRANSIT PROJECTS +RESERVE	43,487,000				62,554,021	26,523,923	43,533,533	102,646,179	278,744,656
	53.0%				152.5%	64.7%	53.1%	35.8%	
TOTAL TRANSIT ALLOCATION	82,032,000				41,016,000	41,016,000	82,032,000	287,112,000	533,208,000

Chapter 5
OUTREACH & COORDINATION

Chapter Five – Outreach & Coordination

Public Participation Goals & Objectives

As part of any development or update to a Long-Range Transportation Plan (LRTP), all Metropolitan Planning Organizations (MPO) are required to provide opportunities for public participation and comment prior to adoption of the final plan. For Lackawanna and Luzerne Counties, the MPO efforts to solicit public opinion and input were initiated early in the update process, and touched on each of the four phases of the LRTP development process. The LLTS MPO's public participation goals and objectives are as follows:

- Provide timely and reasonable access to information about transportation issues and processes.
- Seek out and consider the needs of all segments of the region's population, including those traditionally underserved by existing transportation systems.
- Make public information (technical information and meeting notices) easily accessible and understandable, including the use of visualization techniques and electronic formats.
- Hold public meetings at convenient and accessible locations and times.
- Periodically review the effectiveness of the Public Participation Plan and strategies to ensure a full and open process.

The Lackawanna-Luzerne Transportation Study MPO (LLTS MPO) launched a proactive public outreach initiative comprised of a combination of strategies from its existing and updated 2015 Public Participation Plans (PPP) to gather valuable input from key stakeholders, and to engage community members in and educate them about the importance of the LRTP and the update process. In addition to establishing an ongoing dialogue with the public, coordination with the regulatory agencies as a part of the planning and transportation plan development process provided the MPO with essential information and guidance over the course of the overall planning effort.

The LLTS MPO also relied on the outcomes and feedback from the community members to ensure that the final updated plan reflects the counties' collective view for the future of the region. The following information is a summary of the various public participation activities implemented by the LLTS MPO in the LRTP update process.

The Public Participation Strategy

The LLTS MPO PPP was undergoing an update at the same time as the LRTP; therefore the LLTS MPO enjoyed the benefit of utilizing familiar strategies and resources from the previous plan as well as new strategies designed to support the MPO's goals for broadening the reach and effectiveness of its public outreach efforts. The public participation strategy for the update of the LRTP was comprehensive in its engagement of the community members throughout the planning process, and also included unique elements to ensure compliance with federal Environmental Justice/Title VI outreach requirements.

In an effort to establish and maintain an ongoing dialogue with key stakeholders, the public participation strategy actively engaged the MPO Committees; the Transportation Advisory, Technical and Coordinating Committees. These committees are comprised of technical staff; state, county, and municipal agency and resource personnel; elected officials; community leaders; educational institutions; business organizations; media outlets; and local and regional stakeholders. They were called upon for specific purposes throughout the planning process to provide support and guidance regarding the overall development of the updated plan.

The MPO also launched a proactive communications effort to support the dissemination of information to the public-at-large throughout the two counties. Several avenues of communications were utilized, including electronic media such as mass email notifications, online surveys, PowerPoint presentations, and electronic versions of planning documents posted on the MPO website to enhance public accessibility. Direct dialogue and interaction with community members representative of a variety of transportation interests throughout the two counties also occurred through targeted public coordination activities like the Transportation Issues Forums, and an Environmental Justice (EJ) meeting. These events were held in addition to the regularly-scheduled working committee meetings and public information meetings.

Public Participation and the LRTP Update Process

Public participation activities were initiated at the beginning of the LRTP update process, and continued through the preparation of the final version of the document in various formats. Specific activities were employed at key milestones within each phase of the plan to facilitate data collection, feedback, and public comment. The Phases of the LRTP update process and related activities are summarized below:

1. **Data Collection.** The Data Collection Phase included two stakeholder-focused **Transportation Issues Forums**, presentations to the MPO's Coordinating and Technical Committees, and one Special Interest Group Meeting – the **Environmental Justice Workshop**.

2. **Visioning.** The Visioning Phase consisted of three MPO Steering Committee meetings to revisit the plan vision and its framework, and project scoring and ranking criteria, and transportation project ranking meetings.

3. **Draft Plan.** The Draft Plan Phase consisted of presentations to the MPO Coordinating and Technical Committees; agency coordination and two public information meetings held during the Draft Updated LRTP (and Public Participation Plan) Public Review and Comment period.

4. **Final Plan.** The Final Plan Phase consisted of one presentation to the MPO's Coordinating and Technical Committees, and their official adoption of the final version of the Updated Long-Range Transportation Plan.

Additional detail pertaining to the special interest group meetings noted above, and other public participation activities are addressed in the following content.

Transportation Issues Forum

In order to solicit input from key transportation stakeholders during the Data Collection Phase, the LLTS MPO held two Transportation Issues Forums (TIFs) on Thursday, April 2, 2015. The two sessions were conducted on the same day – one in each County. The morning session was held in Lackawanna County, and an afternoon session was held in Luzerne County. A letter of invitation was emailed to interested parties two-weeks in advance of the event, and invitees were encouraged to select the session they preferred to attend – or to consider attending both. An estimated 40 individuals total responded to the invitation. The logistics of each meeting are conveyed in the table below:

Transportation Issues Forum (TIF) Meetings

	Date	Time	Location
Lackawanna County Session	April 2, 2015	9:00 a.m. – 11:30 a.m.	Scranton Cultural Center – Masonic Temple Scranton, PA
Luzerne County Session	April 2, 2015	1:30 p.m. – 4:00 p.m.	Forty Fort Borough Building Community Room Forty Fort, PA

The TIF meeting discussion topics covered all modes of transportation; namely: automobiles and trucks, freight and passenger rail, public transportation, bicycle and pedestrian, and aviation. The majority of the participants, who represented various transportation-related interests and other stakeholder groups, were active and engaged in voicing their input during both sessions. While the afternoon session proved to have more attendees vocalizing their thoughts on automobile and truck issues, both sessions were alike in the attendees' support and interests in public transportation and bicycle/pedestrian issues.

Discussion regarding both motorized and non-motorized transportation issues that exists throughout the bi-county region was the focus of the meetings. This feedback was documented during each session, and later analyzed and compiled for inclusion in the plan development process. To reach those invitees who were unable to attend, and to also provide the opportunity for input from other interested community members, the MPO launched an online survey which remained available for two weeks following the meetings. The survey asked questions that were specific to the type of information the MPO was seeking regarding local transportation issues and concerns. Feedback received from the survey was combined with the meeting feedback for inclusion in the plan development process.

The following organizations were represented at one or both of the Transportation Issues Forums:

- Around Town Bicycles
- Career Technology Center of Lackawanna County
- City of Hazleton
- City of Pittston
- City of Scranton
- City of Wilkes-Barre
- Earth Conservancy

- Forty Fort Borough
- Hanover Township
- Luzerne County
- Lackawanna County
- Lackawanna County Community Relations Office
- Lackawanna County Convention and Visitors Bureau
- Luzerne County Planning Commission
- Lackawanna County Planning Commission
- Lackawanna County Commissioners' Office
- Lackawanna Heritage Valley Authority
- Lackawanna River Corridor Association
- Luzerne County EMA
- Luzerne County Transit Authority
- NEPA Alliance
- North Branch Land Trust
- PennDOT, District 4-0
- Pennsylvania Environmental Council

Environmental Justice (EJ) Workshop

The LLTS MPO conducted an Environmental Justice (EJ) Workshop on September 24, 2015 at the Greater Pittston Chamber of Commerce in Pittston, PA. The primary purpose of the meeting was to solicit input on transportation issues from a range of key stakeholders who, by the nature of their organization or services provided, could provide input on the potential needs and/or concerns of various segments of the environmental justice and traditionally underserved populations within the two-county region of the MPO. The meeting also featured a mapping exercise, where attendees were encouraged to engage in identifying potential issues or concerns on 11 x 17 copies of mapping that may be associated with the traditionally and/or potentially underserved populations within the two-county area. Those in attendance placed an emphasis on improvements in public transportation for such populations. The information gathered would be used to support the MPO's efforts to shape an updated LRTP representative of the diversity of the bi-county populations as well as their transportation needs.

The secondary purpose of the meeting was to ascertain the most effective avenues of communications for these specific audiences in particular, so that the MPO could ensure their communications for the LRTP and future efforts would be conducted in the most equitable manner available.

While the primary focus of this workshop was the LRTP update, it was also an opportune time to introduce the MPO's draft updated Public Participation Plan which included an updated Title VI Plan and Limited-English Proficiency (LEP) Plan. The meeting participants were encouraged to review and provide comments on all of these documents during the Public Review and Comment Period which was scheduled to take place September 28 through November 12.

The following organizations and agencies were represented at the Environmental Justice meeting:

- City of Hazleton
- Federal Highway Administration
- PennDOT District 4
- Lackawanna County Planning Commission
- Lackawanna Workforce Development Board
- Luzerne County Planning Commission
- Luzerne County Transportation Authority
- Mature Worker Program, Area Agency on Aging of Luzerne/Wyoming Counties

MPO Coordinating and Technical Committee Meetings

The LLTS MPO convened meetings with its Technical and Coordinating Committees to support the update of the LRTP routinely throughout the plan development process. Meetings were coordinated with the regular meeting schedules of the committees whenever possible. Occasionally, meetings were conducted via conference call and by using "Go to Meeting" technology to accommodate individual schedules, share documentation, and collect input immediately. These alternative meeting methodologies helped to keep the plan development process moving forward and on schedule. An abbreviated summary of the in-person committee meetings that were conducted and their purpose is provided below.

Two presentations were made to the MPO's Technical and Coordinating Committees during Phase 1. The first presentation on January 21, 2015 included a discussion on the background of the LRTP Update Process, the MPO's vision for land use and transportation and a review of project scoring and ranking criteria. The second meeting and presentation was held on March 26, 2015. At this time the discussion focused on long-term visioning and project scoring including an overview of the Decision Lens application.

Two MPO Committee meetings were held during Phase 2 for project ranking, and evolving from these meetings was the final project ranking criteria. The initial meeting was held on April 29, 2015; a second on July 1, 2015. These meetings included discussions of the project ranking criteria to be used for all projects on the current TIP and LRTP and incorporation of the EJ Title VI themes within those criteria.

A meeting was held with the MPO Coordinating and Technical membership to review the draft version of the LRTP on September 17, 2015. A presentation on the draft LRTP was made at the PennDOT- facilitated Agency Coordination Meeting (ACM) on October 28. The purpose of the ACM is to share highlights of the draft LRTP with resource agencies and to gather input on any environmental/cultural impacts of the plan and to share ideas on potential mitigation options.

The Public Review and Comment Period began on September 28th and continued through November 12. All comments received during the Public Review and Comment Period, at the ACM meeting, and at the public meetings were compiled, reviewed and as appropriate, integrated in to the final version of the Updated LRTP.

Public Meetings

Two public meetings were held during the Public Review and Comment Period for the Draft Updated LRTP as well as the Draft Updated PPP which also includes the draft Title VI Plan, and the Limited-English Proficiency (LEP) Plan. A meeting was held on Wednesday, November 4 in Luzerne County at the Luzerne County Courthouse; and a second meeting was held the following day on Thursday, November 5 at the Center for Public Safety in Lackawanna County. The objective of the meetings was three-fold; to provide the public with:

1) the opportunity to review each of the documents in detail,

2) the opportunity to hear a presentation on the development of the draft plans, the purpose of the meeting and their role in accomplishing the meeting goals; and

3) the opportunity to obtain answers to questions through interaction with representatives of the LLTS MPO.

For the purpose of this document, the remaining content in this section will focus on activities associated solely with the Draft LRTP.

Attendees were given the opportunity to review the draft documents in detail, and review informational display boards for the first half of the meeting. The remaining meeting time was reserved for a PowerPoint presentation which provided an overview of the draft plans. The presentation was delivered by a representative of the Luzerne and Lackawana County Transportation Planners, respectively. Meeting attendees had the option of completing comment forms at the meeting, taking a form home to be completed then submitting it later, or filling out the comment form online via SurveyMonkey and submitting their comments to the MPO electronically. Individuals could also deliver their written comments to the LLTS MPO in person, by way of a fax machine, or the US Postal Service. Public meeting attendees included representatives of the following organizations and agencies:

- The Times Leader
- Luzerne County Council
- NEPA Alliance
- AVP-Airport
- Wilkes Barre/Scranton International Airport
- Luzerne County Transportation Authority
- PennDOT District 4
- Luzerne County Planning Commission
- Lackawanna County Planning Commission
- Scranton Times-Tribune
- Martz
- Earth Conservancy
- City of Scranton
- Scranton Lackawanna Industrial Building Company
- Greater Scranton Chamber of Commerce

A more detailed summary of the public meetings is provided in the LLTS MPO's Updated PPP. All comments received during the Public Review and Comment Period, at the ACM meeting, and at the public meetings were compiled and reviewed by the LLTS MPO. A compilation of this information was then shared with the MPO's consultant project team, McCormick Taylor, and the team addressed the comments in the preparation of the final version of the Updated LRTP, as appropriate.

Appendix A

ENVIRONMENTAL JUSTICE BENEFITS AND BURDENS REPORT

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ENVIRONMENTAL JUSTICE

Background

Environmental Justice (EJ) is the overarching policy adopted in the United States for the "fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."[1] This report summarizes the activities, analyses, and outcomes that were completed as a part of the Lackawanna Luzerne Transportation Study Metropolitan Planning Organization (LLTS MPO) planning process in compliance with the EJ policy.

The following three federal acts and two executive orders define the principles of EJ, including the specific populations that are to be considered:

- *The Civil Rights Act of 1964, Title VI*, which prohibits discrimination on the basis of race, color, or national origin.
- The *Age Discrimination Act of 1975*, which prohibits discrimination on the basis of age.
- The *Americans with Disabilities Act of 1990*, along with the *Americans with Disabilities Act Amendments Act of 2008*, which prohibit discrimination on the basis of disabilities.
- *Executive Order 12898 on Environmental Justice (1994)*, which protects minority and low-income populations from disproportionately high and adverse impacts.
- *Executive Order 13166 on Improving Access to Services for Persons with Limited English Proficiency (2000)*, which aims to improve access to services for persons who have limited English proficiency.

The foundation of EJ was established in *Title VI of the Civil Rights Acts of 1964,* which states:

> *No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.*

Therefore, all recipients of Federal aid are required to certify, and the U.S. Department of Transportation (USDOT) must ensure, non-discrimination under *Title VI of the Civil Rights Act of 1964*. For the purposes of long-range transportation planning, Metropolitan Planning Organizations (MPOs) must specifically address EJ in the process of developing and advancing transportation programs and projects.

As a specific application of *Title VI*, *Executive Order 12898* required Federal agencies and recipients of Federal aid to states to specifically consider the impacts of its programs on minority and low-income populations:

> *Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.*
> and,

[1] U.S. EPA, Environmental Justice Webpage, http://www.epa.gov/oecaerth/environmentaljustice/, as accessed August 6, 2015.

> *Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.*

In 2011, the Federal Highway Administration (FHWA) issued an *Environmental Justice Emerging Trends and Best Practices Guidebook*. In 2012, the USDOT issued its *Final DOT Environmental Justice Order* and FHWA issued *Order 6640.23A FHWA Action to Address Environmental Justice in Minority Populations and Low-Income Populations*. In 2015, FHWA issued an *Environmental Justice Reference Guide.* These documents highlight three main EJ objectives:

- To identify, address, minimize, mitigate, and (preferably) avoid disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.

- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process by providing public involvement opportunities and dissemination of information, including meaningful access to public information concerning the human health or environmental impacts, when soliciting input from affected minority and low-income populations when considering alternatives during the planning and development of transportation infrastructure investments.

- To ensure that no person—particularly those of minority or low-income populations—is excluded from participating in, denied the benefits of, or in any other way subjected to discrimination under any program or activity receiving Federal assistance.

As defined by the USDOT *Final Environmental Justice Order*, adverse effects means "… the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to:

- Bodily impairment, infirmity, illness, or death
- Air, noise, and water pollution and soil contamination
- Destruction or disruption of man-made or natural resources.
- Destruction or diminution of aesthetic values.
- Destruction or disruption of community cohesion or a community's economic vitality, destruction or disruption of the availability of public and private facilities and services,
- Vibration.
- Adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations
- Increased traffic congestion, isolation, exclusion, or separation of minority or low-income individuals within a given community or from the broader community
- The denial of, reduction in, or significant delay in the receipt of, benefits of DOT programs, policies, or activities".

Disproportionately high and adverse effect on minority and low-income populations means an adverse effect that is: A) predominantly borne by a minority population and/or a low-income population; or B) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude that the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Identification of Minority, Low-Income, and Other Traditionally Underserved Populations

In response to the identified EJ policies, a distributive geographic analysis was conducted to identify the locations and concentrations of minority, low-income, and other traditionally underserved populations (TUP). The preparation of such a demographic profile describes the social composition of the MPO region and illustrates how demographic patterns vary spatially.

The identification of these populations is essential to establishing effective strategies for engaging them in the transportation planning process. When meaningful opportunities for interaction are established, the transportation planning process can effectively draw upon the perspectives of communities to identify existing transportation needs, localized deficiencies, and the demand for transportation services. Mapping of these populations not only provides a baseline for assessing impacts of the transportation investment program but also aids in the development of an effective public involvement program.

To demonstrate and substantially comply with the intent of *Title VI* and *Executive Order 12898*, the transportation planning process must also establish measures for assessing the Long-Range Transportation Plan and verifying that equitable access and mobility improvements are included in the transportation improvement program (TIP). As such, the mapping and datasets created through this exercise culminate in the "Benefits and Burdens Analysis"—the intent of which is to provide a measureable assessment of the transportation program's equity across the region's various populations.

Distributive Analysis Methodology

Datasets and mapping were assembled as a baseline inventory of demographic attributes for the following populations that are traditionally underserved by the transportation system:

- Minority
- Hispanic or Latino
- Low-Income (In-Poverty)
- Senior (Elderly)
- Disabled
- Those with limited English proficiency (LEP)
- Those with no personal vehicle available (zero-vehicle households)
- Female head of household with child

The primary and most comprehensive data source for information on these populations was the U.S. Census Bureau (2010 Census and 2009-2013 American Community Survey 5-Year Estimates), while data from the Department of Education's National School Lunch program was used to supplement and provide a more current data source for identifying low-income populations.

U.S. Census Data

Using a geographic information system, spatial and demographic data from the U.S. Census Bureau were compiled at various geographic level of detail—county, municipality, and census tract. **Table 1** provides a summary of the 2009-2013 U.S. Census American Community Survey (ACS) data at the County and MPO levels. The population of the region has increased by approximately 2,500 people since the 2000 Census.

Table 1. Profile of Traditionally Underserved Populations in the LLTS MPO Region

	LLTS MPO Region			
	Lackawanna County	Luzerne County	Total Population	Regional Threshold (Average Concentration)
Data Universe: Total Population	214,275	320,827	535,102	
Non-Hispanic Minority Population [1]	11,867	16,905	28,772	*5.4%*
Hispanic or Latino Minority Population [2]	11,296	23,829	35,125	*6.6%*
Senior Population [3]	38,543	58,384	96,927	*18.1%*
Data Universe: Total Population for whom Poverty Status is determined	206,410	309,333	515,743	
Low-Income Population [4]	28,007	48,147	76,154	*14.8%*
Data Universe: Total Population Age 5 or Older	202,825	304,493	507,318	
Limited English Proficiency Population [5]	7,098	11,266	18,458	*3.6%*
Data Universe: Total Civilian Non-Institutionalized Population	210,916	313,431	524,347	
Disabled Population [6]	30,868	47,769	78,637	*15.0%*
Data Universe: Total Households	85,769	130,880	216,649	
Zero Vehicle Households [7]	8,818	14,162	22,980	*10.6%*
Female Head of Household with own Children [8]	5,576	9,533	15,109	*7.0%*

Source: U.S. Census Bureau, American Community Survey (ACS), 5-Year Estimates (2009-2013)

Notes:

1 Non-Hispanic Minority Population: Table B03002 Hispanic or Latino Origin – Calculated as "Not Hispanic or Latino" minus "White Alone"

2 Hispanic or Latino Population Table B03002 Hispanic or Latino Origin – Value given as "Hispanic or Latino"

3 Senior Population: Table S0103, ACS Population 65 Years and Over in the United States – Value given as "Total Population: 65 years and over".

4 Low-Income Population: Table S1701, Poverty Status in the Past 12 Months – Value given as "Population for whom poverty status is determined: Below poverty level".

5 Limited English Proficiency Population: Table S1601, Language Spoken At Home – Value given as "Population 5 years and over: Language other than English: Speak English less than "very well".

6 Disabled Population: Table S1810, Disability Characteristics – Value given as "Total civilian non-Institutionalized population: With a disability".

7 Zero Vehicle Households: Table B08201, Household Size by Vehicles Available – Value given as "Total Households: No vehicle available".

8 Female Head of Household with Children: Table DP02, Selected Social Characteristics in the United States, Households by Type – Value given as "Family households: Female householder, no husband present family: With own children under 18 years".

Census data at the tract level was chosen for use in all distributive analyses. Mapping of Census data was completed individually for each population according to the concentration of the population within each geographic area (tract or county). The mapped concentration is represented using 5 classes, which are related to the Regional Average Concentration (Regional Threshold) shown in **Table 1**, above.

Class 1	0 to ½ of the Regional Threshold
Class 2	½ of the Regional Average to Regional Threshold
Class 3	Regional Threshold to 1½ times the Regional Threshold
Class 4	1½ times the Regional Threshold to 2 times the Regional Threshold
Class 5	Greater than 2 times the Regional Threshold

While this mapping was generated at the Census tract level, municipal-level summaries are also provided in the following breakout sections that identify and interpret the distributive analysis.

Minority Populations

Title VI of the *Civil Rights Act of 1964* prohibits discrimination on the basis of race, color, or national origin. Specifically, minority populations represent the following:

- **Black** - a person having origins in any of the black racial groups of Africa.
- **Asian** - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- **American Indian and Alaskan Native** - a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition.
- **Native Hawaiian or Other Pacific Islander** - a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- **Other** - Persons who identified themselves some other race besides those identified above have been classified as "Other" in the 2000 US Census, and included as minorities when identifying minority populations in this region.
- **Two or more Races** - For the first time in the 2000 US Census, people were allowed to identify themselves as belonging to multiple races. For calculation purposes, persons identifying themselves as having two or more races have been included as part of the minority population.

The Census Bureau adheres to standards issued by the Office of Management and Budget (OMB) which specify that race and Hispanic origin (also known as ethnicity) are two separate and distinct concepts. These standards generally reflect a social definition of race and ethnicity recognized in this country, and they do not conform to any biological, anthropological, or genetic criteria.

Ethnic minority population includes those who self-identify as "Hispanic or Latino (of any race)", which refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race. This classification method is followed in this document.

Table 2 summarizes the race characteristics for the LLTS MPO Region and the percentage of the total population that belongs to a minority population. The LLTS MPO regional average for minority population (not including Hispanic or Latino) was found to be 5.4% based on the 2009-2013 American Community Survey 5-Year Estimates, approximately a one percent increase from the 4.0% identified by the 2000 U.S. Census. The black, Asian, and two or more races population groups had the largest population increases since the 2000 Census (each population approximately doubled in size).

Table 2. Racial Populations (not Hispanic or Latino) in the LLTS MPO Region

County	Total Population	White alone	Black alone	American Indian and Alaskan Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races	% Minority
Lackawanna	214, 275	191,112	5,185	289	3,845	49	338	2,161	5.5%
Luzerne	320, 827	280,093	10,196	409	3,036	49	188	3,027	5.2%
Total	535,102	471,205	15,381	698	6,881	98	526	5,188	5.4%

Source: U.S. Census Bureau, 2009-2013 ACS 5-Year Estimates. Table B03002, Hispanic or Latino Origin by Race

As illustrated in **Figure 1**, the urbanized areas of Scranton, Wilkes-Barre, and Hazleton have the largest populations of minorities in the LLTS MPO region. Butler Township, just north of Hazleton, is another focal point for minorities and may reflect the Keystone Job Corps facility. Jackson Township, located to the west of Wilkes-Barre, also has a high minority population likely due to the inclusion of the State Correctional Institution at Dallas. Similarly, Newport Township, located southwest of Wilkes-Barre, has a higher than average minority population likely due to the inclusion of the State Correctional Institution at Retreat. **Tables 3 and 4** summarize the population and concentration of minority persons by municipality. Hazleton City and West Hazleton Borough have seen a significant increase (approximately 40%) in the minority population since the 2000 Census.

Table 3. Municipalities with the Highest Minority Populations

	Municipality	Total Population	Total Minority Population
1	Scranton City	75,982	15,684
2	Wilkes-Barre City	41,374	11,777
3	Hazleton City	25,233	11,661
4	West Hazleton Borough	4,570	2,269
5	Kingston Borough	13,151	1,759
6	Jackson Township	4,623	1,409
7	Dunmore Borough	14,031	1,130
8	Hazle Township	9,557	893
9	Newport Township	5,407	840
10	Butler Township	9,295	830
11	Carbondale City	8,880	724
12	South Abington Township	9,081	711
13	Taylor Borough	6,243	705
14	Nanticoke City	10,442	664
15	Blakely Borough	6,557	611
16	Exeter Borough	5,637	610
17	Hanover Township	11,066	584
18	Wilkes-Barre Township	2,980	522
19	Plymouth Borough	5,936	475
20	Old Forge Borough	8,299	468

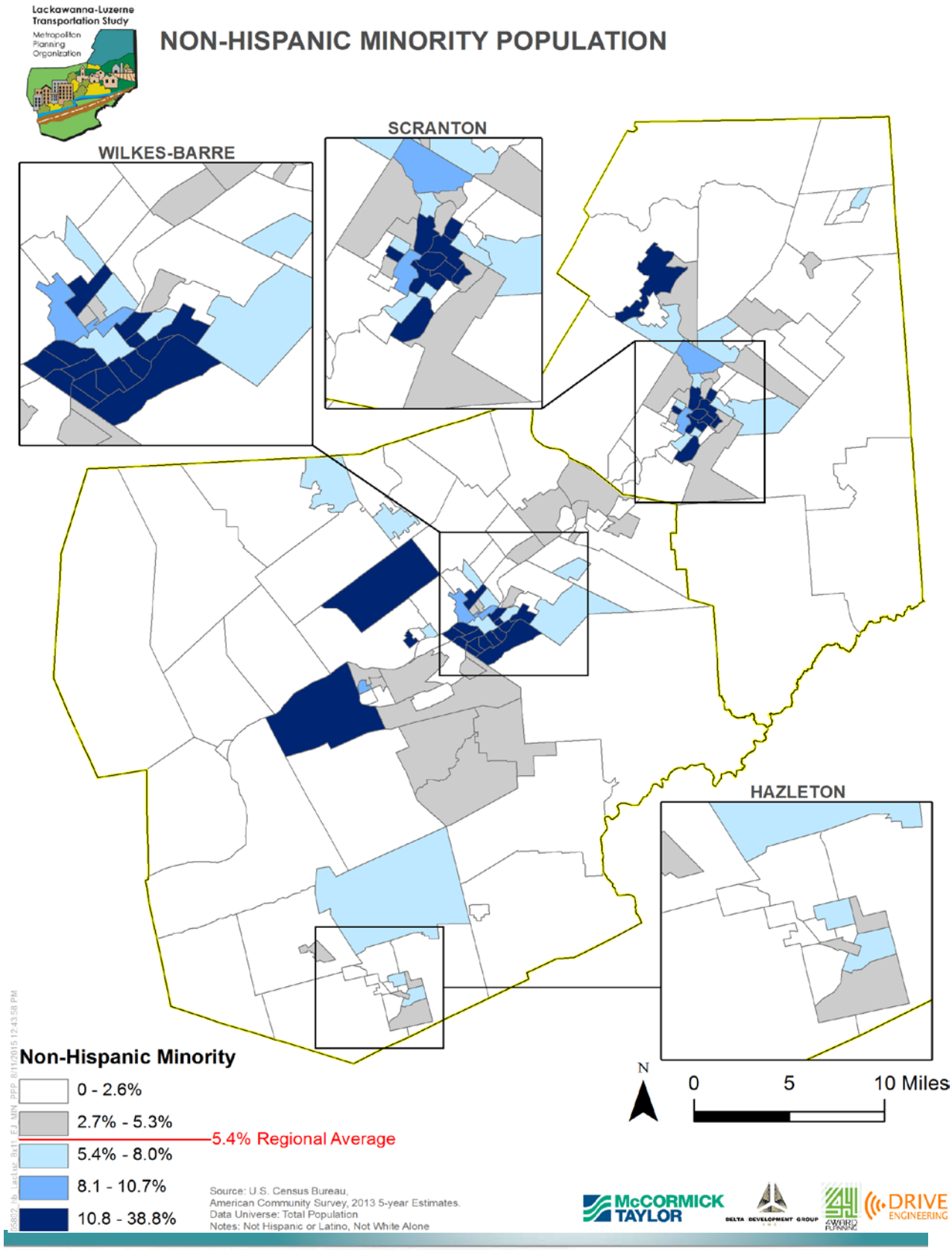
Source: U.S. Census Bureau, 2009-2013 ACS 5-Year Estimates

Table 4. Municipalities with the Highest Concentration of Minority Populations

	Municipality	Total Population	% Minority Population
1	West Hazleton Borough	4,570	49.6
2	Hazleton City	25,233	46.2
3	Jackson Township	4,623	30.5
4	Wilkes-Barre City	41,374	28.5
5	Scranton City	75,982	20.6
6	Wilkes-Barre Township	2,980	17.5
7	Newport Township	5,407	15.5
8	Kingston Borough	13,151	13.4
9	Taylor Borough	6,243	11.3
10	Luzerne Borough	2,849	10.9
11	Exeter Borough	5,637	10.8
12	Nescopeck Borough	1,869	10.8
13	Laflin Borough	1,450	9.8
14	Hazle Township	9,557	9.3
15	Waverly Township	1,609	9.3
16	Blakely Borough	6,557	9.3
17	Thornhurst Township	1,069	9.3
18	Edwardsville Borough	4,803	9.2
19	Carbondale Township	1,206	9.1
20	Butler Township	9,295	8.9

Source: U.S. Census Bureau, 2009-2013 ACS, 5-Year Estimates.

FIGURE 1



Lackawanna-Luzerne Transportation Study MPO

Table 5 summarizes the Hispanic or Latino Minority population for the LLTS MPO Region and the percentage of the total population that identifies as Hispanic or Latino. Approximately 7% of the LLTS MPO identifies as Hispanic or Latino.

Table 5. Hispanic or Latino Minority Populations in the LLTS MPO Region

County	Total Population	# of Persons Hispanic or Latino	% Hispanic or Latino
Lackawanna	214,275	11,296	5.3%
Luzerne	320,827	23,829	7.4%
Total	535,102	35,125	6.6%

Source: U.S. Census Bureau, 2009-2013 ACS, 5-Year Estimates. Table B03002 Hispanic or Latino Origin

Refer to **Figure 2**, Hispanic or Latino Population. The Hispanic or Latino populations are concentrated around the urbanized areas of Wilkes-Barre, Scranton, and Hazleton, but also have populations above the regional threshold in the areas of Plymouth Township, Jackson Township (SCI Dallas), Clarks Green Borough, and Dunmore Borough.

Tables 6 and 7 summarize the population and concentration of Hispanic or Latino persons by municipality.

Table 6. Municipalities with the Highest Hispanic or Latino Minority Populations

	Municipality	Total Population	Total Hispanic or Latino Minority Population
1	Scranton City	75,982	15,684
2	Wilkes-Barre City	41,374	11,777
3	Hazleton City	25,233	11,661
4	West Hazleton Borough	4,570	2,269
5	Kingston Borough	13,151	1,759
6	Jackson Township	4,623	1,409
7	Dunmore Borough	14,031	1,130
8	Hazle Township	9,557	893
9	Newport Township	5,407	840
10	Butler Township	9,295	830
11	Carbondale City	8,880	724
12	South Abington Township	9,081	711
13	Taylor Borough	6,243	705
14	Nanticoke City	10,442	664
15	Blakely Borough	6,557	611
16	Exeter Borough	5,637	610
17	Hanover Township	11,066	584
18	Wilkes-Barre Township	2,980	522
19	Plymouth Borough	5,936	475
20	Old Forge Borough	8,299	468

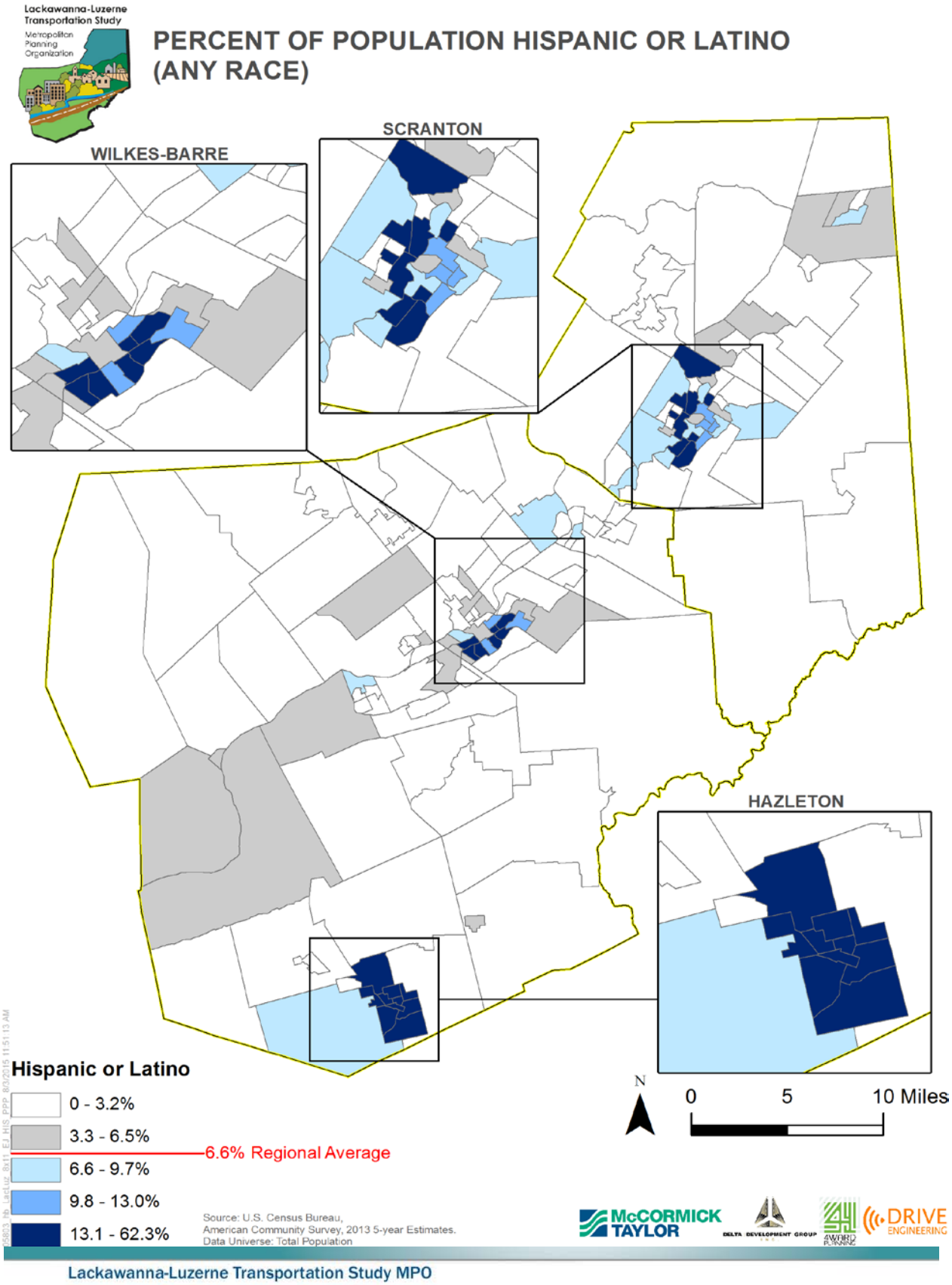
Source: U.S. Census Bureau, 2009-2013 ACS 5-Year Estimates

Table 7. Municipalities with the Highest Concentration of Hispanic or Latino Minority Populations

	Municipality	Total Population	% Hispanic or Latino Minority Population
1	West Hazleton Borough	4,570	47.9
2	Hazleton City	25,233	42.5
3	Wilkes-Barre City	41,374	12.9
4	Scranton City	75,982	9.7
5	Carbondale Township	1,206	9.1
6	Taylor Borough	6,243	8.7
7	Hazle Township	9,557	8.5
8	Nescopeck Borough	1,869	7.9
9	Covington Township	1,771	7.5
10	Exeter Borough	5,637	6.9
11	Glenburn Township	1,225	6.4
12	Elmhurst Township	1,141	6.4
13	Shickshinny Borough	749	5.7
14	Jackson Township	4,623	5.4
15	Thornhurst Township	1,069	5.2
16	Blakely Borough	6,557	5.1
17	Carbondale City	8,880	4.7
18	Freeland Borough	3,512	4.3
19	Newport Township	5,407	4.3
20	Luzerne Borough	2,849	3.9

Source: U.S. Census Bureau, 2009-2013 ACS, 5-Year Estimates.

FIGURE 2


Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
PERCENT OF POPULATION HISPANIC OR LATINO (ANY RACE)
SCRANTON
WILKES-BARRE
HAZLETON
Hispanic or Latino
0 - 3.2%
3.3 - 6.5%
6.6% Regional Average
6.6 - 9.7%
9.8 - 13.0%
13.1 - 62.3%
N
0
5
10 Miles
Source: U.S. Census Bureau,
American Community Survey, 2013 5-year Estimates.
Data Universe: Total Population
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Low-Income Populations

Executive Order 12898 on Environmental Justice and the USDOT *Final Order on Environmental Justice* specifically identify low-income populations as a group to be considered in the long-range transportation plan when identifying and addressing the impacts of the transportation investment program. USDOT defines "low-income populations" as those having a median household income that is at or below the Department of Health and Human Services' poverty guidelines. Since information from the U.S. Census Bureau informs these guidelines, the Census's "In-Poverty Status" indicator was used to identify low-income populations.[2]

Table 8 gives the LLTS MPO region low-income population and the percentage of the population below the poverty level, according to data from the 2009-2013 ACS, 5-Year Estimates. To prevent bias, the percentage below poverty level is calculated using the "Population for which Poverty Status is determined". The Census determination of poverty level is based on family size, composition, and income. If a family's total income is less than the threshold for that family type, then every person in the family is considered to be "in-poverty". While the income thresholds do not vary by geographic region, they are updated annually according to the Consumer Price Index. The LLTS MPO regional concentration for low-income persons was found to be 14.8%, which is approximately a 4% increase above the population below poverty level identified in the 2000 Census (10.9%).

Table 8. Low-Income Populations in the LLTS MPO Region

County	Total Population (for which poverty status is determined)	# of Persons Below Poverty Level	% Below Poverty Level
Lackawanna	206,410	28,007	13.6%
Luzerne	309,333	48,147	15.6%
Total	515,743	76,154	14.8%

Source: U.S. Census Bureau, 2009-2013 ACS, 5-Year Estimates. Table S1701, Poverty Status in the Past 12 Months – Value given as "Population for whom poverty status is determined: Below poverty level"

As illustrated in **Figure 3**, the largest low-income populations are generally located in the more urbanized areas of Scranton, Wilkes-Barre, and Hazleton, but census tracts above the regional threshold for low income populations also are present in Newport Township, Nanticoke, Township of Hanover, Pittston Township, Exeter Borough, Duryea Borough, Throop Borough, Jermyn Borough, and Carbondale Township. **Tables 9 and 10** summarize the population and concentration of low-income persons by municipality. Edwardsville Borough has the highest concentration of low-income persons and was also the highest according to the 2000 Census data. West Hazleton Borough has the second highest low-income population, but did not even rank within the top 20 municipalities based on the 2000 Census data.

[2] In-poverty status serves as a proxy for identifying persons and households with low-income. Therefore, the terms "in-poverty" and "low-income" may be used interchangeably.

FIGURE 3

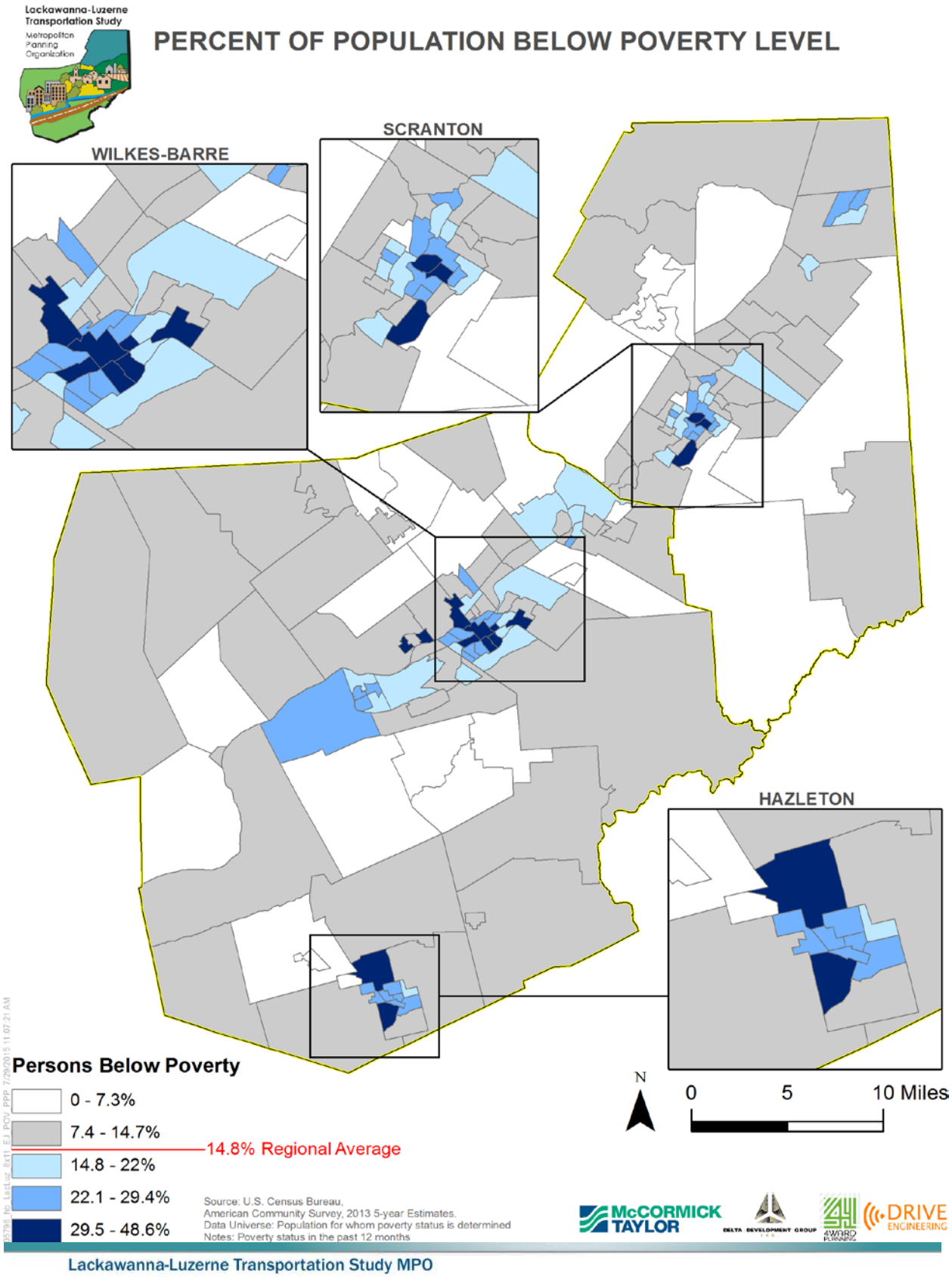
Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
PERCENT OF POPULATION BELOW POVERTY LEVEL
WILKES-BARRE
SCRANTON
HAZLETON
Persons Below Poverty
0 - 7.3%
7.4 - 14.7%
14.8% Regional Average
14.8 - 22%
22.1 - 29.4%
29.5 - 48.6%
N
0
5
10 Miles
Source: U.S. Census Bureau,
American Community Survey, 2013 5-year Estimates.
Data Universe: Population for whom poverty status is determined
Notes: Poverty status in the past 12 months
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Table 9. Municipalities with the Highest Low-Income Population

	Municipality	Total Population	Total In-Poverty Population
1	Scranton City	70,641	14,492
2	Wilkes-Barre City	37,976	10,517
3	Hazleton City	24,889	6,267
4	Nanticoke City	10,295	2,348
5	Carbondale City	8,653	2,032
6	Kingston Borough	12,639	1,890
7	Hanover Township	10,960	1,749
8	Plymouth Borough	5,931	1,560
9	Hazle Township	9,360	1,554
10	Edwardsville Borough	4,803	1,549
11	Dunmore Borough	13,279	1,419
12	Plains Township	9,600	1,380
13	Pittston City	7,711	1,372
14	West Hazleton Borough	4,556	1,306
15	Exeter Borough	5,521	1,081
16	Newport Township	4,256	1,040
17	Blakely Borough	6,308	884
18	Duryea Borough	4,920	840
19	Old Forge Borough	8,266	820
20	Archbald Borough	7,035	789

Source: U.S. Census Bureau, 2009-2013 ACS 5-Year Estimates.

Table 10. Municipalities with the Highest Concentration of Low-Income Population

	Municipality	Total Population	% In-Poverty Population
1	Edwardsville Borough	4,803	32.3
2	West Hazleton Borough	4,556	28.7
3	Wilkes-Barre City	37,976	27.7
4	Plymouth Borough	5,931	26.3
5	Luzerne Borough	2,849	25.7
6	Hazleton City	24,889	25.2
7	Newport Township	4,256	24.4
8	Carbondale City	8,653	23.5
9	Nanticoke City	10,295	22.8
10	La Plume Township	730	22.5
11	Wilkes-Barre Township	2,941	20.6
12	Scranton City	70,641	20.5
13	Exeter Borough	5,521	19.6
14	Pittston City	7,711	17.8
15	Covington Township	1,763	17.7
16	Throop Borough	4,090	17.1
17	Duryea Borough	4,920	17.1
18	Jermyn Borough	2,233	17.0
19	New Columbus Borough	196	16.8
20	Pringle Borough	987	16.8

Source: U.S. Census Bureau, 2009-2013 ACS 5-Year Estimates

Table S1701, Poverty Status in the Past 12 Months – Value given as "Population for whom poverty status is determined: Below poverty level".

Since poverty is typically an emphasized measure of community disadvantage, more recent data from the Pennsylvania Department of Education's Free and Reduced Price Lunch Program was obtained as a secondary indicator of low-income populations. The National School Lunch Program (NSLP), a federal and state reimbursement program, was created in 1946 to provide eligible students with free or reduced price lunches. To receive a reduced price lunch, household income must be below 185 percent of the federal poverty level and to receive a free lunch, household income must fall below 100 percent of the federal poverty level. NSLP eligibility data by school and school district is updated yearly and can be helpful in understanding a current view of poverty across the region.

The eligibility criteria are annually established by the United States Department of Agriculture (USDA). The USDA issued new federal guidelines for 2014 for free and reduced price lunches as shown in **Table 11**[3].

[3] Federal Register http://www.gpo.gov/fdsys/pkg/FR-2014-03-05/pdf/2014-04788.pdf, accessed August 7, 2015.

Table 11. Annual Income – NSLP Eligibility Guidelines Effective July 1, 2014 – June 30, 2015		
Family Size	Free Meals or Milk (100% of Poverty Guidelines)	Reduced Price Meals (185% of Poverty Guidelines)
One	$11,670	$21,590
Two	$15,730	$29,101
Three	$19,790	$36,612
Four	$23,850	$44,123
Five	$27,910	$51,634
Six	$31,970	$59,145
Seven	$36,030	$66,656
Eight	$40,090	$74,167
Each additional family member add	+ $4,060	+ $7,511

Source: USDA Food and Nutrition Service, School Meals, Income Eligibility Guidelines

Any public school, intermediate unit, charter school, area vocational technical or career technology school, public residential child care institution, and tax exempt non-public school or residential child care institution may apply to be an NSLP sponsor.[4]

A regional average of eligible students was established by summing the total number of students eligible for free and reduced price lunch in the MPO region, and dividing it by the total number of students enrolled in the schools.[5]

The results showed that 49.3 percent (regional average) of the total students enrolled in public schools are eligible for free and reduced price lunch. The regional average was used as a threshold for identifying those schools and school districts with a disproportionately high percentage of students who are eligible for the free and reduced price lunch program (**Figure 4**). Those schools that are not eligible to participate in NSLP were not included in the map. Those schools that were above the regional threshold are listed in **Table 12**, and those that were below the regional threshold are listed in **Table 13**.

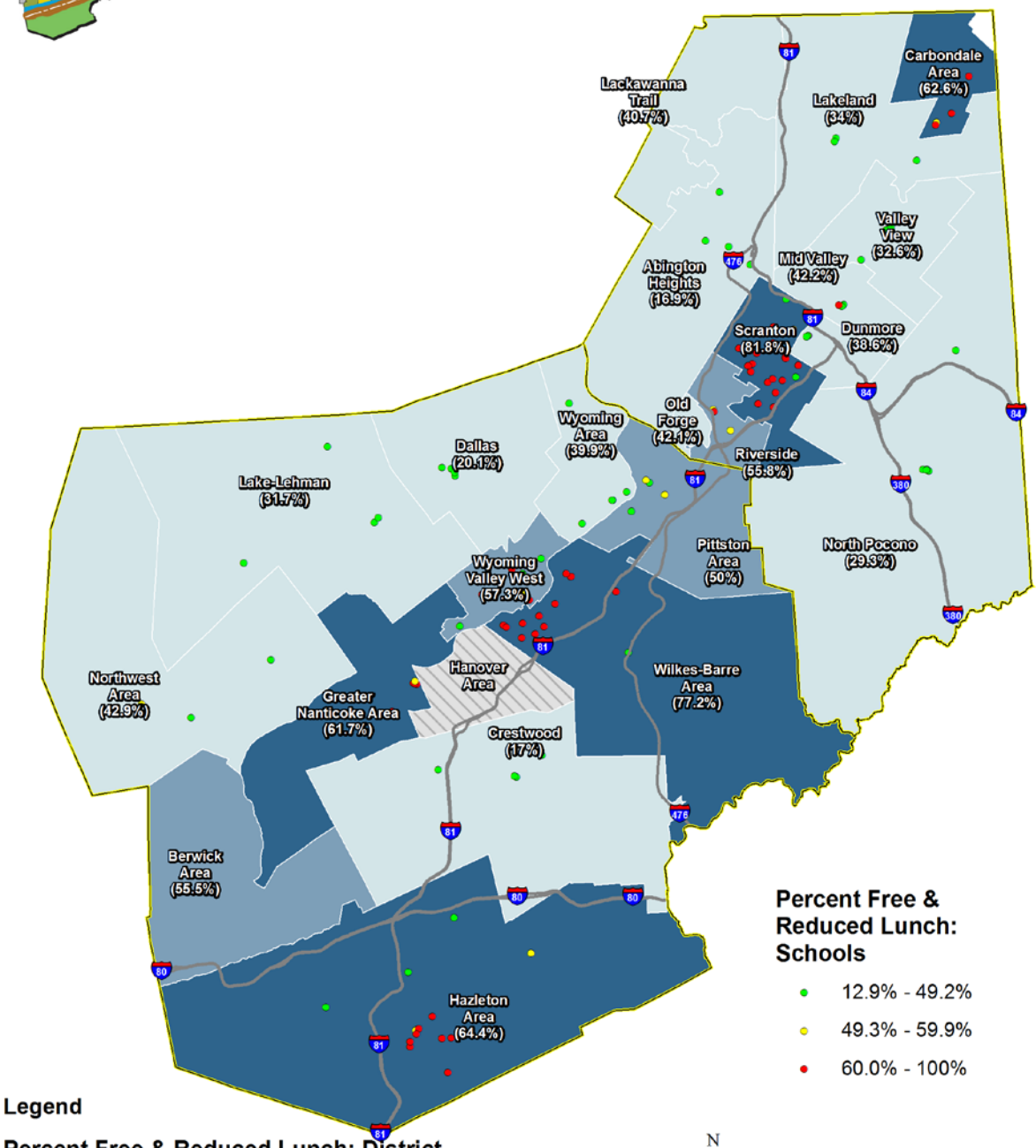
Poverty in and of itself creates an innate barrier to transportation mobility, particularly in the American transportation culture that is dominated by highways and the personal automobile. According to the American Automobile Association, operating the average personal automobile costs nearly $8,700 annually, in addition to the cost of purchasing the vehicle.[6] With the 2014 poverty guideline for a family of four at just less than $24,000, owning and operating even a single personal automobile would be virtually impossible for such a family.

[4] Department of Education, Food and Nutrition Programs, National School Lunch Program.
[5] The location of each school was based on ESRI data and eligibility information was obtained from Pennsylvania Department of Education for the year 2014.
[6] American Automobile Association Website, as accessed on August 11, 2015, http://newsroom.aaa.com/tag/your-driving-costs/.

FIGURE 4

Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization

FREE AND REDUCED LUNCH BY SCHOOL DISTRICT



Source: PA Dept. of Education National School Lunch Program 2014 - 2015

Table 12. Above Regional Average of Percent Eligible for Free & Reduced Priced Lunches - Lackawanna/Luzerne Schools, 2014-15

School	Municipality, County	Percent Eligible
NEIU/NHS Partial Hospitalization Program - Secondary	Throop, Lackawanna	100
Frances Willard - Elementary	Scranton, Lackawanna	98.6
Northeast Intermediate School	Scranton, Lackawanna	98.6
George Bancroft - Elementary	Scranton, Lackawanna	98.6
John Adams - Elementary	Scranton, Lackawanna	98.6
John F. Kennedy - Elementary	Scranton, Lackawanna	98.6
John G Whittier - Elementary	Scranton, Lackawanna	98.5
Neil Armstrong - Elementary	Scranton, Lackawanna	98.5
South Scranton - Secondary	Scranton, Lackawanna	98.5
McNichols Plaza - Elementary	Scranton, Lackawanna	98.5
Charles Sumner - Elementary	Scranton, Lackawanna	98.4
Whittier Annex - Elementary	Scranton, Lackawanna	98.3
Lincoln Jackson - Elementary	Scranton, Lackawanna	98.2
Hazleton Area Alternative Learning Center - Secondary	Hazleton, Luzerne	87.5
Maple Manor - Combined	West Hazleton, Luzerne	87.4
Monticello School - Combined	Scranton, Lackawanna	87.3
Heights Terrace - Combined	Hazleton, Luzerne	86.1
West Hazleton - Combined	West Hazleton, Luzerne	84.8
NEIU Learning Ctr. - Secondary	Archbald, Lackawanna	84.6
Wilkes-Barre Area Career and Technical School - Secondary	Plains Township, Luzerne	83.7
Hazle Township Early Learning Center - Elementary	Hazle Township, Luzerne	83.1
Arthur Street - Elementary	Hazleton, Luzerne	83
Hazleton Elementary/Middle School - Combined	Hazleton, Luzerne	83
State - Elementary	Larksville, Luzerne	78.2
Alternative Learning Center - Combined	Wilkes-Barre, Luzerne	77.8
G A R Memorial - Secondary	Wilkes-Barre, Luzerne	77.3
Daniel J Flood - Elementary	Wilkes-Barre, Luzerne	77.3
Milford E. Barnes - Combined	Wilkes-Barre, Luzerne	77.3
Solomon/Plains - Secondary	Plains, Luzerne	77.2
Dr. David W. Kistler - Elementary	Wilkes-Barre, Luzerne	77.2
Elmer L Meyers - Secondary	Wilkes-Barre, Luzerne	77.2
James M Coughlin - Secondary	Wilkes-Barre, Luzerne	77.2
Solomon/Plains - Elementary	Plains, Luzerne	77.2
Heights/Murray - Elementary	Wilkes-Barre, Luzerne	77.2
Dodson - Elementary	Wilkes-Barre, Luzerne	77.2
Fell Charter School - Combined	Simpson, Lackawanna	77.1
Jefferson School - Combined	Dunmore, Lackawanna	74.3
J.F. Kennedy - Elementary	Nanticoke, Luzerne	73.8
Hazleton Area Career Center - Combined	Hazleton, Luzerne	71.5
McAdoo-Kelayres - Combined	Mcadoo, Luzerne	70.6
Scranton - Secondary	Scranton, Lackawanna	68
Isaac Tripp - Elementary	Scranton, Lackawanna	66.2
Carbondale - Elementary	Carbondale, Lackawanna	66
Riverside West - Elementary	Taylor, Lackawanna	65.5
K.M. Smith - Elementary	Nanticoke, Luzerne	65.2
West Scranton - Combined	Scranton, Lackawanna	65.1
Schuyler Avenue - Elementary	Kingston, Luzerne	64.3
West Scranton - Secondary	Scranton, Lackawanna	61.8
William Prescott - Elementary	Scranton, Lackawanna	61.7
Greater Nanticoke Area - Combined	Nanticoke, Luzerne	61.6
Third Avenue - Elementary	Kingston, Luzerne	61.1
Greater Nanticoke Area - Elementary	Nanticoke, Luzerne	60.9
West Side AVTS - Secondary	Kingston, Luzerne	60.3
Freeland - Combined	Freeland, Luzerne	59.5
Hazleton - Secondary	Hazleton, Luzerne	59.2
Huntington Township - Elementary	Shickshinny, Luzerne	58.8
Greater Nanticoke Area - Secondary	Nanticoke, Luzerne	58.5
Carbondale Area - Secondary	Carbondale, Lackawanna	57.7
Wyoming Valley West - Secondary	Kingston, Luzerne	57.5
Robert Morris - Elementary	Scranton, Lackawanna	56.6
Pittston Intermediate Center - Elementary	Pittston, Luzerne	55
Riverside East - Elementary	Moosic, Lackawanna	54.7
Pittston Area Primary Center - Elementary	Pittston, Luzerne	54
Riverside - Combined	Taylor, Lackawanna	51.9

Table 13. Below Regional Average of Percent Eligible for Free & Reduced Priced Lunches - Lackawanna/Luzerne Schools, 2014-15

School	Municipality, County	Percent Eligible
Mid Valley - Elementary	Throop, Lackawanna	49.3
Hunlock Township - Elementary	Shickshinny, Luzerne	49.2
Pittston Area Middle School	Pittston, Luzerne	48.8
Lake-Noxen - Elementary	Harveys Lake, Luzerne	48.5
Ctc of Lackawanna County - Secondary	Scranton, Lackawanna	47.5
Mayfield - Elementary	Mayfield, Lackawanna	46.2
Pittston Area - Secondary	Pittston, Luzerne	45.9
PA Treatment & Health - Combined	Scranton, Lackawanna	45.5
Kennedy - Elementary	Exeter, Luzerne	45.3
Wyoming Valley West - Secondary	Plymouth, Luzerne	45.3
Tenth Street - Elementary	Wyoming, Luzerne	45.3
Old Forge - Elementary	Old Forge, Lackawanna	44.2
Dana - Elementary	Forty Fort, Luzerne	44.1
Sara j Dymond – Elementary	Pittston, Luzerne	43.8
Montgomery Avenue - Elementary	West Pittston, Luzerne	43.6
Dunmore - Elementary	Dunmore, Lackawanna	41.1
Old Forge - Combined	Old Forge, Lackawanna	39.3
Bear Creek Community	Wilkes-Barre, Luzerne	38.9
Chester Street - Elementary	Kingston, Luzerne	38.7
Valley View - Elementary	Peckville, Lackawanna	36.2
Moscow - Elementary School	Moscow, Lackawanna	34.9
Wyoming Area Sec Ctr - Secondary	Exeter, Luzerne	34.9
Hazleton Area Academy of Sciences-Secondary	Drums, Luzerne	33.7
Valley View - Elementary	Archbald, Lackawanna	33
Ross - Elementary	Sweet Valley, Luzerne	32.9
Northwest Area - Combined	Shickshinny, Luzerne	32.4
Mid Valley Secondary Center	Throop, Lackawanna	31.5
Lakeland - Combined	Jermyn, Lackawanna	31.3
Valley View - Secondary	Archbald, Lackawanna	31.1
Dunmore - Combined	Dunmore, Lackawanna	31
Valley View - Secondary	Archbald, Lackawanna	31
North Pocono Intermediate -Combined	Moscow, Lackawanna	30.8
North Pocono - Secondary	Moscow, Lackawanna	29.6
Lakeland - Elementary	Jermyn, Lackawanna	28.9
Valley - Combined	Sugar Loaf, Luzerne	28.9
Lake-Lehman - Secondary	Lehman, Luzerne	28.7
Newton-Ransom - Elementary	Clarks Summit, Lackawanna	27.9
Drums - Combined	Drums, Luzerne	26.6
Lehman-Jackson - Elementary	Dallas, Luzerne	26.3
North Pocono - Secondary	Covington Township, Lackawanna	26.1
Jefferson - Elementary	Lake Aerial, Lackawanna	25.6
Wycallis - Elementary	Dallas, Luzerne	22.8
Fairview - Elementary	Mountain Top, Luzerne	22.2
Dallas - Combined	Dallas, Luzerne	20.6
Clarks Summit - Elementary	Clarks Summit, Lackawanna	20.2
Dallas - Elementary	Dallas, Luzerne	20
Dallas - Secondary	Dallas, Luzerne	18.2
Abington Heights - Secondary	Clarks Summit, Lackawanna	17.2
Crestwood - Secondary	Mountain Top, Luzerne	17.2
Rice - Elementary	Mountain Top, Luzerne	16.7
South Abington - Elementary	Chinchilla, Lackawanna	16
Abington Heights - Secondary	Clarks Summit, Lackawanna	13.7
Crestwood - Secondary	Mountain Top, Luzerne	13.3
Waverly - Elementary	Waverly, Lackawanna	12.9

Source: National School Lunch Program,2015 http://www.portal.state.pa.us/portal/server.pt/community/national_school_lunch/7487

Senior Population

The *Age Discrimination Act of 1975*, which prohibits discrimination on the basis of age, states:

> *No person in the United States shall, on the basis of age, be excluded from participation, in be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance.*

For the purposes of this long-range transportation plan, the application of this Act is made for the senior (Elderly) population—persons age 65 and over. The population of the United States is aging rapidly, with the median age increasing from 28 in 1970 to 35 in 2000 and 37.2 in 2010. In the coming decades covered by this long-range transportation plan, cumulative advances in medicine and nutrition as well as improvements in environmental quality are anticipated to promote this trend, and the senior population will continue to expand as the "Baby Boomer" generation ages.

Table 14 gives the LLTS Senior population and the percentage of the population for two age ranges: ages 60 to 64, and ages 65 and over. The data is from the 2013 ACS 5-Year estimates. The percentage of the population in each age range is a simple proportion of the total population. ACS data indicates that Pennsylvania has one of the highest percentages of senior persons in the United States—15.7 percent (2009-2013 5-Year estimates), which is fourth in the country following Florida, Maine, and West Virginia. Both Lackawanna and Luzerne Counties have a percentage of seniors that is significantly above the Pennsylvania and even Florida averages. Clearly, the senior population merits consideration as one of the largest traditionally underserved populations in the LLTS MPO region. It is noted that the senior population in the region for age 65 and older has declined by approximately 1.5% since the 2000 Census and the population age 60-64 has increased by approximately 2%.

Table 14. Senior Population in the LLTS MPO Region

County	Total Population	Age 60 to 64	% of Population Age 60 to 64	Age 65 & over	% of Population 65 & over
Lackawanna	214,275	13,499	6.3%	38,543	18.0%
Luzerne	320,827	20,854	6.5%	58,389	18.2%
Total	535,102	34,353	6.4%	96,927	18.1%

Source: U.S. Census Bureau, American Community Survey 2013 5 Year Estimates, Table S0101 Age and Sex.

Seniors have diverse transportation needs and habits, many of which depend on their quality of health, level of income, and location. It is not uncommon for seniors in the 65 to 75 age group to have active lifestyles, even in retirement; and many in this group maintain personal vehicles, although they tend to drive less. Many in this age-group choose to live in their homes or "age in place", which are increasingly located in suburban, exurban, or rural areas. Several para-transit organizations in the MPO region offer free or reduced-fare transportation programs for seniors, particularly those with disabilities or with a need for transportation for medical purposes.

For seniors in the 75 to 85 age group, the ability to maintain an automobile and the appropriate skills for driving tend to diminish, with an increasing majority becoming dependent on transportation from family/friends or alternative modes of transportation. Transportation needs along with travel

frequency and distance typically diminish during these years. Beyond age 85, the vast majority of seniors are mostly transportation-dependent. Living arrangements are varied but typically include

partial or full-assistance. Transportation needs beyond those provided as a part of the living arrangements tend to be minimal.

As illustrated in **Figure 5**, senior populations (age 65 and over) are somewhat dispersed throughout the LLTS MPO region, but the highest populations are generally found in/near the larger urbanized areas of Scranton, Wilkes-Barre, and Hazleton. The larger senior concentrations are located in Elmhurst Township, Township of Jenkins, Blakely Borough, Dupont Borough, and Shickshinny Borough.

Tables 15 and 16 summarize the population and concentration of senior persons by municipality.

Table 15. Municipalities with the Highest Senior Population

	Municipality	Total Population	Total Senior Population
1	Scranton City	75,982	12,841
2	Wilkes-Barre City	41,374	6,206
3	Hazleton City	25,233	3,936
4	Kingston Borough	13,151	2,709
5	Dunmore Borough	14,031	2,652
6	Plains Township	9,938	2,385
7	Nanticoke City	10,442	2,349
8	Hanover Township	11,066	2,269
9	Hazle Township	9,557	2,074
10	Blakely Borough	6,557	1,836
11	Dallas Township	9,082	1,816
12	Carbondale City	8,880	1,785
13	Butler Township	9,295	1,766
14	Old Forge Borough	8,299	1,643
15	South Abington Township	9,081	1,299
16	Jenkins Township	4,455	1,292
17	Archbald Borough	7,035	1,280
18	Pittston City	7,713	1,280
19	Swoyersville Borough	5,052	1,207
20	Moosic Borough	5,702	1,203

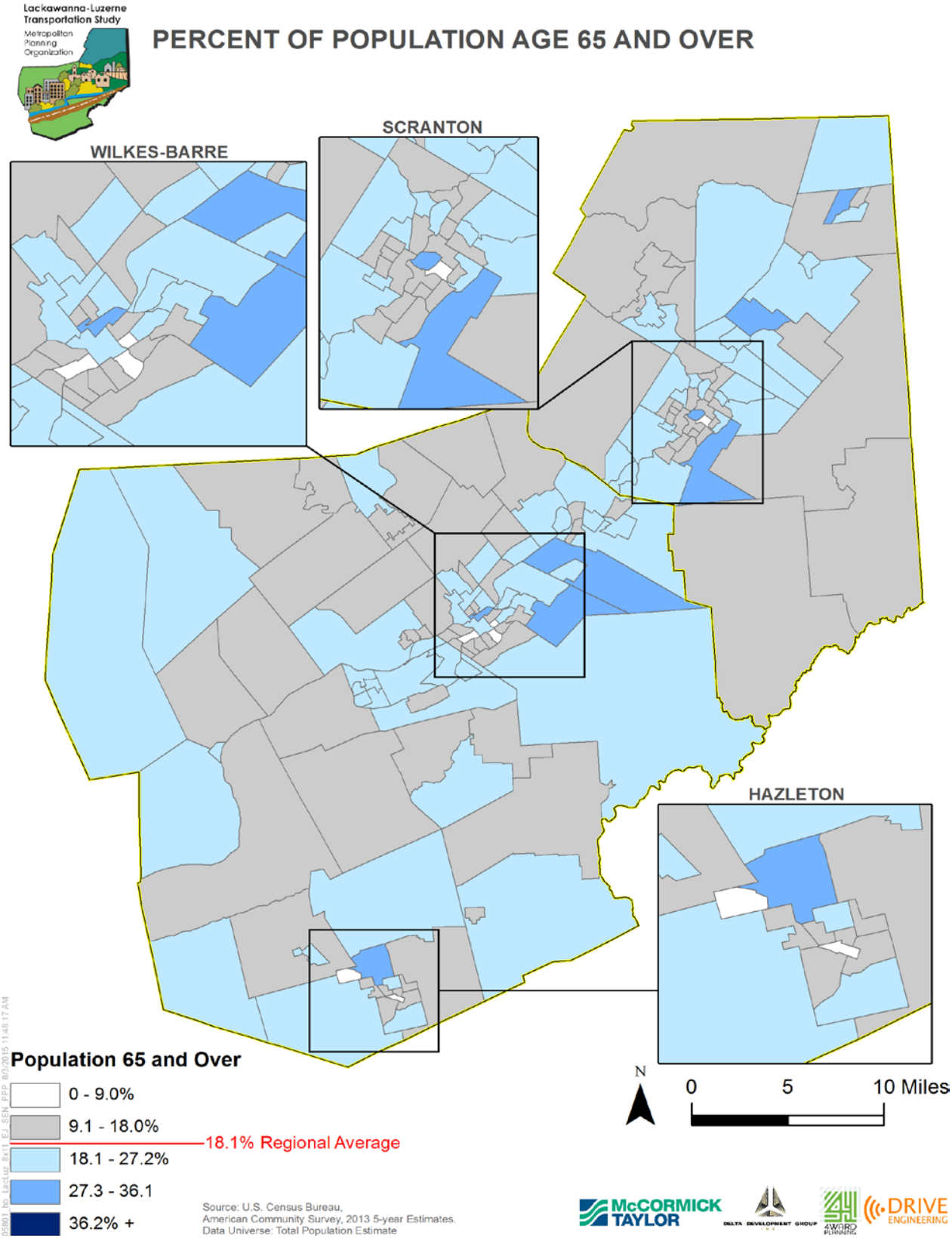
Source: U.S. Census Bureau, 2013 ACS 5-Year Estimates, Table S0101.

Table 16. Municipalities with the Highest Concentration of Senior Population

	Municipality	Total Population	% Senior Population
1	Elmhurst Township	1,141	30.2
2	Jenkins Township	4,455	29.0
3	Blakely Borough	6,557	28.0
4	Dupont Borough	2,713	26.6
5	Shickshinny Borough	749	25.2
6	Bear Creek Village Borough	339	24.8
7	Conyngham Borough	1,863	24.7
8	West Pittston Borough	4,866	24.5
9	Plains Township	9,938	24.0
10	Swoyersville Borough	5,052	23.9
11	Wyoming Borough	3,073	23.9
12	Yatesville Borough	622	23.8
13	New Columbus Borough	196	23.5
14	Laflin Borough	1,450	23.0
15	Nanticoke City	10,442	22.5
16	Foster Township	3,474	22.4
17	Ashley Borough	2,773	22.3
18	Nescopeck Township	1,118	21.8
19	Penn Lake Park Borough	326	21.8
20	Courtdale Borough	644	21.7

Source: U.S. Census Bureau, 2013 ACS 5-Year Estimates, Table S0101.

FIGURE 5


Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
PERCENT OF POPULATION AGE 65 AND OVER
WILKES-BARRE
SCRANTON
HAZLETON
Population 65 and Over
0 - 9.0%
9.1 - 18.0%
18.1% Regional Average
18.1 - 27.2%
27.3 - 36.1
36.2% +
N
0
5
10 Miles
Source: U.S. Census Bureau,
American Community Survey, 2013 5-year Estimates.
Data Universe: Total Population Estimate
McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
4WARD PLANNING
DRIVE ENGINEERING

Disabled Population

The Americans with Disabilities Act of 1990, along with the Americans with Disabilities Act Amendments Act of 2008, prohibit discrimination on the basis of disabilities. The term "disability" means, with respect to an individual:

- A physical or mental impairment that substantially limits one or more major life activities of such individual;
- A record of such an impairment; or
- Being regarded as having such an impairment, which includes the circumstance where an individual has been subjected to actions prohibited under the ADA Act because of an actual or perceived physical or mental impairment.

The ADA Amendments of 2008 were enacted to provide "a clear and comprehensive national mandate for the elimination of discrimination" and "clear, strong, consistent, enforceable standards addressing discrimination. In doing so, the Act Amendments rejects several Supreme Court rulings that limit the scope of protection provided under the ADA.

Table 17 gives the LLTS MPO region disabled population according to data from the 2009-2013 ACS 5-Year estimates. The MPO regional average for disabled persons was found to be 15.0 percent. This is an approximately four percent decrease compared to the 2000 U.S. Census Data.

Table 17. Disabled Population in the LLTS MPO Region

County	Civilian Non-Institutionalized Population	# of Persons without a Disability	# of Persons with a Disability	% Disabled
Lackawanna	210,916	180,048	30,868	14.6%
Luzerne	313,431	265,662	47,769	15.2%
Total	**524,347**	**445,710**	**78,637**	**15.0%**

Source: ACS, 2013 5-Year Estimates, Disabled Population: Table S1810, Disability Characteristics – Value given as "Total civilian non-Institutionalized population: With a disability".

As illustrated in **Figure 6**, areas with the largest disabled population include Shickshinny Borough, West Abington Township, Blakely Borough, La Plume Township, and Warrior Run Borough. This may be due to the presence of group homes or nursing homes in these areas.

Tables 18 and 19 summarize the population and concentration of disabled persons by municipality.

Table 18. Municipalities with the Highest Disabled Population

	Municipality	Total Population	Total Disabled Population
1	Scranton City	73,738	11,496
2	Wilkes-Barre City	39,922	6,286
3	Hazleton City	24,904	3,811
4	Nanticoke City	10,312	2,331
5	Hanover Township	10,967	2,055
6	Dunmore Borough	13,906	1,790
7	Plains Township	9,616	1,755
8	Carbondale City	8,690	1,726
9	Kingston Borough	12,790	1,615
10	Pittston City	7,711	1,539
11	Blakely Borough	6,308	1,460
12	Butler Township	9,134	1,414
13	Hazle Township	9,405	1,403
14	Taylor Borough	6,147	1,268
15	Old Forge Borough	8,274	1,101
16	Dickson City Borough	6,054	1,041
17	Exeter Borough	5,532	1,038
18	Dallas Township	8,841	1,018
19	Plymouth Borough	5,936	1,014
20	Moosic Borough	5,702	919

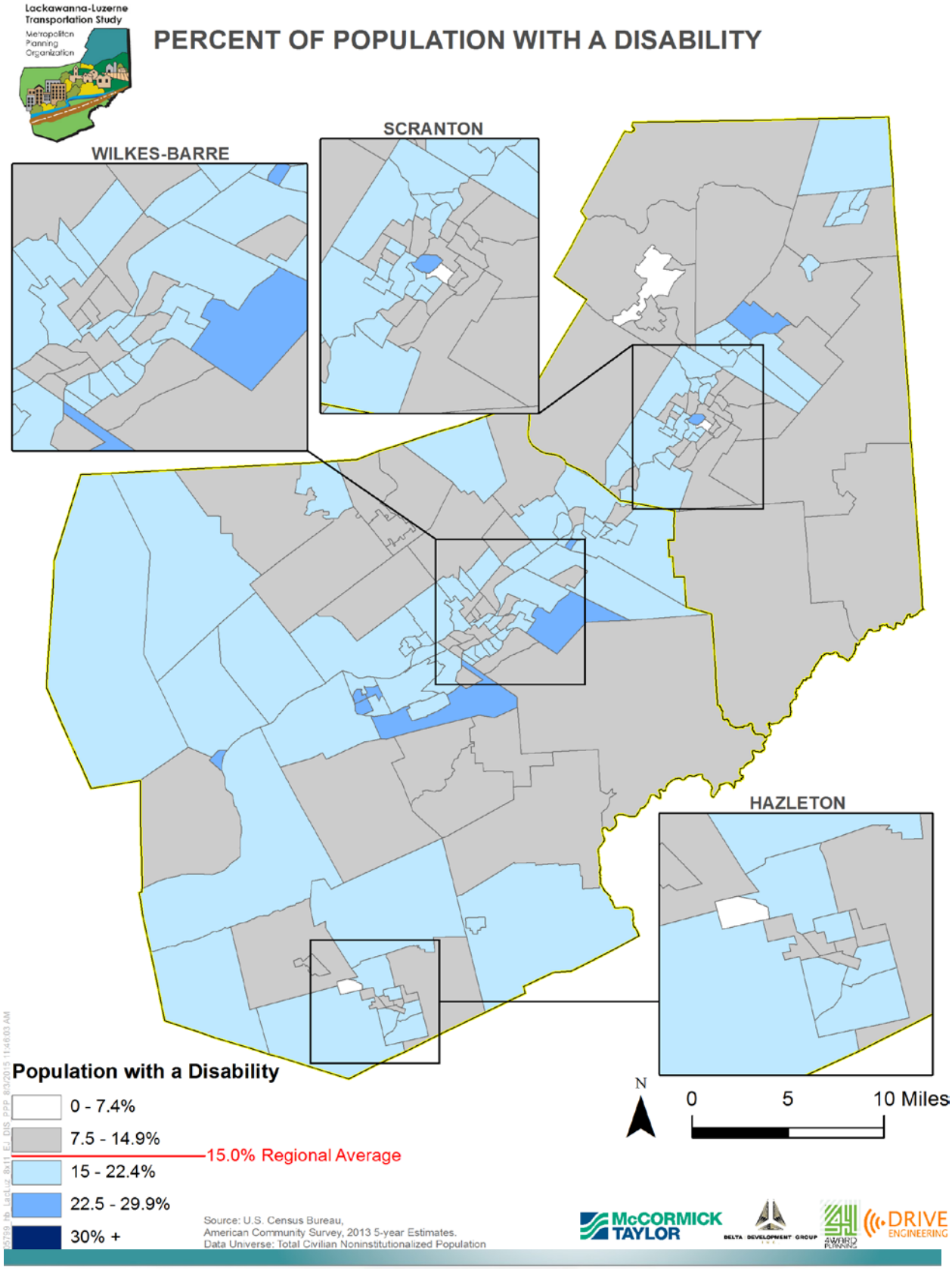
Source: ACS, 2013 5-Year Estimates, Disabled Population: Table S1810, Disability Characteristics – Value given as "Total civilian non-Institutionalized population: With a disability".

Table 19. Municipalities with the Highest Concentration of Disabled Population

	Municipality	Total Population	% Disabled Population
1	Shickshinny Borough	749	25.2
2	West Abington Township	149	23.5
3	Blakely Borough	6,308	23.1
4	La Plume Township	730	22.9
5	Warrior Run Borough	598	22.9
6	Nanticoke City	10,312	22.6
7	Pringle Borough	987	21.5
8	Huntington Township	2,106	20.7
9	Taylor Borough	6,147	20.6
10	Laurel Run Borough	564	20.2
11	Pittston City	7,711	20
12	Carbondale City	8,690	19.9
13	Jenkins Township	4,249	19.8
14	Thornhurst Township	1,069	19.6
15	Conyngham Township	1,238	19.2
16	Plymouth Township	1,831	19.2
17	Elmhurst Township	1,019	19
18	Black Creek Township	2,133	19
19	Luzerne Borough	2,849	19
20	Exeter Borough	5,532	18.8

Source: ACS, 2013 5-Year Estimates, Disabled Population: Table S1810, Disability Characteristics – Value given as "Total civilian non-Institutionalized population: With a disability".

FIGURE 6


Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
PERCENT OF POPULATION WITH A DISABILITY
SCRANTON
WILKES-BARRE
HAZLETON
Population with a Disability
0 - 7.4%
7.5 - 14.9%
15.0% Regional Average
15 - 22.4%
22.5 - 29.9%
30% +
N
0
5
10 Miles
Source: U.S. Census Bureau,
American Community Survey, 2013 5-year Estimates.
Data Universe: Total Civilian Noninstitutionalized Population
McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
AWORD PLANNING
DRIVE ENGINEERING

Limited English Proficiency Population

Executive Order 13166 on Improving Access to Services for Persons with Limited English Proficiency (LEP) aims "to improve access to federally-conducted and federally-assisted programs and activities for persons who, as a result of national origin, are limited in their English proficiency."[7] An operative definition for an individual with Limited English Proficiency may be stated as those individuals who have a limited ability to read, write, speak or understand the English language. This Department of Justice definition is derived from *Title VI* of the *Civil Rights Act*, which prohibits recipients from discriminating on the basis of race, color or national origin, and contemplates a close relationship between one's national origin and one's language. For the purpose of this analysis, LEP persons include those who speak the English language "less than very well," as classified by the Census. It should be noted that ability to speak English is based upon self-reporting or upon an answer given by another member of the household.

Table 20 presents the LEP population and the percentage of the population with LEP, according to data from the ACS 2013 5-Year estimates. For the purposes of this long-range transportation plan, the evaluation of LEP population considers persons age 5 and over. Typically, children learn to speak English before entering elementary school, but 5 years is the approximate age when the public education systems begin teaching reading and writing. Developmentally, children under the age of 5 may not be ready to learn to read and write, while children over the age of 5 who cannot yet speak English are considered disadvantaged. The LLTS MPO regional average for LEP persons was found to be 3.6 percent, an approximate 2% increase from the 2000 Census (1.6%).

Table 20. Limited English Proficiency Population in the LLTS MPO Region

County	Total Population: Age 5 & over	# of Persons who Speak English less than "Very Well": Age 5 & over	% of Persons who Speak English less than "Very Well": Age 5 & over
Lackawanna	202,825	7,098	3.5%
Luzerne	304,493	11,266	3.7%
Total	507,318	18,458	3.6%

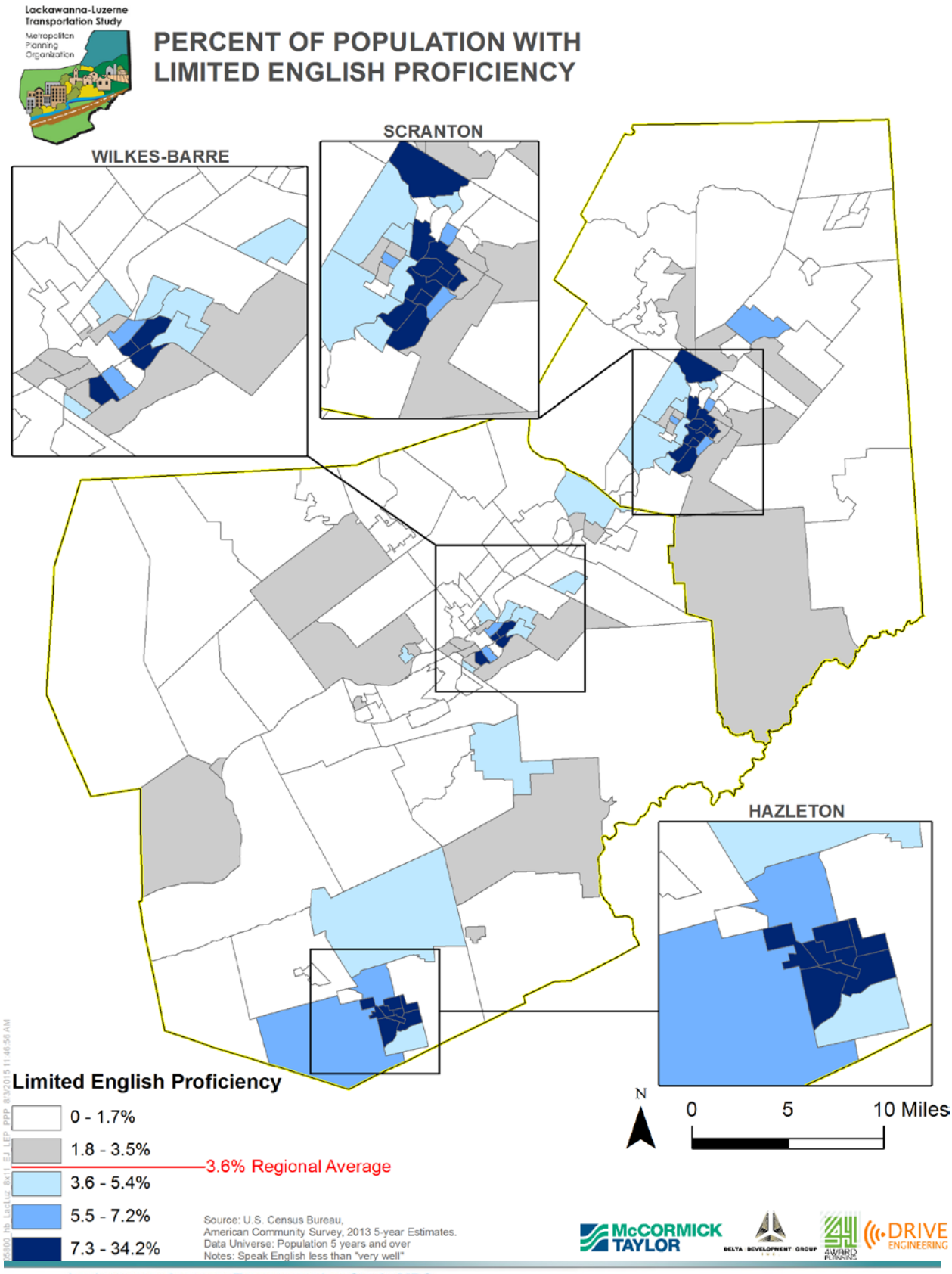
Source: U.S. Census Bureau, ACS, 5-Year Estimates (2009-2013). Limited English Proficiency Population: Table S1601, Language Spoken At Home – Value given as "Population 5 years and over: Language other than English: Speak English less than "very well".

In navigating the transportation system, an LEP person may be limited in his or her ability to read and understand signs, interpret advisory radio messages, and decipher transit schedules. In addition, LEP adults tend to be lower income earners, placing them in a more transportation-dependent position where interpreting the public transportation system may be a challenge.

For the most part, the LEP population of the region is small, both in comparison to the total population (3.6% regionally) and to other TUPs. As illustrated in **Figure 7**, the largest LEP populations are located in the urban centers of Scranton, Wilkes-Barre, and Hazleton, where the general populations are highest.

[7] Executive Order 13166 of August 11, 2000, *Improving Access to Services for Persons with Limited English Proficiency*.

FIGURE 7


Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
PERCENT OF POPULATION WITH LIMITED ENGLISH PROFICIENCY
WILKES-BARRE
SCRANTON
HAZLETON
Limited English Proficiency
0 - 1.7%
1.8 - 3.5%
3.6% Regional Average
3.6 - 5.4%
5.5 - 7.2%
7.3 - 34.2%
Source: U.S. Census Bureau,
American Community Survey, 2013 5-year Estimates.
Data Universe: Population 5 years and over
Notes: Speak English less than "very well"
N
0
5
10 Miles
McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
AWARD PLANNING
DRIVE ENGINEERING

Tables 21 and 22 summarize the population and concentration of LEP persons by municipality. In addition to Scranton, Wilkes-Barre, and Hazleton, higher LEP populations are present in West Hazleton Borough, Dunmore Borough, Blakely Borough, Butler Township, Clifton Township, and Duryea Bureau.

Table 21. Municipalities with the Highest Limited English Proficiency Population

	Municipality	Total Population: Age 5 & over	Total LEP Population: Age 5 & over
1	Hazleton City	23,557	5,065
2	Scranton City	71,463	5,002
3	Wilkes-Barre City	38,796	1,746
4	West Hazleton Borough	4,133	1,054
5	Blakely Borough	6,286	409
6	Butler Township	8,830	371
7	Hazle Township	9,131	329
8	Kingston Borough	12,555	289
9	Dunmore Borough	13,475	256
10	South Abington Township	8,567	223
11	Taylor Borough	5,713	206
12	Plains Township	9,601	202
13	Duryea Borough	4,485	170
14	Fairview Township	4,309	159
15	Olyphant Borough	4,843	140
16	Plymouth Borough	5,563	134
17	Nanticoke City	9,925	109
18	Lehman Township	3,330	97
19	Carbondale City	8,516	94
20	Newport Township	5,170	88

Source: U.S. Census Bureau, ACS 2009-2013 5-Year Estimates.

Table 22. Municipalities with the Highest Concentration of Limited English Proficiency Population

	Municipality	Total Population: Age 5 & over	% LEP Population: Age 5 & over
1	West Hazleton Borough	4,133	25.5
2	Hazleton City	23,557	21.5
3	Scranton City	71,463	7.0
4	Blakely Borough	6,286	6.5
5	Wilkes-Barre City	38,796	4.5
6	Butler Township	8,830	4.2
7	Clifton Township	1,416	4.1
8	Duryea Borough	4,485	3.8
9	Fairview Township	4,309	3.7
10	Jeddo Borough	107	3.7
11	Hazle Township	9,131	3.6
12	Taylor Borough	5,713	3.6
13	Laflin Borough	1,370	3.6
14	Plymouth Township	1,784	3.5
15	Shickshinny Borough	705	3.4
16	White Haven Borough	1,070	3.3
17	Wilkes-Barre Township	2,728	3.2
18	Dennison Township	1,039	3.0
19	Olyphant Borough	4,843	2.9
20	Lehman Township	3,330	2.9

Source: U.S. Census Bureau, ACS 2009-2013 5-Year Estimates.

Table S1601, Language Spoken At Home – Value given as "Population 5 years and over: Language other than English: Speak English less than "very well"

Zero-Vehicle Households

Households and persons without access to a personal vehicle, while not protected under a Federal Act or Executive Order, are considered in this analysis as a traditionally underserved population. Zero-vehicle households are those households without direct ownership of an automobile and tend to be highly transit-dependent. In the U.S., the transportation program has traditionally favored investments in highway infrastructure, and in 2012, approximately 86 percent of all travel to work occurred on the highway system via personal automobile[8].

[8] USDOT Bureau of Transportation Statistics, Principal Means of Transportation to Work, accessed August 12, 2015 http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_01_41.html

In most instances, the distribution of zero-vehicle households directly mirrors the distribution of persons in poverty. A comparison of **Table 9** and **Table 10** (Top 20 municipalities for low-income population) confirms this trend. However, some exceptions are noted. Unlike the compulsory impact

that poverty has on the choice of transportation options, not owning a vehicle may be a personal decision, rather than an economic one. Some households may find that living without a vehicle is desirable for financial, environmental, legal, convenience, or other reasons.

Table 23 gives the MPO regional distribution and percentage of zero-vehicle households, according to data from the 2013 ACS 5-Year Estimates. The percentage of households without access to a personal vehicle is 10.6 percent for the LLTS MPO region (a decrease from the 13.2 percent 2000 U.S. Census count), as compared to the national average of 9.1 percent. The Pennsylvania average stands at 11.5 percent (ACS 2013 5-Year Estimates).

Table 23. Zero Vehicle Households in the LLTS MPO Region

County	Total Households	Zero Vehicle Households	% of Households with Zero Vehicles Available
Lackawanna	85,769	8,818	10.3%
Luzerne	130,880	14,162	10.8%
Total	216,905	22,980	10.6%

Source: U.S. Census Bureau, American Community Survey, 5-year Estimate (2009-2013). Table B08201, Household Size by Vehicles Available – Value given as "Total Households: No vehicle available".

As illustrated in **Figure 8**, the areas with the highest concentration of zero-vehicle households are focused within the urbanized areas—Scranton, Wilkes-Barre, Hazleton, and also in Edwardsville Borough, Elmhurst Township, Nanticoke City, Pittston City, and West Hazleton Borough. Approximately 1/3 of the households in Edwardsville Borough do not have direct ownership of a vehicle.

Tables 24 and 25 summarize the number and concentration of zero-vehicle households persons by municipality.

Table 24. Municipalities with the Highest Zero-Vehicle Households

	Municipality	Total Households	Total Zero-Vehicle Households
1	Scranton City	29,249	4,503
2	Wilkes-Barre City	16,077	3,565
3	Hazleton City	9,606	1,699
4	Nanticoke City	4,609	902
5	Edwardsville Borough	2,199	666
6	Kingston Borough	5,796	655
7	Pittston City	3,377	578
8	Hanover Township	4,894	575
9	Carbondale City	3,803	548
10	Dunmore Borough	5,845	458
11	Old Forge Borough	3,695	446
12	Plains Township	4,474	385
13	Blakely Borough	2,799	381
14	Plymouth Borough	2,549	372
15	Hazle Township	4,080	368
16	West Hazleton Borough	1,723	273
17	Olyphant Borough	2,171	254
18	Butler Township	3,687	250
19	Archbald Borough	2,918	238
20	Dickson City Borough	2,643	228

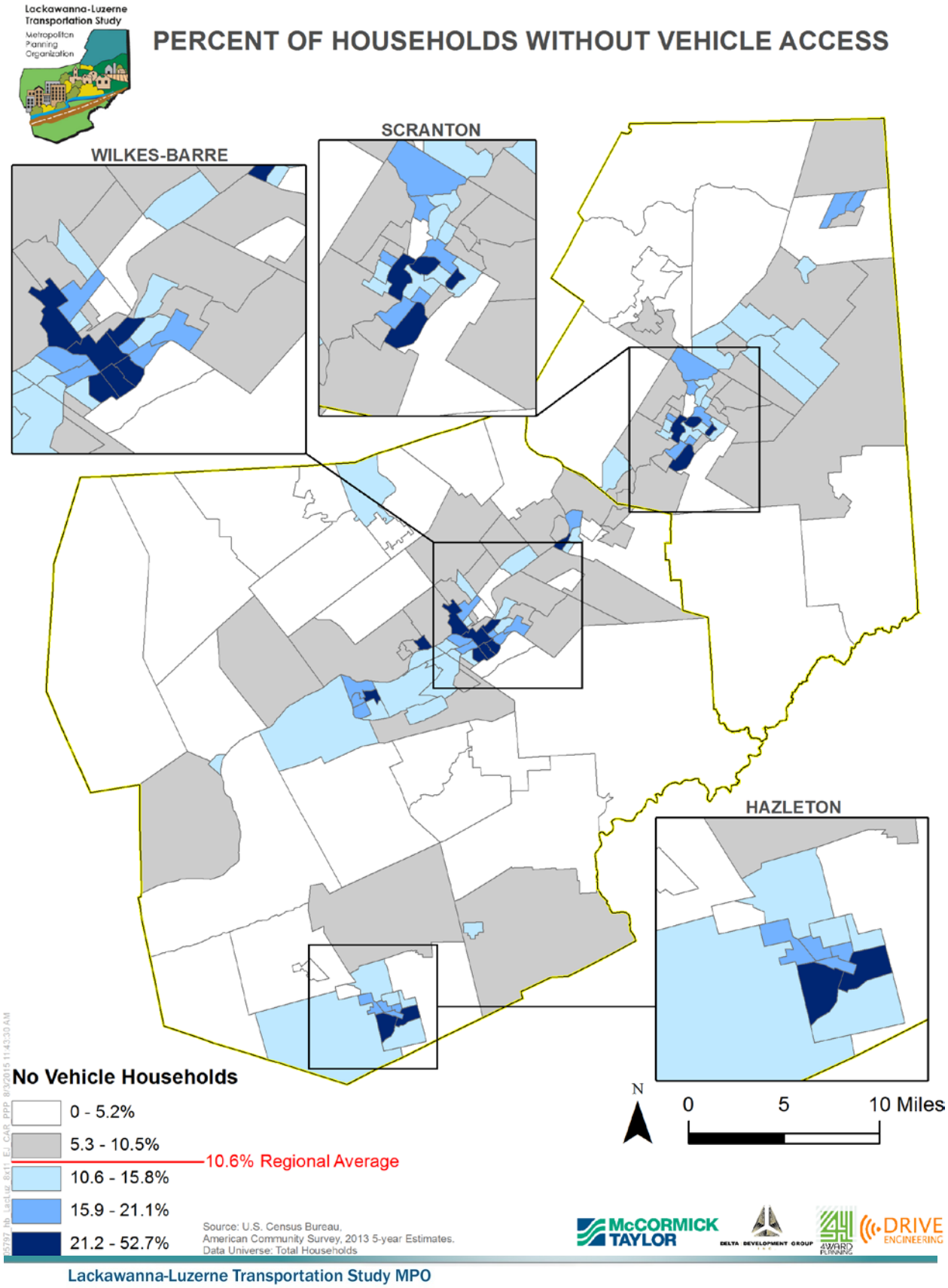
Source: U.S. Census Bureau, ACS 2013 5-Year Estimates.

Table 25. Municipalities with the Highest Concentration of Zero-Vehicle Households

	Municipality	Total Households	% Zero-Vehicle Households
1	Edwardsville Borough	2,199	30.3
2	Wilkes-Barre City	16,077	22.2
3	Elmhurst Township	372	19.9
4	Nanticoke City	4,609	19.6
5	Hazleton City	9,606	17.7
6	Pittston City	3,377	17.1
7	West Hazleton Borough	1,723	15.8
8	Scranton City	29,249	15.4
9	Plymouth Borough	2,549	14.6
10	Carbondale City	3,803	14.4
11	Sugar Notch Borough	403	14.1
12	Blakely Borough	2,799	13.6
13	Jermyn Borough	923	12.9
14	Shickshinny Borough	320	12.5
15	Wyoming Borough	1,512	12.2
16	Old Forge Borough	3,695	12.1
17	Hanover Township	4,894	11.7
18	Olyphant Borough	2,171	11.7
19	Jessup Borough	1,784	11.7
20	Pringle Borough	438	11.6

Source: U.S. Census Bureau, ACS 2013 5-Year Estimates.

FIGURE 8



Lackawanna-Luzerne Transportation Study MPO

Benefits and Burdens Analysis

The Benefits and Burdens Analysis is an emerging analytic process that, when applied in the long-range transportation planning process, provides feedback on the equity of the transportation investment program. The analysis, which is germane to minority and low-income populations[9], examines the impact (benefit vs. burden) that the transportation investment program has on certain persons, person groups, or geographic locations and identifies any disproportionate impacts. Benefits are the positive impacts from investment such as enhancements in transportation services/options, increases in public safety, congestion relief, increased economic vitality, reduced travel times, etc. Burdens, on the other hand, are the adverse effects of investment such as pollution (noise and air), disruption of community cohesion, displacement of persons or businesses, destruction, or diminution of economic vitality, adverse employment effects, decline in tax base or property values, diminished esthetics, disruption of businesses, parking/access to transit, congestion, or the denial, delay, or reduction of receipt of benefits.

No standardized methodology and set of performance measures has been established for assessing benefits and burdens. Rather, the FHWA/FTA certification review process seeks evidence that MPOs have established an analytic process for assessing the regional benefits and burdens of transportation system investments, with specific consideration as to how these effects are distributed among different socio-economic groups. This includes evidence that there is a data collection process and that the analytical process seeks to assess the benefit and impact distributions of the investments included in the TIP and long-range transportation plan.[10]

Analysis Framework

The framework for the Benefits and Burdens Analysis is essentially a "before-and-after" comparison in which baseline and forecasted performance measures are overlaid and evaluated relative to the geographic distribution populations. Performance measures often include commuter travel times, roadway safety, quality of transportation services. Baseline information establishes the primary comparison point and is typically available through existing data sources. Forecasted performance measures are more difficult to obtain and are typically generated with the help of a regional travel demand model.

MPOs that operate a regional travel demand model generally have the capacity and have frequently identified "accessibility" as a relevant performance measure for assessing whether the program of investments in the Regional Transportation Plan (or TIP) will deliver improved "access to jobs" or "access to opportunities" (e.g., shopping, educational facilities, or other desired destinations) compared to the existing condition or a No-Build Future condition. With a travel demand model, it is possible to review travel network skim tables and assess which individual travel analysis zones enjoy travel-time savings to critical destinations (e.g., job centers) due to transportation network improvements. [11]

---

[9] While multiple EJ and traditionally underserved populations have been identified in this plan, it is important to note that the Benefits and Burdens Analysis was based solely on the geographic location of Minority and In-Poverty Populations. This determination was used under advisement as the specific application of *Executive Order 12898 on Environmental Justice.*

[10] Federal Highway Administration, *Environmental Justice Reference Guide*, April 1 2015.

[11] The Federal Highway Administration's, *Transportation and Environmental Justice: Case Studies* booklet (2000) provides examples of the approach undertaken by the Mid-Ohio Regional Planning Commission (MORPC) and Southern California Association of Governments (SCAG) accessible at http://www.fhwa.dot.gov/environment/ejustice/case/index.htm.

Even in the absence of a travel demand model—as is the case for the LLTS MPO—it is still possible to evaluate existing conditions as well as the distribution of planned projects. As a forward-looking methodology that will help to inform future updates of the LRTP, the Benefits and Burdens Analysis for this update of the LRTP consists of the following two elements:

- *Development of Baseline Performance Measures* – A baseline set of performance measures, based on existing datasets and sources (e.g., U.S. Census, PennDOT, etc.), are developed to establish a comparison point for evaluating the future progress of transportation equity. For future updates of the LRTP, updated datasets from the same sources may be accessed, and an assessment of the plan's equity may be performed.[12]

- *Assessment of Transportation Investment Plan Equity* – Even without a travel demand model, the location of planned, future transportation projects and the amount of their investment can be mapped and evaluated in relation to minority and low-income populations. For the current update of the LRTP, this evaluation will provide the primary criteria used to assess the equity of the transportation plan.

The intent of the comparisons made in this analysis is to judge how well the benefits and burdens generated by the transportation plan projects are balanced between areas with high concentrations of minority and low-income populations, and all other areas of the region. For the purposes of the Benefits and Burdens Analysis, the following language will be used when referring to areas with high concentrations of minority and low-income populations:

> "High minority" refers to block groups that have a concentration of non-Hispanic minority persons that is greater than two times the regional average of 5.4 percent. *(Two times the regional average was chosen as it is the trigger criteria for conducting targeted outreach identified in the LLTS MPO Public Participation Plan)*.
>
> "High in-poverty" refers to block groups that have a concentration of low-income persons that is greater than two times the regional average of 14.8 percent.

As such, the identification of minority and low-income populations that was completed as a part of the Distributive Analysis is fundamental to the Benefits & Burdens Analysis. For reference purposes, **Table 26** provides statistics and a brief review of how minority and low-income populations were identified at the census tract level according to the regional averages. The populations are listed according to population "categories" that were applied in summarizing the Benefits & Burdens performance measures. Finally, cross-tabulations of total, minority, and low-income populations are given to further clarify the distribution of population across the LLTS MPO Region. **Figure 9** offers a geographic representation of these locations, primarily located in the urbanized areas of Wilkes-Barre, Scranton, and Hazleton.

The ultimate outcome of this analysis is to ensure comparative transportation equity across the region, with all areas receiving an appropriate share of benefits and burdens. The result of this analysis will lend itself to the selection and prioritization of LRTP projects.

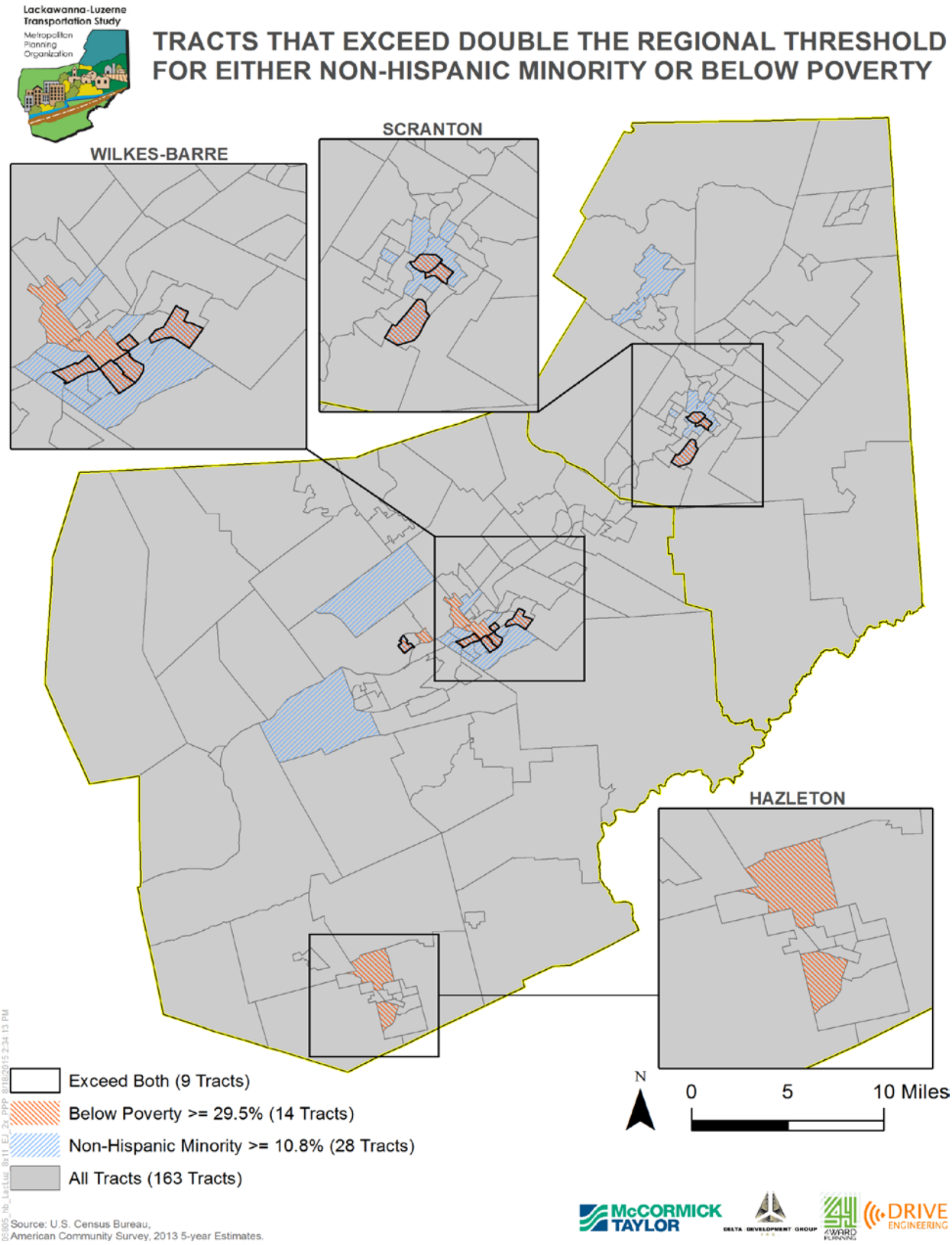
[12] If a regional travel demand model is developed for future LRTP updates, the data contained in the current LRTP document will still be useful in both drawing comparisons and calibrating the travel demand model.

Table 26. Population Categories and Benchmarks for Benefits & Burdens Analysis of Performance Measures

Population Area Category	Definition	Number of Census Tracts	Population Distribution Benchmarks			
			Total Population for Minority	Minority Population	Total Population for whom Poverty Status is Determined	In-Poverty Population
High Minority Only	>= 10.8% Minority Population (2 Times the Regional Average)	28 (17%)	85,183	15,648 (18.4%)	75,866	20,290 (26.7%)
High In-Poverty Only	>= 29.5% In-Poverty Population (2 Times the Regional Average)	14 (8.6%)	39,694	6,189 (15.6%)	34,590	13,026 (37.7%)
Both High Minority and High In Poverty	>= 10.8% Minority Population AND >= 29.5% In-Poverty Population	9 (5.5%)	25,144	5,346 (21.3%)	21,902	8,631 (39.4%)
Neither High Minority nor High In-Poverty	< 10.8% Minority Population AND < 29.5% In-Poverty Population	130 (79.8%)	435,369	12,281 (2.8%)	427,189	51,469 (12.0%)
LLTS MPO Region Total		163	535,102	28,772	515,743	76,154

Source: U.S. Census Bureau, 2013 American Community Survey 5-Year Estimates.

FIGURE 9


Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
TRACTS THAT EXCEED DOUBLE THE REGIONAL THRESHOLD FOR EITHER NON-HISPANIC MINORITY OR BELOW POVERTY
WILKES-BARRE
SCRANTON
HAZLETON
Exceed Both (9 Tracts)
Below Poverty >= 29.5% (14 Tracts)
Non-Hispanic Minority >= 10.8% (28 Tracts)
All Tracts (163 Tracts)
N
0
5
10 Miles
Source: U.S. Census Bureau, American Community Survey, 2013 5-year Estimates.
McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
AWARD PLANNING
DRIVE ENGINEERING

Development of Equity & Environmental Justice Performance Measures

A set of performance measures were generated to gage the advancement of transportation equity and Environmental Justice, and include the following:

- Transportation Service Levels
- Transportation Mobility
- Transportation Funding

The performance measurements were designed to be replicable using readily available data sources, so that transportation equity considerations may be tracked in subsequent updates of the LRTP, even in the absence of a travel demand model. While evaluations of the existing and proposed Transportation Funding programs can be made here, comparisons of the baseline and forecasted performance measures for the Transportation Service Levels and Mobility categories were not attempted.

Transportation Service Levels

Performance measures related to Transportation Service Levels were selected to broadly evaluate the frequency of use, availability, safety, and service levels provided by the most prevalent modes of personal transportation—automobile, transit, and walking.

Travel Mode to Work

The use of different modes for travel to work was investigated, using U.S. Census data to evaluate the availability and diversity of travel modes used in areas with higher concentrations of minority and low-income persons. **Table 27** summarizes the mode use data by total commuters and the percentage of the total commuters who use each mode.

Table 27. Travel Mode to Work for Minority and In-Poverty Areas vs. Other Areas in the LLTS MPO Region

Population Area Category	Total Commuters (Workers Age 16 +)	Car, Truck, or Van		Public Transit	Bicycle	Walk	Work at Home	Other
		Drove Alone	Carpool					
High Minority Only	33,489	23,418	5,146	1,067	135	2,773	659	291
		69.9%	6.4%	3.2%	0.4%	8.3%	2.0%	0.4%
High In-Poverty Only	14,445	8,968	2,477	478	38	1,994	320	180
		82.5%	27.6%	3.3%	0.3%	13.8%	2.2%	0.7%
Both High Minority and High In-Poverty	9,572	5,606	1,791	323	20	1,461	265	106
		62.1%	18.7%	3.4%	0.2%	15.3%	2.8%	0.8%
Neither High Minority nor High In-Poverty	201,392	166,294	21,322	1,522	303	5,114	5,828	1,009
		82.6%	10.6%	0.8%	0.2%	2.5%	2.9%	0.4%
LLTS MPO Region Total	239,764	193,074	27,154	2,744	456	8,420	6,542	1,374
		80.5%	11.3%	1.1%	0.2%	3.5%	2.7%	0.5%

Source: U.S. Census Bureau, 2013 American Community Survey, 5-Year Estimates, Table B08006.

Clearly, the automobile (e.g., car, truck, or van) dominates all other modes for trips to work, with more than 90 percent of all commuters choosing to drive alone or carpool using an automobile. High minority areas showed greater use of the walking and public transit modes but otherwise had very similar mode use characteristics to those areas without high concentrations of minority or low-income populations. High in-poverty areas showed greater use of the carpool, public transportation, and walking modes.

As compared to the automobile, transit usage was low across all areas, with the highest usage happening in high minority and high in-poverty areas. The difference may be due to both higher service levels (see following section on *Transit Availability and Service Levels*) and the lower user cost.

Taken together, bicycle, walk, and other modes accounted for more than 16 percent of trips in areas with both high minority and high in-poverty populations. Much of this travel occurs using the walk mode, which carries a far greater share of trips than public transportation. This may indicate some success by the LLTS MPO region in retaining "walk-to-work" housing with employment opportunities in the vicinity.

Roadway Condition

The condition of roadways within high minority and high in-poverty areas was evaluated according to International Roughness Index (IRI) data obtained through PennDOT MPMS IQ. **Table 28** gives the mileage and percentage of state-owned roadway by IRI Quality Range.

Table 28. International Roughness Index for Roadways in Minority and In-Poverty Areas vs. Other Areas in the LLTS MPO Region

Population Area Category	Total Roadway Mileage	Roadway Mileage within IRI Quality Range			
		Excellent	Good	Fair	Poor
High Minority Only	84.4	13 15.4%	26.1 30.9%	20.2 23.9%	25.1 29.7%
High In-Poverty Only	30.3	3.4 11.2%	7.7 25.4%	9.1 30.0%	10.1 33.3%
Both High Minority and High In-Poverty	14.1	1.7 12.1%	2.6 18.4%	3.3 23.4%	6.5 46.1%
Neither High Minority nor High In-Poverty	1,557.9	255.3 16.4%	578.2 37.1%	399.3 25.6%	325.1 20.9%
LLTS MPO Region Total	1,659.15	270.25 16.3%	609.5 36.7%	425.5 25.6%	353.9 21.3%

Source: U.S. Census Bureau, 2013 ACS 5-Year Estimates; PennDOT MPMS IQ

In general, the proportions of mileage for each Quality Range are consistent across most areas, with the exception of high minority and high in-poverty areas, where the percentage of "poor" roadway is about 25 percent higher than the LLTS MPO Region as a whole. Additionally the percentage of "good" roadway in high minority and high poverty areas is about 18 percent lower than the regional total.

Transit Availability

Transit availability was evaluated to gage the equity of the transit system. Low-income persons and families are frequently dependent upon lower-cost, public modes of transportation, particularly transit bus. **Figure 10** illustrates the overlay of transit service areas[13] with minority and low-income concentrations, respectively. **Table 29** summarizes the overlay analysis of transit service areas.

Table 29. Transit Availability and Service Level for Minority and In-Poverty Areas vs. Other Areas in the LLTS MPO Region

Population Area Category	Total Tracts	Tracts within Transit Service Area	Tracts outside Transit Service Area
High Minority Only	28	27 96.4%	1 3.6%
High In-Poverty Only	14	14 100%	0 0%
Both High Minority and High In-Poverty	9	9 100%	0 0%
Neither High Minority nor High In-Poverty	130	106 81.5%	24 18.5%
LLTS MPO Region Total	163	138 84.7%	25 15.3%

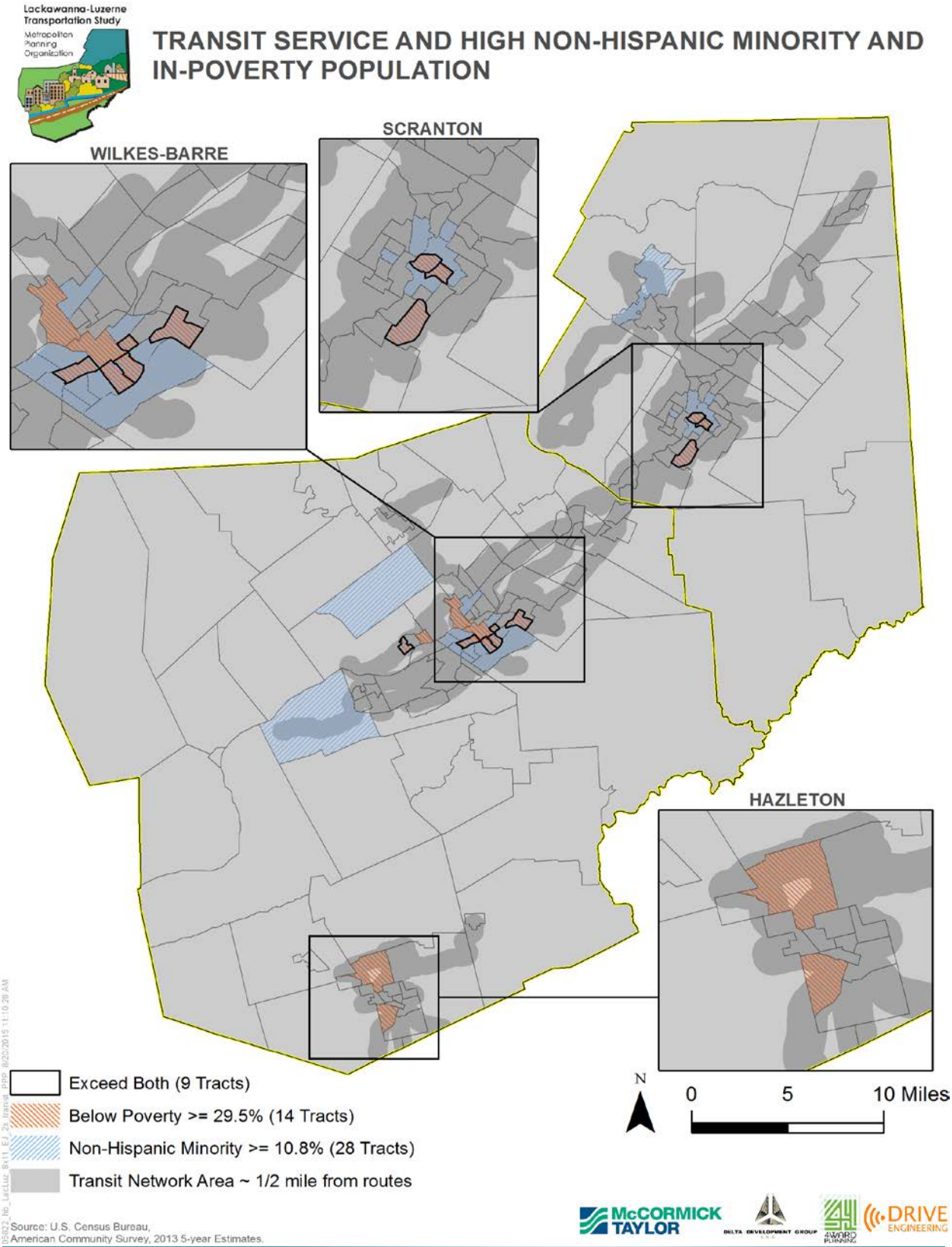
Source: County of Lackawanna Transit System, 2015; Lackawanna County Transportation Authority, 2015; Hazleton Public Transit, 2015; U.S. Census Bureau, ACS 2013 5-Year Estimates.

About 96 percent of the high minority population areas are overlapped by a transit service area, while approximately 100 percent of the high in-poverty population areas are included in a transit service area. All of the tracts with both high minority and in-poverty populations are included in a transit service area. In comparison, areas without high minority or in-poverty populations have only about 80 percent of tracts overlapped by a transit service area. This trend is not surprising, since higher priced housing tends to be constructed at lower densities—which is not as conducive to efficient transit service. Residents of these areas are generally more able to afford a personal automobile and use it for most or all of their transportation needs.

While most of the LLTS MPO minority and in-poverty population is located in tracts within the transit service area, one high minority area is located outside of the transit service area. This one area is Jackson Township, Luzerne County which is home to the State Correctional Institute at Dallas which likely contributes to the high minority population.

[13] Transit service areas in the LLTS MPO Region include all tracts within 1/2 mile on either side of the regular transit routes operated by the County of Lackawanna Transit System (COLTS), Luzerne County Transportation Authority (LCTA), and Hazleton Public Transit (HPT).

FIGURE 10


Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
TRANSIT SERVICE AND HIGH NON-HISPANIC MINORITY AND IN-POVERTY POPULATION
WILKES-BARRE
SCRANTON
HAZLETON
Exceed Both (9 Tracts)
Below Poverty >= 29.5% (14 Tracts)
Non-Hispanic Minority >= 10.8% (28 Tracts)
Transit Network Area ~ 1/2 mile from routes
N
0
5
10 Miles
Source: U.S. Census Bureau,
American Community Survey, 2013 5-year Estimates.
McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
4WARD PLANNING
DRIVE ENGINEERING

Vehicular & Pedestrian Safety

Vehicular and pedestrian safety in the vicinity of minority and low-income populations was evaluated by overlaying crash history data provided by PennDOT District 4-0 with the distributive U.S. Census data mapping. The crash history data included reportable crashes for the 5-year period from July 2009 to June 2014. The highest intersection crashes were identified by sampling the crash data within 100 feet of any intersection and ranking the top 20 locations in each county according to the number of fatal/injury crashes. **Figure 11** illustrates the geographic overlay of top intersection crash locations with high minority and in-poverty areas.

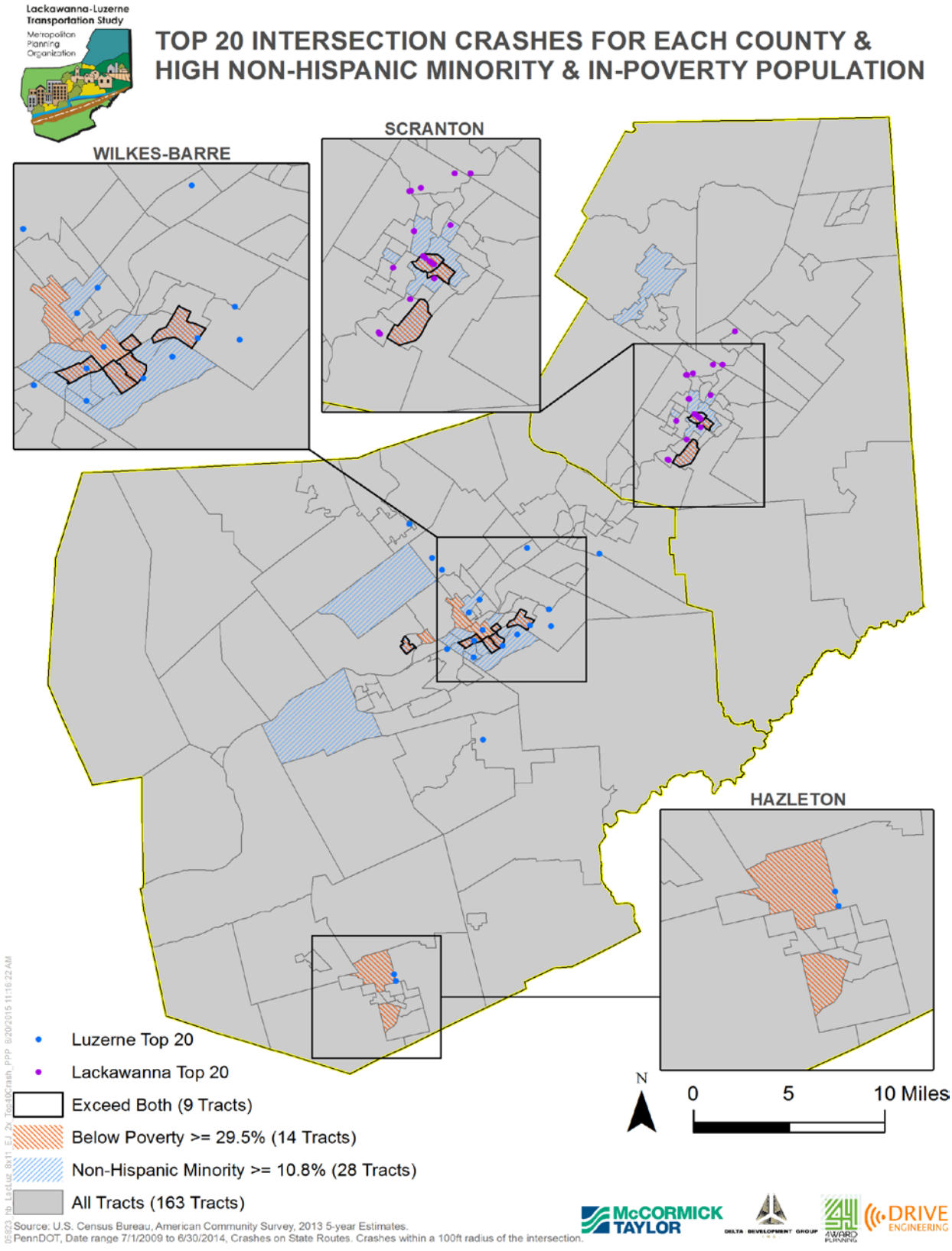
Table 30 gives a comparison of the number of census tracts and population in the vicinity of the top intersection crash locations. When examining the location of intersection crash locations, high minority and/or high in-poverty areas tend to be more impacted by the intersection crash locations, as compared with other communities. The overall number of crashes in the LLTS MPO region per 1,000 persons has decreased from 14.9 (based on 2008 PennDOT data and 2000 U.S. Census data) to 9.2.

Table 30. Top Crash Intersections near Minority & In-Poverty Areas vs. Other Areas in the LLTS MPO Region

Population Area Category	Total Tracts	Total Population	Number of Intersections with Crashes within Tracts	Total Crashes within Tracts	Number of Crashes per 1,000 persons
High Minority Only	28	85,183	75	1,130	13.3
High In-Poverty Only	14	39,694	33	446	11.2
Both High Minorityand High In-Poverty	9	25,144	21	325	12.9
Neither High Minoritynor High In-Poverty	130	435,369	301	3,652	8.4
LLTS MPO Region Total	163	535,102	389	4,935	9.2

Source: PennDOT Intersection Data (Date range 7/1/2009 to 6/30/2014, Only crashes that occurred on State Routes)

FIGURE 11


Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
TOP 20 INTERSECTION CRASHES FOR EACH COUNTY & HIGH NON-HISPANIC MINORITY & IN-POVERTY POPULATION
WILKES-BARRE
SCRANTON
HAZLETON
Luzerne Top 20
Lackawanna Top 20
Exceed Both (9 Tracts)
Below Poverty >= 29.5% (14 Tracts)
Non-Hispanic Minority >= 10.8% (28 Tracts)
All Tracts (163 Tracts)
N
0
5
10 Miles
Source: U.S. Census Bureau, American Community Survey, 2013 5-year Estimates.
PennDOT, Date range 7/1/2009 to 6/30/2014, Crashes on State Routes. Crashes within a 100ft radius of the intersection.
McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
AWARD PLANNING
DRIVE ENGINEERING

Similar to the analysis of intersection crashes, **Table 31** describes the number of tracts and population in the vicinity of pedestrian crashes. Pedestrian crashes appear to occur at a higher rate in high minority and high in-poverty areas compared to other areas of the LLTS MPO Region. Pedestrian fatalities, on the other hand, appear to occur slightly less in high in-poverty and high-minority areas compared to other areas.

Table 31. Pedestrian Crashes near Minority & In-Poverty Areas vs. Other Areas in the LLTS MPO Region

Population Area Category	Total Tracts	Total Population	Number of Pedestrian Crashes	Number of Pedestrian Crashes per 1,000 persons	Number of Fatal Pedestrian Crashes
High Minority Only	28	85,183	118	1.4	6 5.1%
High In-Poverty Only	14	39,694	86	2.2	6 7.0%
Both High Minority and High In-Poverty	9	25,144	61	2.4	4 6.6%
Neither High Minority nor High In-Poverty	130	435,369	279	0.6	22 7.9%
LLTS MPO Region Total	163	535,102	423	0.8	30 7.1%

Source: PennDOT Pedestrian Crashes Data (Date range 7/1/2009 to 6/30/2014, Only crashes that occurred on State Routes)

The analysis summarized in **Table 32** looks at the crash data from a different perspective by comparing the LLTS MPO regional average concentration of minority and in-poverty persons to the concentrations in the vicinity of intersection crashes. Concentrations of minority populations are higher than the LLTS MPO regional average around Top 40 crash intersections and injury pedestrian crashes, but similar to the regional average around roadway segments with fatal pedestrian crashes. Concentrations of in-poverty populations are higher than the regional average around intersection crashes and roadway segments with injury crashes, but similar to the regional average around roadway segments with fatal pedestrian crashes.

Table 32. Concentrations of Minority & In-Poverty Populations near Crash Hot Spot Locations in the LLTS MPO Region

	LLTS MPO Regional Concentration of EJ Population for All Block Groups	Average Concentration of Minority and In-Poverty Populations in Tracts containing ...		
		"Top 40" Intersection Crashes	At Least Three Injury Pedestrian Crashes	At Least One Fatal Pedestrian Crash
Non-Hispanic Minority Population	5.4%	8%	6.8%	5.9%
In-Poverty Population	14.8%	16%	18.3%	15%

Source: PennDOT District 4-0, 2015; U.S. Census Bureau, ACS 2013 5-Year Estimates

Mobility

Mobility performance measures were selected to gage the transportation system's ability to efficiently move persons from origins to destinations throughout the LLTS MPO Region.

Travel Time to Work

U.S. Census ACS data regarding travel time to work was used to measure relative mobility throughout the region. **Table 33** describes the journey-to-work travel times for census tracts according to Census determined ranges. In general, high minority and in-poverty areas have a higher proportion of travel times under 45 minutes than other areas. The remaining travel time ranges above 45 minutes are quite similar in proportion across all areas. The final column of **Table 33** gives an estimate of "Weighted Travel Time"[14] for each Population Area Category. Travel times for high minority and in-poverty areas are lower than those for other communities. This is a similar finding to the finding that was made using the 2000 Census data.

Table 33. Travel Time to Work for Minority and In-Poverty Areas vs. Other Areas in the LLTS MPO Region

Population Area Category	Total Workers (Age 16+)	< 10 min.	10-19 min.	20-29 min.	30-44 min.	45-59 min.	60-89 min.	> 89 min.	Weighted Avg. Travel Time [1]
High Minority Only	32,830	6,832 20.8%	13,442 40.9%	6,453 19.7%	3,466 10.6%	1,210 3.7%	699 2.1%	728 2.2%	21.8
High In-Poverty Only	14,135	3,399 24%	5,370 38%	2,947 20.8%	1,346 9.5%	396 2.8%	458 3.2%	219 1.5%	21.0
Both High Minority and High In-Poverty	9,307	2,280 24.5%	3,517 37.8%	2,020 21.7%	814 8.7%	251 2.7%	243 2.6%	182 2%	20.8
Neither High Minority nor High In-Poverty	195,564	33,031 16.9%	70,074 35.8%	45,042 23%	28,815 14.7%	8,810 4.5%	5,862 3.0%	3,930 2.0%	24.0
LLTS MPO Region Total	233,222	40,982 17.6%	85,369 36.6%	52,422 22.5%	32,813 14.1%	10,165 4.4%	6,776 2.9%	4,695 2.0%	23.7

Notes:
[1] Weighted Average Travel Time calculated by multiplying the number of commuters by the average time for each range. For the >89 minute range, a travel time of 120 minutes was assumed. The sum across all ranges was divided by the total number of commuters.

Source: U.S. Census Bureau, ACS, 2013 5-Year Estimates, Table B08012.

Of course, the travel times and range distribution are somewhat biased by the travel mode share. **Table 34** gives journey-to-work travel time by public transportation versus other modes. For all travel time ranges, high Minority and In-Poverty areas have a somewhat higher proportion of trips made by public transit, in comparison to the LLTS MPO region. It should also be noted that, based on the evaluation of travel mode (**Table 27**), high Minority and In-Poverty areas had a higher proportion of trips made by walking, which is certainly a slower mode for moving from origin to destination.

[14] "Weighted Travel Time" is an estimate that was calculated assuming that trips were equally distributed within each range of travel time. Trips over 90 minutes were assumed to be uniformly distributed around an average of 120 minutes.

Table 34. Travel Time to Work by Mode for Minority and In-Poverty Areas vs. Other Areas in the LLTS MPO Region

Population Area Category	Total Workers (Age 16+)	Total Workers that take Public Transit	< 30 min.		30-44 min.		45-59 min.		> 60 min.	
			Public Transit	Modes other than Public Transit	Public Transit	Modes other than Public Transit	Public Transit	Modes other than Public Transit	Public Transit	Modes other than Public Transit
High Minority Only	32,830	1,067	374	26,353	223	3,243	102	1,108	368	1,059
		3.3%	1.1%	80.3%	0.7%	9.9%	0.3%	3.4%	1.1%	3.2%
High In-Poverty Only	14,135	478	153	11,563	80	1,266	15	381	230	447
		3.4%	1.1%	81.8%	0.6%	9.0%	0.1%	2.7%	1.6%	3.2%
Both High Minority and High In-Poverty	9,307	323	148	7,669	30	784	15	236	130	295
		3.5%	1.6%	82.4%	0.3%	8.4%	0.2%	2.5%	1.4%	3.2%
Neither High Minority nor High In-Poverty	195,564	1,522	511	147,636	409	28,406	204	8,606	398	9,394
		0.8%	0.3%	75.5%	0.2%	14.5%	0.1%	4.4%	0.2%	4.8%
LLTS MPO Region Total	233,222	2,744	890	177,883	682	32,131	306	9,859	866	10,605
		1.2%	0.4%	76.3%	0.3%	13.8%	0.1%	4.2%	0.4%	4.5%

Source: U.S. Census Bureau, ACS, 2013 5-Year Estimates, Table B08134.

For auto trips made in less than 45 minutes, communities with high concentrations of low-income and minority populations access roughly half the number of jobs that tracts without high concentrations of low-income and minority populations access. Bus commuters from non-minority communities similarly access about twice as many jobs as bus commuters from minority communities. Bicycle and pedestrian commuters from communities with high concentrations of minority persons access slightly more jobs than those from non-minority communities.

Transportation Funding

Fundamentally, the principles of environmental justice are aimed at preventing the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations. The establishment of transportation funding as a performance measure is consistent with this principle by supporting the evaluation of funding priorities contemplated for the Long-Range Transportation Plan, including the 4-year Transportation Improvement Program (TIP). Mapping and analyzing transportation funding can assist in making the prioritization process more open, transparent, and accountable to the public. In developing this funding performance measure, the core issue is whether the number and types of projects and the total project investment are equitably distributed throughout the planning area, or whether certain communities consistently receive a greater share of project funding expenditures.

Transportation funding as a performance measure is appealing, particularly for its simplicity, but there are limitations that must be acknowledged. “Benefits” cannot always be effectively ascribed to a specific location. For example, many significant projects, such as transit vehicle replacements and non-specific line item funding programs for bridges and roadway projects (e.g., CMAQ) cannot be readily mapped to specific locations, yet they may deliver significant benefits to traditionally underserved populations. In addition, transportation projects that can be “mapped” to areas without high concentrations of minority or low-income persons could be projects of critical regional and

economic significance, including improvements to interstate facilities and major arterial corridors. Such projects benefit all travelers—not just local populations—by improving access to employment

and activity centers.[15] At the same time, transportation projects that deliver benefits for regional travelers may also create burdens for populations in immediate proximity to the right-of-way in the form of noise, air quality, safety for pedestrians or drivers, etc. These burdens or adverse impacts may not be fully understood until the feasibility of specific preliminary design alignments and concepts are being examined.[16]

Equity Assessment of the Existing TIP

Patterns of transportation investment spending from the existing TIP were compared to those in the proposed TIP to consider the distributional effects for minority and low-income populations. As shown in **Table 35**, the *locatable projects* from the existing TIP for the LLTS MPO region have a total value of **$207,507,504.95 for funding 130 projects**. This TIP is weighted heavily toward spending on bridge improvements and construction, consistent with the current statewide priority to address structurally deficient bridges. Project priorities may change once the problems with structurally deficient bridges are addressed.

Figure 12 illustrates the geographic proximity between different TIP project types and high minority and high in-poverty areas. **Table 35** summarizes the dollar value of the projects according to the project type and the geographic proximity to high minority and in-poverty populations. There was a total investment of approximately $41.7 million (21 percent of the TIP) in high minority areas and $28.6 million (14 percent of the TIP) in high in-poverty areas.

[15] The extent of these benefits would be measureable through the use of a regional travel demand model, a tool which is not currently available for the Lackawanna/Luzerne region.
[16] Environmental Justice is appropriately a topic for additional environmental study in the NEPA/Project Development stage.

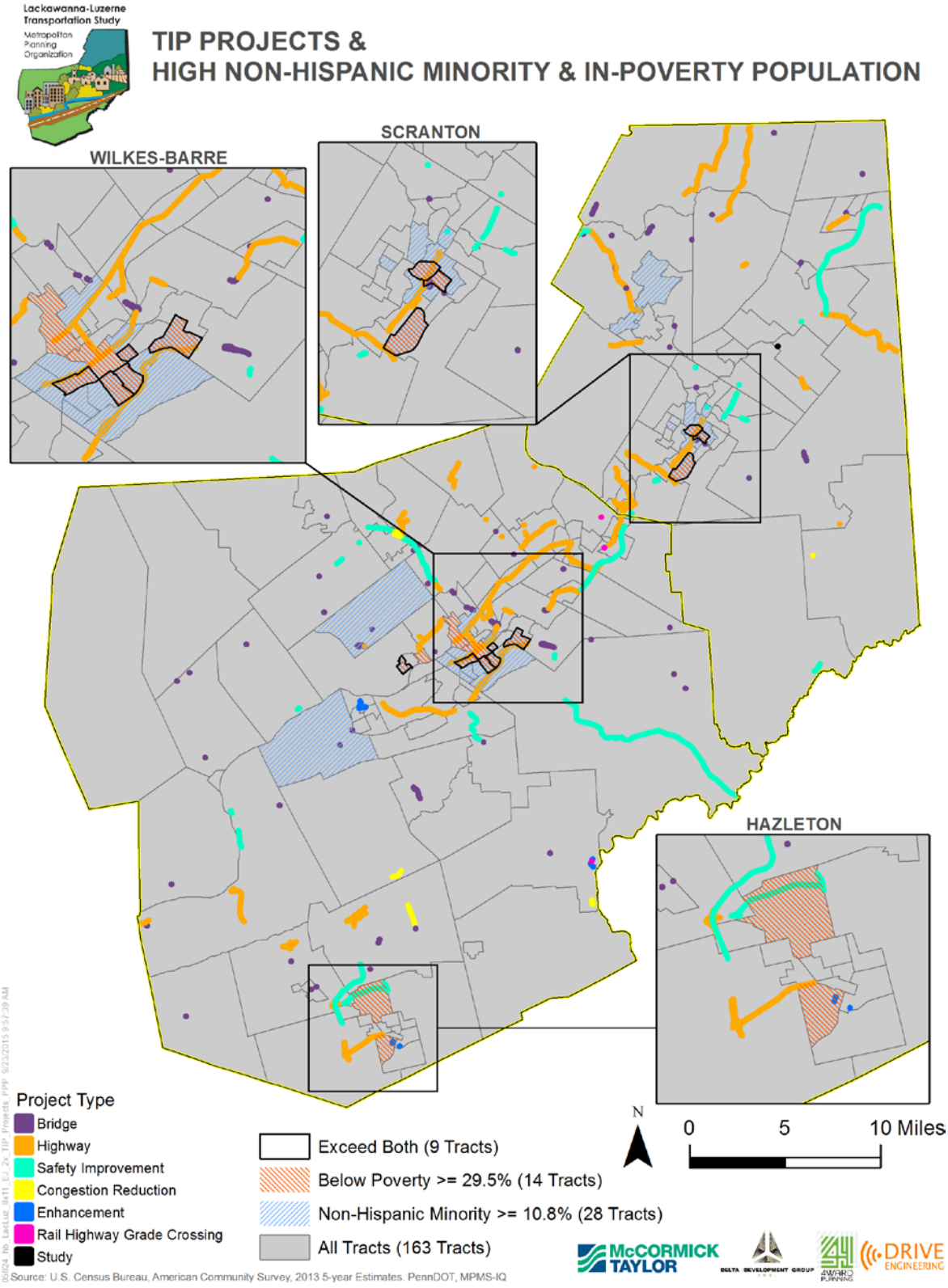
Table 35. Existing Transportation Investment by Category by Proximity to High Minority and/or High In-Poverty Populations within the LLTS MPO Region (2015-2018)

Project Category	Population Area Category				
	High Non-Hispanic Minority Only	In-Poverty Only	Both High Minority and High In-Poverty	Neither High Minority nor High In-Poverty	LLTS MPO Region Total
BRIDGE	$7,901,500.00 8.3%	$3,557,500.00 3.7%	$3,557,500.00 3.7%	$88,990,212.00 91.8%	$96,891,712.00
HIGHWAY RESTORATION/ RECONSTRUCTION	$33,019,064.00 46.2%	$22,604,289.00 31.6%	$14,941,289.00 20.9%	$70,591,081.95 98.5%	$71,668,856.95
SAFETY IMPROVEMENT	$849,900.00 3.6%	$1,562,430.00 6.7%	0	$23,232,765.00 99.6%	$23,332,665.00
CONGESTION REDUCTION	0	0	0	$9,639,770.00 100%	$9,639,770.00
ENHANCEMENT	0	0	0	$5,299,747.00 100%	$5,299,747.00
RAIL HIGHWAY GRADE CROSSING	0	0	0	$554,754.00 100%	$554,754.00
STUDY	0	0	0	$120,000.00 100%	$120,000.00
Total Projects with Location Information	$41,770,464.00 21.1%	$28,666,219.00 14.4%	$18,498,789.00 9.3%	$198,418,329.95 95.6%	$207,507,504.95

* Projects funded through Line Item and Reserve funding are not locatable at this point in the planning process. Therefore, their proximity to High Minority and/or High In-Poverty populations could not be determined. The total for projects with no location information is $94,147,937.05. Multiple projects spanned multiple tracts inside and outside of high minority and in-poverty areas. Because of this, projects were counted multiple times if this was the case, as to not include bias when determining projects to be counted.

Source: PennDOT District 4-0 TIP (2015-2018); PennDOT MPMS IQ.

FIGURE 12


Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
TIP PROJECTS &
HIGH NON-HISPANIC MINORITY & IN-POVERTY POPULATION
WILKES-BARRE
SCRANTON
HAZLETON
Project Type
Bridge
Highway
Safety Improvement
Congestion Reduction
Enhancement
Rail Highway Grade Crossing
Study
Exceed Both (9 Tracts)
Below Poverty >= 29.5% (14 Tracts)
Non-Hispanic Minority >= 10.8% (28 Tracts)
All Tracts (163 Tracts)
N
0
5
10 Miles
Source: U.S. Census Bureau, American Community Survey, 2013 5-year Estimates, PennDOT, MPMS-IQ
McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
DRIVE ENGINEERING

Equity Assessment of the Proposed TIP and LRTP

Title VI of the *Civil Rights Act of 1964* states that "no person in the United States shall, on the grounds of race, color, or national origin, be excluded from the participation of, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." Additionally, *Executive Order 12898* mandates that federal agencies incorporate environmental justice considerations and analysis in their policies, programs, and activities. Environmental Justice (EJ) is the fair treatment and meaningful involvement of all people regardless of religion, race, ethnicity, income, or education level in the planning and decision-making process.

An Environmental Justice Workshop was held on September 24, 2015 to gather input on transportation priorities and needs from representatives of minority, low-income and other traditionally underserved populations in the LLTS MPO region. Attendees at the meeting included representatives of the Luzerne County Planning Commission, Lackawanna County Planning Commission, FHWA, PennDOT, Luzerne County Transportation Authority, Area Agency on Aging of Luzerne/Wyoming Counties, Lackawanna Workforce Development Board, and the City of Hazleton. Some of the identified needs included public transit availability after 5pm to accommodate workers, transit routes to industrial parks, transit accommodations for veterans and seniors, and transit accommodations to out-of-county healthcare facilities.

Patterns of transportation investment spending for the proposed, fiscally-constrained long-range transportation plan for the LLTS MPO region were considered to gage the distributional effects on minority and low-income populations. As shown in **Table 36**, the locatable projects from the proposed long-range transportation plan (2015-2040) have a total value of $1.94 billion for funding 296 projects.

Figure 13 illustrates the geographic proximity between different project types and high minority and high in-poverty areas. **Table 36** summarizes the dollar value of the projects according to the project type and the geographic proximity to high minority and in-poverty populations. The proposed long-range transportation plan invests $190 million (16 percent of the plan) in high minority areas and $210 million (18 percent of the plan) in high in-poverty areas. In addition, $91 million (8% of the plan) is to be directed to areas with both High Minority and In-Poverty populations. The remaining $1 billion (86 percent of the plan) is directed to areas with neither High Minority nor High In-Poverty populations.

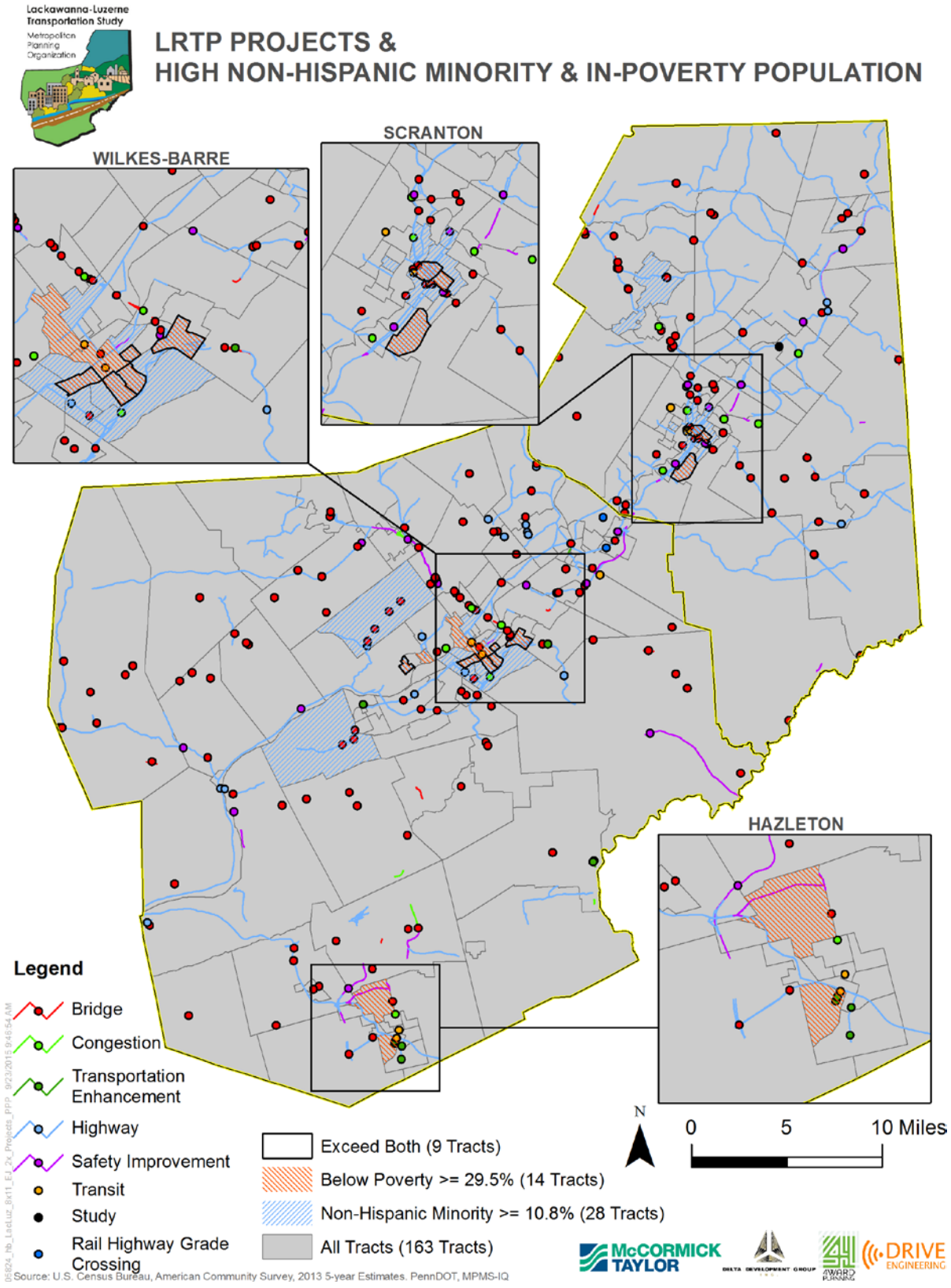
Table 36. Proposed Transportation Investment by Category by Proximity to High Minority and/or High In-Poverty Populations within the Two-County Area (2015-2040) *

Project Category	Population Area Category				
	High Non-Hispanic Minority Only	In-Poverty Only	Both High Minority and High In-Poverty	Neither High Minority nor High In-Poverty	LLTS MPO Region Total
BRIDGE	$28,254,430.00 4.4%	$88,523,449.00 13.9%	$11,918,831.00 1.9%	$532,020,533.00 83.3%	$638,370,516.00
HIGHWAY RESTORATION/ RECONSTRUCTION	$135,162,963.00 38.8%	$84,385,545.00 24.2%	$66,722,545.00 19.2%	$338,219,844.00 97.2%	$348,047,619.00
SAFETY IMPROVEMENT	$849,900.00 1.7%	$1,562,430.00 3.1%	0	$50,831,809.00 99.8%	$50,931,709.00
CONGESTION REDUCTION	$13,508,737.00 19.9%	0	0	$54,515,411.00 80.1%	$68,024,148.00
ENHANCEMENT	0	$942,000.00 11.9%	0	$7,914,994.00 100%	$7,914,994.00
RAIL HIGHWAY GRADE CROSSING	0	0	0	$817,009.00 100%	$817,009.00
STUDY	0	0	0	$110,000.00 91.7%	$120,000.00
Total Projects with Location Information	$190,113,745.00 15.9%	$210,441,305.00 17.6%	$90,979,091.00 7.6%	$1,028,941,060.00 86.2%	$1,193,765,336.00

Projects funded through Line Item and Reserve funding are not locatable at this point in the planning process. Therefore, their proximity to High Minority and/or High In-Poverty populations could not be determined. The total for projects with no location information is $775,806,711.00. Multiple projects spanned multiple tracts inside and outside of high minority and in-poverty areas. Because of this, projects were counted multiple times if this was the case, as to not include bias when determining projects to be counted.

Source: DRAFT Lackawanna-Luzerne Long Range Transportation Plan, 2015

FIGURE 13


Lackawanna-Luzerne Transportation Study
Metropolitan Planning Organization
LRTP PROJECTS &
HIGH NON-HISPANIC MINORITY & IN-POVERTY POPULATION
WILKES-BARRE
SCRANTON
HAZLETON
Legend
Bridge
Congestion
Transportation Enhancement
Highway
Safety Improvement
Transit
Study
Rail Highway Grade Crossing
Exceed Both (9 Tracts)
Below Poverty >= 29.5% (14 Tracts)
Non-Hispanic Minority >= 10.8% (28 Tracts)
All Tracts (163 Tracts)
N
0
5
10 Miles
Source: U.S. Census Bureau, American Community Survey, 2013 5-year Estimates. PennDOT, MPMS-IQ
McCORMICK TAYLOR
DELTA DEVELOPMENT GROUP
AWARD PLANNING
DRIVE ENGINEERING

Appendix B

LONG RANGE TRANSPORTATION PLAN PROJECTS AND CANDIDATE PROJECTS OUTSIDE FISCAL CONSTRAINTS

LONG RANGE TRANSPORTATION PLAN PROJECT LIST

						Project Funding Years				
PROJECT ID	**PROJECT CLASS**	**PROJECT TITLE**	**PROJECT DESCRIPTION**	**COUNTY**	**MUNICIPAL**	**2015-2018**	**2019-2020**	**2021-2022**	**2023-2026**	**2027-2040**
57706	SAFE	Kennedy Drive/County Road	Safety improvement/New Traffic Signal on State Route 1012 (Kennedy Drive) and Main Street in Archbald Borough, Lackawanna County.	Lackawanna	Archbald	X				
2015-151	BRIDG	Goers Hill Bridge	Goers Hill Road over White Oak Run, 0.1 mile north of Salem St	Lackawanna	Archbald Boro				X	X
104611	BRIDG	Farnham Road (SR 4002) over Outlet Baylors Lake	Bridge Replacement. Bridge closed to traffic. Stone arch.	Lackawanna	Benton					X
68853	BRPL	SR 4005 over D&H RR	Bridge replacement on State Route 4005 (Seamans Road) over D&H Railroad, in Benton Township, Lackawanna County.	Lackawanna	Benton	X	X	X		
67227	BRPL	PA 107 ov Br Tunk Creek	Bridge replacement on PA 107 (Benton Road) over Branch of Tunkhannock Creek, in Benton Township, Luzerne County.	Lackawanna	Benton					X
2015-071	BRIDG	SR 6006 over Hulls Creek	SR 6006 over Hulls Creek in Blakely	Lackawanna	Blakely					X
101498	BPRSF	SR 1019 ov US 6	Bridge preservation on State Route 1019 (Wayne Street) over US 6, in the City of Carbondale, Lackawanna County.	Lackawanna	Carbondale					X
2015-042	BRIDG	SR 6006 over Fall Brook	SR 6006 over Fall Brook in Carbondale	Lackawanna	Carbondale			X	X	
8040	BRPL	6th Ave.Bridge,Carbondale	Replacement of the bridge carrying State Route 7301 (6th Avenue) over Lackawanna Riverin the City of Carbondale, Lackawanna County.	Lackawanna	Carbondale	X				
8343	HRST	Carbondale Ind Park (APL)	Intersection improvement of State Route 106 (Dundaff Street) and Enterprise Drive in City of Carbondale, Lackawanna County.	Lackawanna	Carbondale	X				
61813	HRST	US 6 to State Route 6006	Highway restoration on US 6 (Robert P. Casey Highway) in Dunmore,Throop, Olyphant, Jessup, Archbald and Mayfield Boroughs, Carbondale Township, Lackawanna County.	Lackawanna	Carbondale		X	X	X	
104440	SAFE	SR 6 Cable Median Barrier	Install cable median barrier on State Route 6 in Archbald Borough to Carbondale Township, Lackawanna County.	Lackawanna	Carbondale	X				
62960	SAFE	Exit 7 Improvements	Safety Improvement on Exit 7 US Route 6 (Robert P Casey Highway) and Business Route 6 intersection in Carbondale Township, Lackawanna County.	Lackawanna	Carbondale	X				
102906	ENHNC	Carbondale Riverwalk	Construction of two mile section of trail, linking Carbondale to Fell Township, Lackawanna County.	Lackawanna	Carbondale And Fell Twp	X				
2015-066	BRIDG	SR 0006 TR 6 & 11 over Branch Leggetts Creek	SR 0006 TR 6 & 11 over Branch Leggetts Creek in Clark Summit	Lackawanna	Clarks Summit		X	X	X	
2015-001	CONST	SR 0006, State Street Improvements - Congestion/safety	State St. improvements including bulb outs, pedestrian improvements, wider lanes, possible barrier between Grove St. and the Kost Tire, and high friction surface.	Lackawanna	Clarks Summit Borough				X	
2015-150	BRIDG	Fourth St. Bridge	Fourth Street- T309 over Lehigh River. 1/4 mile north of SR 507	Lackawanna	Clifton Twp	X	X			
8238	BPRSF	PA 307 ov Interstate 380	Bridge preservation on PA 307 (Scranton Pocono Highway) over Interstate 380, in Covington Township, Lackawanna County.	Lackawanna	Covington				X	X
97839	CNGST	Daleville Park & Ride	Construction of Park and Ride Lot on State Route 307 (Scranton Pocono Highway) Interstate 380, Exit 20, in Covington Township, Lackawanna County.	Lackawanna	Covington	X	X			
100487	BRPL	SR 632 ov Trib Lily Lake	Bridge replacement on State Route 632 (Main Street) over Tributary to Lily Lake, in Dalton Borough, Lackawanna County.	Lackawanna	Dalton			X	X	X
67234	BRPL	SR 4011 ov S Br Tunk Cr	Bridge replacement on State Route 4011 (Turnpike Road) over South Branch of Tunkhannock Creeek, in Dalton Borough, Lackawanna County.	Lackawanna	Dalton					X

Sorted by County and Municipality

LONG RANGE TRANSPORTATION PLAN PROJECT LIST

						Project Funding Years				
PROJECT ID	**PROJECT CLASS**	**PROJECT TITLE**	**PROJECT DESCRIPTION**	**COUNTY**	**MUNICIPAL**	**2015-2018**	**2019-2020**	**2021-2022**	**2023-2026**	**2027-2040**
64307	BRST	US 6 Over SR 632	Rehabilitation of the bridge carrying US 6 (Grand Army of the Republic Highway) over State Route 632 (Main Street) in Dalton Borough, Lackawanna County.	Lackawanna	Dalton	X				
94832	SAFE	Main St Corridor Ph III	Signal/Intersection Improvements at five intersections; resurfacing on Main Avenue from State Route 1037 (Dundaff Street) to Interstate 81 in Dickson City Borough and City Of Scranton, Lackawanna County.	Lackawanna	Dickson City & Scranton	X				
92949	CNGST	Tigue Street Park N Ride	Construction of a Park and Ride on Tigue Street in Dunmore Borough, Lackawanna County.	Lackawanna	Dunmore		X			
95263	SAFE	Drinker St NB Exit Signal	Traffic Signal Installation and Intersection Improvements at Interstate 81 Exit 186 Northbound off ramp at State Route 2020 (Drinker Street) Dunmore Borough, Lackawanna County.	Lackawanna	Dunmore	X				
8394	SAFE	Dunmore Signal Network	"Signalized intersection improvements on State Route 347 (O'Neill Highway) from University Drive to Greenridge Street Dunmore Borough, Lackawanna County."	Lackawanna	Dunmore	X				
2015-453	CNGST	SR 6011 Cherry to Potter Signal Upgrades	Cherry St toPotter St Signal Upgrades	Lackawanna	Dunmore Borough				X	X
2015-035	BRIDG	SR 0435 TR 435 over Lacka Co RR Authority	SR 0435 TR 435 over Lacka Co RR Authority in Elmhurst Twp	Lackawanna	Elmhurst				X	X
2015-086	BRIDG	SR 435 Bridge over Roaring Brook	SR 435 over Roaring Brook replacement. Currently under construction for emergency repair.	Lackawanna	Elmhurst					X
105051	BRST	SR 435 ov Roaring Brook	SR 435 ov Roaring Brook	Lackawanna	Elmhurst	X				
8359	BRST	Elk Creek Bridge	Rehabilitation of the bridge carrying State Route 171 (Main Street) over Elk Creek in Fell Township, Lackawanna County.	Lackawanna	Fell	X				
67226	BRPL	US 6 ov inlet Glenburn Pd	Bridge replacement on US 6 (Grand Army of the Republic Highway) over inlet to Glenburn Pond, Glenburn Township, Lackawanna County.	Lackawanna	Glenburn		X	X	X	
8309	BRST	Glenburn Pond Outlet	Rehabilitation of the bridge carrying State Route 6 (Grand Army of the Republic Highway) over Outlet Glenburn Pond in Glenburn Township, Lackawanna County.	Lackawanna	Glenburn	X				
8193	BRST	SR 106 ov Tunkhannock Ck	Rehabilitation of the bridge carrying State Route 106 (Fallbrook Road) over Branch Tunkhannock Creek in Greenfield Township, Lackawanna County.	Lackawanna	Greenfield	X				
67205	BRPL	SR 2001ov outlet Kizer Pd	Bridge replacement on State Route 2001 (Maplewood Road) over Outlet Kizer Pond, in Jefferson Township, Lackawanna County.	Lackawanna	Jefferson					X
94567	SAFE	SR 348 Intersection Imp	Safety Improvements on State Route 348 from State Route 2002 (Wimmers Road) to State Route 2003 (Cortez Road) in Jefferson Township, Lackawanna County.	Lackawanna	Jefferson		X			
102486	STUDY	SR 1018 ov Steery Creek	Drainage Improvement on State Route 1018 (Lane Street) over Steery Creek, Jessup Borough, Lackawanna County.	Lackawanna	Jessup	X				
2015-007	CNGST	Expand Jessup Borough Park and Ride	Expand Park and Ride to provide more parking spaces	Lackawanna	Jessup Boro		X	X	X	
67085	BRPL	T437 College Av Marcomis	Bridge replacement on Township Road 437 (College Avenue) over Marcomis Creek, in La Plume Township, Lackawanna County.	Lackawanna	La Plume	X				
68856	BRST	SR 4009 over D&H Railroad	Bridge rehabilitation on State Route 4009 (Sunset Road) over D&H Railroad, in LaPlume Township, Lackawanna County.	Lackawanna	La Plume					X

Sorted by County and Municipality

LONG RANGE TRANSPORTATION PLAN PROJECT LIST

						Project Funding Years				
PROJECT ID	**PROJECT CLASS**	**PROJECT TITLE**	**PROJECT DESCRIPTION**	**COUNTY**	**MUNICIPAL**	**2015-2018**	**2019-2020**	**2021-2022**	**2023-2026**	**2027-2040**
8234	BRST	US 6 Bridge, La Plume	Rehabilitation of the bridge carrying State Route 6 (Christy Mathewson Highway) over Tunkhannock Creek in La Plume Township, Lackawanna County.	Lackawanna	La Plume	X				
8178	BRPL	SR 2004 over Kellum Creek	SR 2004 over Kellum Creek	Lackawanna	Madison	X				
8190	BRST	SR 6006 over SR 107	Rehabilitation of the bridge carrying State Route 6006 (Scranton-Carbondale Highway) over State Route 107 (Rushbrook Street) and Rushbrook Creek in Mayfield Borough, Lackawanna County.	Lackawanna	Mayfield	X				
95454	BPRSF	US 11 over Railroad	Bridge preservation on US 11 (Pittston Avenue) over Railroad, in Moosic Borough, Lackawanna County.	Lackawanna	Moosic					X
8086	BRPL	Main Street Bridge Moosic	Bridge replacement on State Route 3024 (Main Street) over Spring Brook Creek, in Moosic Borough, Lackawanna County.	Lackawanna	Moosic	X				
8400	SAFE	Birney Plaza Signals	Signalized intersection improvement (1 intersection at the convergence of multiple streets) on State Route 11 intersection with Birney Plaza, Railroad Street, and Washington Street in Moosic Borough, Lackawanna County.	Lackawanna	Moosic	X				
8174	BRST	PA 690 ov Van Brunt Cr	Bridge rehabilitation on PA 690 (Church Street) over Van Brunt Creek, in Moscow Borough, Lackawanna County.	Lackawanna	Moscow		X	X		
57693	HRST	SR 435 & 690, Moscow	"SR 435 & SR 690 Intersection Moscow Borough Intersection Improvement"	Lackawanna	Moscow	X				
100499	BRPL	SR 4036 ov Br Falls Cr	Bridge replacement on State Route 4036 (Falls Road) over Branch of Falls Creek, in Newton Township, Lackawanna County.	Lackawanna	Newton					X
68828	BRPL	TR 524 over Kennedy Creek	Bridge replacement on State Route 524 (Kennedy Center Road) over Kennedy Creek, in North Abington Township, Lackawanna County.	Lackawanna	North Abington	X				
51553	BRST	Kennedy Creek Bridge	Rehabilitation of the bridge carrying State Route 524 (Kennedy Center Road) over Kennedy Creek in North Abington Township, Lackawanna County.	Lackawanna	North Abington	X				
8182	BPRSF	SR 3017 ov Lackawanna Riv	Bridge preservation on State Route 3017 (Main Street) over Lackawanna River, in Old Forge Borough, Lackawanna County.	Lackawanna	Old Forge		X	X	X	
2015-105	STRUC	SR 3017 - Retaining Wall	Lackawanna County Retaining wall suppporting S.R. 3017	Lackawanna	Old Forge				X	
8342	HRCT	Valley View Business Park	Between SR 247 and SR 1012 Salem Road Archbald and Jessup Boroughs New Alignment	Lackawanna	Olyphant	X				
97020	BPRSF	SR 3002 ov Gardner Creek	Preservation of bridge on various State Routes in Lackawanna County.	Lackawanna	Ransom					X
8257	BPRSF	SR 8008 ov I-84 / I-380	Bridge preservation on State Route 8008 (Ramp D Road) over Interstate 84 and Interstate 380, in Roaring Brook Township, Lackawanna County.	Lackawanna	Roaring Brook					X
97930	BPRSF	SR 435 over Interstate 84	Bridge preservation on State Route 435 (Drinker Pike) over Interstate 84, in Roaring Brook Township, Lackawanna County.	Lackawanna	Roaring Brook					X
8312	BRPL	PA 307 ov Green Run	Bridge replacement on PA 347(Scranton Pocono Highway) over Green Run, in Roaring Brook Township, Lackawanna County.	Lackawanna	Roaring Brook					X
67203	BRPL	PA 307 ov Williams Bg Res	Bridge replacement on PA 307 (Scranton Pocono Highway) over Williams Bridge Reservoir, in Roaring Brook Township, Lackawanna County.	Lackawanna	Roaring Brook					X

Sorted by County and Municipality

LONG RANGE TRANSPORTATION PLAN PROJECT LIST

						Project Funding Years				
PROJECT ID	PROJECT CLASS	PROJECT TITLE	PROJECT DESCRIPTION	COUNTY	MUNICIPAL	2015-2018	2019-2020	2021-2022	2023-2026	2027-2040
8007	BRPL	Stafford Meadow Brook Br	Replacement of the bridge carrying State Route 307 (Scranton-Pocono Highway) over Stafford Meadow Brook in Roaring Brook Township, Lackawanna County.	Lackawanna	Roaring Brook	X				
8244	BRPL	PA 435 Bridge ov SR 348	Replacement of the bridge carrying State Route 435 (Drinker Parkway) over State Route 348 (Mount Cobb Road) in Roaring Brook Township, Lackawanna County.	Lackawanna	Roaring Brook	X				
8245	BPRSF	SR 438 ov S BR of Tunk CR	Preservation of bridge carrying State Route 438 over the South Branch of the Tunkhannock Creek, Scott Township, Lackawanna County.	Lackawanna	Scott					X
93000	BRPL	SR 438 over Elm Brook	Bridge replacement on State Route 438 (Montdale Road) over Elm Brook, in Scott Township, Lackawanna County.	Lackawanna	Scott	X	X			
96793	HRST	SR 1017 Slide	Slope repair on State Route 1017 (Chapman Lake Road) in Scott Township, Lackawanna County.	Lackawanna	Scott	X				
2015-170	BRIDG	North Main Avenue Bridge	North Main Avenue Bridge Over Leggetts Creek near Johnson College	Lackawanna	Scranton		X	X	X	
2015-171	BRIDG	Elm Street Bridge	Elm Street Bridge Over Lackawanna River - 500' NW of S. Washington - Posted for 20 tons	Lackawanna	Scranton		X	X	X	
2015-173	BRIDG	Ash Street Bridge	Ash Street Bridge Over Roaring Brook, 100' SE of Ricter Street	Lackawanna	Scranton				X	X
2015-002	CONST	Joseph McDade Expressway, Keyser Ave Congestion/Safety Improv.	Joseph Mcdade Expressway. Keyser Ave. congestion mitigation/safety improvements Add high friction surface in high crash areas.	Lackawanna	Scranton					X
2015-011	SAFE	SR 0011 Pittston and Cedar Ave Safety Imp	Pittston Ave and Cedar Ave. corridor safety improvements including signal upgrades, bulb outs, pedestrian improvements, turning lanes.	Lackawanna	Scranton			X		X
2015-012	SAFE	Central Scranton Expressway - Concrete median	Install concrete median barrier on the Central Scranton Expressway.	Lackawanna	Scranton					X
2015-014	SAFE	SR 0307 Safety Imp, Oak St to Ferdinand St.	Corridor safety improvements including traffic calming upgrades, LED signal upgrades, interconnecting, pedestrian improvements from Oak St. to Ferdinand St.	Lackawanna	Scranton			X	X	
68754	BPRS	TR 11 over SR 6011	Bridge preservation on TR 11(Joseph M McDade Expressway) over State Route 6011(Oak Street Exit), in City of Scranton, Lackawanna County.	Lackawanna	Scranton				X	X
68746	BPRSF	US 11 ov Theodore Street	Bridge preservation on US 11 (McDade Expressway) over Theodore Street, in the City of Scranton, Lackawanna County.	Lackawanna	Scranton				X	X
2015-029	BRIDG	TR 307 Moosic St over SR 0081 I-81 Northbound	TR 307 Moosic St over SR 0081 I-81 Northbound in Scranton	Lackawanna	Scranton		X	X		
2015-033	BRIDG	SR 3020 LINDEN ST over Lacka Co Rail Authority	SR 3020 LINDEN ST over Lacka Co Rail Authority in Scranton	Lackawanna	Scranton					X
2015-048	BRIDG	SR6011 GRN RIDG ST over Lackawanna River	SR6011 GRN RIDG ST over Lackawanna River in Scranton	Lackawanna	Scranton		X	X	X	
80797	BRPL	Parker St Bridge No. 10	Bridge replacement on State Route 7302 (Parker Street Bridge) over the Lackawanna River, in City of Scranton, Lackawanna County.	Lackawanna	Scranton					X
7838	BRPL	Harrison Avenue Bridge	Bridge replacement on State Route 6011(Harrison Avenue) over Roaring Brook, in City of Scranton, Lackawanna County.	Lackawanna	Scranton	X				

Sorted by County and Municipality

LONG RANGE TRANSPORTATION PLAN PROJECT LIST

						Project Funding Years				
PROJECT ID	PROJECT CLASS	PROJECT TITLE	PROJECT DESCRIPTION	COUNTY	MUNICIPAL	2015-2018	2019-2020	2021-2022	2023-2026	2027-2040
7912	BRPL	Rockwell Avenue Bridge	Replacement of the bridge carrying State Route 7302 (Rockwell Avenue) over Leggett's Creek in the City of Scranton, Lackawanna County.	Lackawanna	Scranton	X				
7764	BRST	W Lackawanna Ave. Bridge	Rehabilitation of the bridge carrying State Route 7302 (West Lackawanna Avenue) over Conrail Railroad in the City of Scranton, Lackawanna County.	Lackawanna	Scranton		X	X		
67199	BRST	SR 3023 ov Roaring Brook	Bridge rehabilitation on State Route 3023 (Cedar Avenue) over Roaring Brook, in City of Scranton, Lackawanna.	Lackawanna	Scranton				X	X
67200	BRST	SR 8025 ov Roaring Brook	Bridge rehabilitation on State Route 8025 (Ramp B) over Roaring Brook, in City of Scranton, Lackawanna County.	Lackawanna	Scranton	X				
8252	BRST	Spruce Complex Ret Wall	Rehabilitation of Roaring Brook Creek Retention Wall adjacent to State Route 11 (Spruce Street) carrying Rail Road Service Road, in City of Scranton, Lackawanna County.	Lackawanna	Scranton	X				
83027	BRST	SR 0011 over SR 8025	Rehabilitation of the bridge carrying State Route 11 over State Route 8025 in the City of Scranton, Lackawanna County.	Lackawanna	Scranton	X				
36	CNGST	Main Avenue Corridor Improvements	Main Avenue corridor improvements, Euclid Avenue to Bedford Street - Includes Euclid rail overpass bridge & Main-McDade ramp signals / Address high crash rates	Lackawanna	Scranton		X	X		
104443	SAFE	SR 0011/SR3023 and Birch Street	Intersection improvements, City of Scranton, State Route 11/3023 (Pittston Avenue) and Birch Street; State Route 11 (Pittston Avenue) and Hickory Street; State Route 3023 (Pittston Avenue) and Elm Street in City of Scranton, Lackawanna County.	Lackawanna	Scranton	X				
57729	STUDY	Scranton-NYC RR Line Item	Connection with the New York Central RailRoad in the City of Scranton, Lackawanna County.	Lackawanna	Scranton	X				
2015-300	TRANS	COLTS CNG Fueling Station,Vehicles, and Maintenance Facility	Compressed Natural Gas fueling station, vehicles (on a regular replacement schedule), and maintenance facility.	Lackawanna	Scranton		X			
2015-304	TRANS	COLTS Additional Parking at Intermodal Facility	Additional Parking at Intermodal Facility	Lackawanna	Scranton			X		
2015-307	TRANS	COLTS Phase 2 Intermodal Facility	Phase 2 of Intermodal facility to connect with potential rail service from New Jersey	Lackawanna	Scranton					X
2015-452	CNGST	SR 3016 Davis Street at SR 11 Signal Upgrades, Aux Lanes	Davis St to SR 11 Signal Upgrades & Aux lanes.	Lackawanna	Scranton City		X	X	X	
69172	BPRSF	SR 8041 ov US 11	Bridge preservation on State Route 8041 (Ramp F) over US 11, in South Abington Township, Lackawanna County.	Lackawanna	South Abington					X
2015-056	BRIDG	SR 0011 TR 11 over Summit Lake Creek	SR 0011 TR 11 over Summit Lake Creek in South Abington	Lackawanna	South Abington					X
69210	BRPL	SR 8015 ov Leggett's Cr	Bridge replacement on State Route 8015 (Ramp F) over Leggett's Creek, in South Abington Township, Lackawanna County.	Lackawanna	South Abington			X	X	
97932	BRST	SR 4023 ov Spillwy at Res	Rehabilitation of bridge carrying State Route 4023(Scott Road) over Spillway at Griffin Reservoir, in South Abington Township, Lackawanna County.	Lackawanna	South Abington					X
8006	BRST	SR 4032 ov Summit Lake Ck	Rehabilitation of the bridge carrying State Route 4032 (Shady Lane Road) over Summit Lake Creek in South Abington Township, Lackawanna County.	Lackawanna	South Abington	X				

Sorted by County and Municipality

LONG RANGE TRANSPORTATION PLAN PROJECT LIST

						Project Funding Years				
PROJECT ID	**PROJECT CLASS**	**PROJECT TITLE**	**PROJECT DESCRIPTION**	**COUNTY**	**MUNICIPAL**	**2015-2018**	**2019-2020**	**2021-2022**	**2023-2026**	**2027-2040**
8221	HRST	Lackawanna Trail (Bett.)	Restoration of State Route 6 from Old Turnpike Road to Gravel Pond Road in South Abington and Glenburn Townships, Lackawanna County.	Lackawanna	South Abington & Glenburn	X				
8156	BRPL	SR 3012 ov Keyser Creek	Bridge replacement on State Route 3012 (Oak Street) over Keyser Creek, in Taylor Borough, Lackawanna County.	Lackawanna	Taylor				X	X
97105	BRST	SR 2013 ov Pond Creek	Rehabilitation of bridge carrying State Route 2013 (River Road) over Pond Creek in Thornhurst Township, Lackawanna County.	Lackawanna	Thornhurst			X	X	
100540	HRST	Group 4-18-Surface Treatment 10	Resurface PA 632 from SR 4018 (Abington Road) to SR 0247 (Wildcat Road) and US 11 from Mifflin Avenue to US 6 (Northern Boulevard) in Waverly, Scott, and South Abington Townships and Dalton Borough, Lackawanna County	Lackawanna	Various		X	X		
101984	HRST	Group 4-15-Surface Treatment 7	Resurface SR 1015 (Creamery Road) from SR 4003 (Jordon Hollow Road) to the Susquehanna County Line and SR 1013 from PA 438 (Boyarsky Road) to the Susquehanna County Line, Benton, Greenfield and Scott Townships, Lackawanna County	Lackawanna	Various	X	X			
101999	HRST	Group 4-16-Surface Treatment 1	Resurface sections of the following State Routes: SR 3014, SR 524, SR 3020, SR 3016, SR 6011, SR 3033, SR 3018, SR 438 in North Abington, Scott, La Plume, and Benton Townships and the City of Scranton, Lackawanna County.	Lackawanna	Various		X			
102004	HRST	Group 4-16-Surface Treatment 7	Resurface sections of the following State Routes: SR 1012 (Salem Road), SR 1027 (Layton Road), and SR 2004, in South Abington, Scott, and Madison Townships and Archbald Borough, Lackawanna County.	Lackawanna	Various		X			
102012	HRST	Group 4-17-Surface Treatment 1	Resurface sections of the following State Routes: SR 590, SR 3021, SR 4034, SR 690 in Elmhurst, Roaring Brook, Madison, Newton, Spring Brook and Jefferson Townships, Moscow Borough and the City of Scranton, Lackawanna County.	Lackawanna	Various			X		
102061	HRST	Group 4-17-Surface Treatment 7	Resurface sections of the following State Routes: SR 6006, SR 11, and SR 1005 in the City of Scranton, Dickson City and Blakely and Moosic Boroughs, and Carbondale Township, Lackawanna County.	Lackawanna	Various			X		
102067	HRST	Group 4-18-Surface Treatment 1	Resurface US 11 from State Route 3031 (Rocky Glen Road) to Mifflin Avenue and PA 247 from Township Road 402 to the Park and Ride Entrance in City of Scranton, Jefferson Township, and Moosic, Jessup, and Olyphant Boroughs, Lackawanna County.	Lackawanna	Various			X	X	
102072	HRST	Group 4-18-Surface Treatment 7	Resurface sections of the following State Routes: SR 1006, SR 2008, and SR 3023 in Carbondale and Scott Townships, Olyphant and Throop Boroughs and the City of Scranton, Lackawanna County.	Lackawanna	Various				X	
102090	HRST	Group 4-19-Surface Treatment 4	Resurface sections of the following State Routes: SR 107, SR 3025 in Jermyn and Mayfield Boroughs, and Scott, Benton, Carbondale and Greenfield Townships and the City of Scranton, Lackawanna County.	Lackawanna	Various					X
102092	HRST	Group 4-20-Surface Treatment 1	Resurface State Route 1003 from State Route 6006 (Roosevelt Highway) to PA 171 (Main Street) in Fell and Carbondale Townships and Vandling Borough	Lackawanna	Various					X

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102094	HRST	Group 4-14-Surface Treatment 18	Resurfacing of SR 347 from Ridgeview Dr to SR 524 in Scott Township, Dickson City, Blakely, Throop, Olyphant, and Dunmore Boroughs and SR 3013 (Main St) from SR 3016 (Davis St) to SR 3012 (Oak St) in Taylor Borough, Lackawanna County.	Lackawanna	Various				X	
102096	HRST	Group 4-21-Surface Treatment 1	Resurface sections of SR 1012, SR 1014, SR 4030, SR 1023, SR 3029, SR 3013, SR 1015, SR 106, SR 1008, and SR 4004 in Various Municipalities, Lackawanna County. "	Lackawanna	Various				X	
102114	HRST	Group 4-21-Surface Treatment 3	Resurfacing of PA 502 from US 11 to PA 435 (Drinker Pike) and PA 307 (Scranton-Pocono Highway) from PA 435 (Drinker Parkway) to the Springbrook Township Line in Moosic Borough, and Spring Brook and Covington Townships, Lackawanna County	Lackawanna	Various					X
102117	HRST	Group 4-22-Surface Treatment 1	Resurface sections of the following State Routes: SR 1016, SR 1001, SR 4005, SR 4009, SR 438, Vandling, Olyphant and Jessup Boroughs, and Fell, Benton, LaPlume, and North Abington Townships, Lackawanna County.	Lackawanna	Various					X
104444	SAFE	District Signal Upgrades	Signal safety improvements on various state routes. Lackawanna, Luzerne, Pike Counties, City of Scranton, Kingston, Blooming Grove, Lackawaxen Townships, SR 6011 (Green Ridge Street), Capouse Avenue, SR 309 (Memorial Highway), SR 1036 (Carverton Road), SR 6 (GAR Highway), SR 434 (Well, Shohola Road)	Lackawanna	Various	X				
96719	BRPL	PA 632 ov Ackerley Ck	Bridge replacement on PA 632 (Carbondale Road) over Ackerley Creek, in Waverly Township, Lackawanna County.	Lackawanna	Waverly					X
67228	BRPL	PA 632 ov Ackerley Creek	Bridge replacement on PA 632 (Carbondale Road) over Ackerley Creek, in Waverly Township, Lackawanna County.	Lackawanna	Waverly					X
2015-350	TRANS	COLTS Operating & Maintenance Costs		Lackawanna			X	X	X	X
67410	BRPL	SR 6309 ov Luz Co Rail Au	Bridge replacement on State Route 6309 (Mountain Boulevard) over Luzerne County Rail Authority Railroad, in Ashley Borough, Luzerne County.	Luzerne	Ashley		X		X	
73757	BRST	Carey St over Solomon Ck	Rehabilitation of the bridge carrying Carey Street over Solomon's Creek in Ashley Borough Luzerne County.	Luzerne	Ashley			X	X	
2015-167	CONST	Main Street (SR 0011) and McAlpine Street (SR 2027) Intersection Improvements	Difficult for trucks to turn right onto Main Street (Southbound) from McAlpine Street (Eastbound). Improvements needed to help develop Greater Pittson Chamber of Commerce Park	Luzerne	Avoca Borough		X	X		
93027	BRPL	SR 2035 over Meadow Run	Bridge replacement on State Route 2035 (Bear Creek Road) over Meadow Run, in Bear Creek Township, Luzerne County.	Luzerne	Bear Creek	X		X		
93033	BRPL	SR 2036 over Mill Creek	Bridge replacement on State Route 2036 (Bald Mountain Road) over Mill Creek, in Bear Creek Township, Luzerne County.	Luzerne	Bear Creek	X				
67280	BRPL	SR 2036 ov Red Run Bridge	Bridge replacement on State Route 2036 (Bald Mountain Road) over Red Run, in Bear Creek Township, Luzerne County.	Luzerne	Bear Creek					X
67364	BRPL	SR 115 over Shades Creek	Bridge Replacement	Luzerne	Bear Creek	X				
9009	BRPL	SR 2035 Ov. Brnch Meadow	Replacement of bridge carrying State Route 2035 (Bear Creek Road) over Branch Meadow Run, in Bear Creek Township, Luzerne County.	Luzerne	Bear Creek	X				

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101479	HRST	PA 115 in Plains Township	Pipe Replacement on PA 115 (Bear Creek Boulevard) between Township Road 457 (Old East End Boulevard) to State Route 2039 (Pittston Boulevard), in Plains Township,Luzerne County.	Luzerne	Bear Creek					X
104441	SAFE	Rumble Strips 2016	Install centerline and edgeline rumble strips on various state routes, in various townships, various counties.	Luzerne	Bear Creek	X				
102002	SAFE	PA 115 E L R Strips	Install Edgeline Rumble Strips and Paved Shoulders on PA 115, in Various Municipalities, Luzerne County.	Luzerne	Bear Creek		X	X	X	
68933	BRPL	SR239 ov BR Huntington Cr	Bridge replacement on State Route 239 (Pond Hill Road) over the Branch of Huntington Creek, in Huntington Township, Luzerne County.	Luzerne	Black Creek					X
9015	BRPL	SR 3020 Ov Branch Blck Ck	Replacement of the bridge carrying State Route 3020 (Tomhicken Road) over Branch Black Creek in Black Creek Township, Luzerne County.	Luzerne	Black Creek	X				
94303	BRPL	SR 2040 ov Kendall Cr	Bridge replacement on State Route 2040 (Buck River Road) over Kendall Creek, in Buck Township, Luzerne County.	Luzerne	Buck					X
67460	BRPL	SR 3040 ov Trib Nescop Cr	Bridge replacement on State Route 3040 (St. Johns Road) over tributary to Nescopeck Creek, in Butler Township, Luzerne County.	Luzerne	Butler					X
93006	BRPL	SR 309 over Nescopeck Ck	Bridge replacement on State Route 309 (Hunter Highway) over Nescopeck Creek, in Butler Township, Luzerne County.	Luzerne	Butler	X				
8759	BRPL	SR 7204 ov Nescopeck Cr	Bridge replacement on State Route 7204 (T-358, Sleepy Hollow) over Nescopeck Creek, in Butler Township, Luzerne County.	Luzerne	Butler					X
67343	BRPL	SR 3021 ov Nescopeck Ck	Bridge replacement on State Route 3021 (Old Turnpike Road) over Nescopeck Creek, in Butler Township, Luzerne County.	Luzerne	Butler	X	X			
67344	BRST	SR 3021 ov Nescopeck Cr	Bridge rehabilitation on State Route 3021 (North Old Turnpike Road) over Nescopeck Creek, in Butler Township, Luzerne County.	Luzerne	Butler	X				
64481	CNGST	Butler Twp. Park & Ride	Construction of a Park and Park and Ride Lot on PA Route 309 at the Interstate 80 Interchange in Butler Township, Luzerne County.	Luzerne	Butler	X	X			
2015-010	SAFE	SR 309 Southbound Off-Ramp at Wilkes Barre Blvd	Intersection improvements at the Exit 2 SR 0309 southbound off ramp at Wilkes-Barre Blvd..	Luzerne	City Of Wilkes- Barre					X
67450	BRPL	SR 3004 overTurtle Run Cr	Bridge replacement on State Route 3004 (Main Street) over Turtle Run Creek, in Conyngham Township, Luzerne County.	Luzerne	Conyngham					X
93040	BRPL	SR 3034 over Nescopeck Cr	Bridge replacement on State Route 3034 (Sugarloaf Avenue) over Branch of Little Nescopeck Creek, in Conyngham Borough, Luzerne County.	Luzerne	Conyngham	X				
93035	BRPL	SR 3006 over Pond Creek	Bridge replacement on State Route 2036 (Bald Mountain Road) over Mill Creek, in Bear Creek Township, Luzerne County.	Luzerne	Conyngham	X	X			
8434	BRST	SR 3034 ov Nescopeck Ck	Rehabilitation of the bridge carrying State Route 3034 (Butler Avenue) over Little Nescopeck Creek in Conyngham Borough, Luzerne County.	Luzerne	Conyngham	X	X			
9214	SAFE	PA239 Widening @ RR Track	Restoration of State Route 239 in Conyngham Township, Luzerne County.	Luzerne	Conyngham	X		X		
97943	BRST	SR 309 over Toby Creek 2	Rehabilitation of bridge carrying State Route 309(Memorial Highway) over Toby Creek, in Courtdale Borough, Luzerne County.	Luzerne	Courtdale	X	X			

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9174	BRPL	PA 309 ov Br Fern Creek	Bridge replacement on State Route 309 (Tunkhannock Highway) over Branch of Fern Creek, Dallas Borough, Luzerne County.	Luzerne	Dallas		X	X	X	
68977	BRST	SR 1014 Overbrook ov 309	Bridge rehabilitation on State Route 1014 (Overbrook Avenue) over TR 309, in Dallas Township, Luzerne County.	Luzerne	Dallas	X		X		
70249	CNGST	Dallas Int. 5 Leg	Intersection improvement on State Route 415 intersection with State Route 1045 (Main Street) State Route 1045 (Chruch Street) and State Route 1047 (Lake Street) in Dallas Borough.	Luzerne	Dallas	X				
50800	HRST	Upper Demunds/Hildebrant	Intersection Realignment, Signal Installation at intersection State Route 309 and State Route 1041 (Upper Demunds Road), Signal Improvement at State Route 309 and State Route 1044 (Center Hill Road) and in Dallas Township, Luzerne County.	Luzerne	Dallas	X				
70233	SAFE	SR 309 Kingston	SR 309 from Hillside Rd to SR 309/415 Split and SR 415 from SR 309/415 to SR 118 Kingston Township, Dallas Borough, Dallas Township Safety Improvement Corridor & Congestion Study 20 intersections	Luzerne	Dallas	X				
104322	ENHNC	Back MT Trail - Mile 7	Construction of a trail extending the Back Mountain Trail from Overbrook Road to Dorchester Road in Dallas Township, Luzerne County.	Luzerne	Dallas Twp	X				
93018	BRPL	SR 437 over Creasy Creek	Bridge replacement on State Route 437 (Church Street) over Tributary to Creasy Creek, in Dennison Township, Luzerne County.	Luzerne	Dennison	X	X			
102909	ENHNC	D&L Trail Middleburg Xing	Construction of pedestrian crossing for D&H Trail that ties together previously constructed sections of the trail in Dennison Township, Luzerne County.	Luzerne	Dennison	X				
103211	RAILG	SR 2041 Middleburg Road	D and L trail crossing on Middleburg Road, SR 2041, and trail construction with a railroad crossing in PennDOT ROW adjacent to SR 2041 in Dennison Township, Luzerne County.	Luzerne	Dennison	X				
96724	BRPL	2042 ov Lil Wapwallo Cr	Bridge replacement on State Route 2042 (Stairville Road) over Little Wapwallopen Creek, in Dorrance Township, Luzerne County.	Luzerne	Dorrance					X
93036	BRPL	SR 3010 ov Wapwallopen Cr	Bridge replacement on State Route 3010 (Alberdeen Road) over Branch of Wapwallopen Creek, in Dorrance Township, Luzerne County.	Luzerne	Dorrance					X
50703	CNGST	Dorrance Park & Ride	Construction of a Park and Ride on State Route 3007 at the Dorrance Exit 155 of Interstate 81 in Dorrance Township, Luzerne County.	Luzerne	Dorrance	X				
67434	BRST	US 11 Over RR And Mill CK	Rehabilitation of the bridge carrying State Route 11 (Main Street) over Railroad and Mill Creek in Dupont Borough, Luzerne County.	Luzerne	Dupont	X				
8890	NALGN	Airport Access Road	Construction of a New Access Road from State Route 315 to Commerce Boulevard in Dupont Borough and Pittston Township, Luzerne County.	Luzerne	Dupont & Pittston	X				
102828	RAILG	SR 2032 Foote Ave.	Replacement and relocation of lights and gates on State Route 2032 (Foote Avenue) in Duryea Borough, Luzerne County	Luzerne	Duryea Boro	X				
2015-003	CONST	SR 0011, Wyoming Ave Improvements	Wyoming Ave. corridor safety improvements including LED signal upgrades, interconnecting, pedestrian improvements, turning lanes.	Luzerne	Edwardsville And Kingston Twps					X

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67470	BRPL	SR 1038 ov Obendorfers Cr	Bridge replacement on State Route 1038 (Oberdorfer Road) over Obendorfers Creek, in Exeter Township, Luzerne County.	Luzerne	Exeter					X
67471	BRPL	SR 92 over Lewis Creek	Bridge replacement on State Route 92 (Sullivan Trail) over Lewis Creek, in Exeter Township, Luzerne County.	Luzerne	Exeter			X	X	
89712	BRPL	SR 1025 ov Hicks Creek	Bridge replacement on State Route 1025 (Schooley Avenue) over Hicks Creek, in Exeter Township, Luzerne County.	Luzerne	Exeter		X	X	X	
96794	HRST	SR 1040 Slide	Slope repair on State Route 1040 (Apple Tree Road) in Exeter Township, Luzerne County.	Luzerne	Exeter	X				
96795	HRST	SR 1025 Slide	Slope repair on State Route 1025 (Schooley Avenue) in Exeter Borough, Luzerne County.	Luzerne	Exeter	X				
101387	BPRSF	SR 4015 ov Kitchen Creek	Bridge preservation on State Route 4015 (Bethel Hill Road) over Kitchen Creek, in Fairmont Township, Luzerne County.	Luzerne	Fairmount					X
93019	BRPL	SR 4020 over Pine Creek	Bridge replacement on State Route 4020 (Volanski Road) over Pine Creek, in Fairmount Township, Luzerne County.	Luzerne	Fairmount	X		X		
67290	BRPL	SR 4033 ov Branch Pine Cr	Bridge replacement on State Route 4033 (Old County Road) over Branch of Pine Creek, in Fairmont Township, Luzerne County.	Luzerne	Fairmount					X
93043	BRST	SR 4024 ov Huntington Ck	Bridge rehabilitation on State Route 4024 (Talcott Hill Road) over Huntington Creek, in Fairmount Township, Luzerne County.	Luzerne	Fairmount	X		X	X	
101927	BPRSF	SR 437 ov Railroad	Bridge preservation on PA 437 (Woodland Road) over railroad in Fairview Township, Luzerne County	Luzerne	Fairview					X
8776	BRPL	Mary St Br T-439 Fairview	Replacement of the bridge carrying Township Road 439 (Mary Street) over Conrail Railroad in Fairview Township, Luzerne County.	Luzerne	Fairview	X				
84301	BRST	SR 11 over Abraham's Ck	Rehabilitation of the bridge carrying State Route 11 (Wyoming Avenue) over Abrahams Creek in West Wyoming Borough, Luzerne County.	Luzerne	Forty Fort	X	X			
92882	BPRSF	SR 1006 over SR 309	Bridge preservation on State Route 1006 (Rutter Avenue) over State Route 309, in Forty Fort and Kingston Boroughs, Luzerne County.	Luzerne	Forty Fort & Kingston	X				
93020	BRPL	SR 1021 over Sutton Creek	Bridge replacement on State Route 1021 (Eighth Street) over Sutton Creek, in Franklin Township, Luzerne County.	Luzerne	Franklin					X
2015-020	BRIDG	SR 2002 over Warrior Creek	SR 2002 over Warrior Creek in Hanover Twp	Luzerne	Hanover				X	X
67419	BRPL	SR 2034 ov Trib Pine Cr	Bridge replacement on State Route 2034 (Pine Run Road) over Tributary to Pine Creek, in Hanover Township, Luzerne County.	Luzerne	Hanover					X
93021	BRPL	SR 2008 Bridges	Bridge replacement on State Route 2008 (South Main Street) Bridge over State Route 29 (South Cross Valley Expressway) in Hanover Township, Luzerne County.	Luzerne	Hanover		X	X	X	X
69228	BRST	PA 29 ov New Commerce Blv	Bridge Preservation on PA 29 (South Cross Valley Expressway) over New Commerce Boulevard, in Sugar Notch Borough, Luzerne County.	Luzerne	Hanover					X
105050	ENHNC	Nanticoke Streetscaping	Study Phase - Streetscaping along State Route 2002(Main Street) and SR 3001(Market Street) including sidewalks, curbing, plantings, signal upgrade, lighting, crosswalks, ADA ramps, etc., City of Nanticoke, Luzerne County	Luzerne	Hanover	X				
102030	HRCT	SR 2002 Reconstruction	Reconstruction of State Route 2002 (San Souci Parkway) from Loomis Street to State Route 2005 (Casey Avenue) in Hanover Township, Luzerne County.	Luzerne	Hanover					X

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102116	HRST	SR 2005 Reconstruction	Reconstruct State Route 2005 (Blackman Street) from State Route 6309 (Mountain Boulevard) to State Route 2002 (Sans Souci Parkway) in the City of Wilkes-Barre	Luzerne	Hanover				X	X
93945	HRST	SR 2002 Surface Treatment	Surface Treatment on State Route 2002 (Sans Souci Parkway), Hanover Township, Luzerne County	Luzerne	Hanover		X			
62969	SAFE	PA 309 Rock Fence	Installation of a Rock Fence on PA Route 309, between Township Road 433 (Brown Street) and State Route 2034 (Pine Run Road) in Hanover Township, Luzerne County.	Luzerne	Hanover	X				
67408	BRPL	SR 2002 over Warrior Creek	SR 2002 over Warrior Creek	Luzerne	Hanover Twp	X	X	X		
95434	HRST	Fed Aid Paving 4-15-FP 1	Resurface State Route 29, in Hanover, Plymouth Townships, and Sugar Notch Borough, Luzerne County.	Luzerne	Hanover, Plymouth, Sugar Notch	X				
67291	BRPL	SR1415 oTrib Harvey's Lk	Replacement of the bridge carrying State Route 1415 (Lakeside Drive) over Tributary to Harvey's Lake Creek in Harvey's Lake Borough, Luzerne County.	Luzerne	Harveys Lake					X
8871	BRPL	Harvey's Lake Inlet	Bridge replacement on State Route 415 (Memorial Highway) over Inlet at Harvey's Lake, in Harvey's Lake Borough, Luzerne County.	Luzerne	Harvey'S Lake	X				
9084	BPRSF	SR 924 ov SR 81	Bridge preservation on State Route 924(Can Do Expressway) over Interstate 81 in Hazle Township, Luzerne County	Luzerne	Hazle		X	X	X	
2015-055	BRIDG	SR 0309 TR 309 over Little Black Creek	SR 0309 TR 309 over Little Black Creek in Hazle Twp	Luzerne	Hazle				X	X
67456	BRST	TR 924 Over Conrail,Hazle	Rehabilitation of the bridge carrying State Route 924 (Hazelton Shepton Highway) over Conrail in Hazle Township, Luzerne County.	Luzerne	Hazle	X	X			
86733	HRCT	I81& 924 Intrchange Study	Interchange Improvement on Interstate 81 (Exit 143) and State Route 924 (Shepton Highway) to Interstate 81 Southbound, in Hazle Township, Luzerne County.	Luzerne	Hazle	X	X			
70467	NALGN	Ext of 424 to SR 924	SR 424 (Hazelton Beltway) extension to SR 924 Hazle Township, New Roadway	Luzerne	Hazle	X	X	X		
104439	SAFE	Interstate 81 CMB	Install cable median barrier on Interstate 81 in West Hazelton Borough, Avoca Borough, Luzerne County.	Luzerne	Hazle	X				
50714	SAFE	Hazleton Airport Rd	Corridor Safety Improvement	Luzerne	Hazle & Sugarloaf	X				
2015-004	CONST	SR 0309 Improvements, SR 924 to Airport Rd	SR 0309 corridor from SR 0924 to Airport Rd. Signal upgrades, interconnecting, pedestrian improvements, turning lanes, high friction surface.	Luzerne	Hazle Twp./ West Hazleton		X	X		
87182	SRTSF	Heights Terrace SRTS	SRTS improvements on SR 309 (Church Street) intersecting with Chapel Street and Beech Street, and SR 3018 (Poplar Street) intersecting with Beech Street and Samuels Avenue in Hazleton City, Luzerne County.	Luzerne	Hazleton	X				
2015-303	TRANS	Hazleton Bike Racks	Bike Racks for all fixed-route vehicles	Luzerne	Hazleton		X			
2015-308	TRANS	Hazleton Parking Garage	Parking garage on top of Intermodal facility	Luzerne	Hazleton					X
93044	BRPL	SR 4026 over Lewis Run	Bridge replacement on State Route 4026 (Prichards Road) over Lewis Run, in Hunlock Township, Luzerne County.	Luzerne	Hunlock	X	X			
89913	BRPL	SR 4025 ov Roaring Brook	Bridge replacement on State Route 4025 (Gravel Rd.) over Roaring Brook, in Hunlock Township, Luzerne County.	Luzerne	Hunlock				X	X
89914	BRPL	SR 4026 ov Roaring Brook	Bridge replacement on State Route 4026 (Prichards Road) over Roaring Brook, in Hunlock Township, Luzerne County.	Luzerne	Hunlock				X	X

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93002	BRPL	SR 239 over Pine Creek	Bridge replacement on State Route 239 (Pond Hill Road) over Tributary to Pine Creek, in Huntington Township, Luzerne County.	Luzerne	Huntington	X	X			
67298	BRPL	SR 4010 ov Trib Hunt. Cr	Bridge replacement on State Route 4010 (Sunshine Road) over the tributary to Huntington Creek, in Huntington Township, Luzerne County.	Luzerne	Huntington					X
101925	BRST	SR 4035 ov Pine Creek	Bridge rehabilitation on State Route 4035 over Pine Creek in Huntington Township	Luzerne	Huntington					X
96721	BRPL	1012 ov Trib Harvey's Ck	Bridge replacement on State Route 1012 (Chase Road) over Tributary to Harvey's Creek, in Jackson Township, Luzerne County.	Luzerne	Jackson					X
68966	BRPL	SR 1012 ov Br Harvey's Cr	Bridge replacement on State Route 1012 (Chase Road) over Branch of Harvey's Creek, in Jackson Township, Luzerne County.	Luzerne	Jackson					X
100508	BRPL	SR 1005 ov Becker's Cr	Bridge replacement on State Route 1005 (Huntsville Road) over Becker's Creek,in Jackson Township, Luzerne County.	Luzerne	Jackson			X	X	
57671	BRPL	BR Harvey's Creek Bridge	Bridge replacement on State Route 1012 (Chase Road) over Branch of Harvey's Creek, in Jackson Township, Luzerne County.	Luzerne	Jackson	X				
67299	BRST	SR 29 over Harveys Creek	Bridge rehabilitation on State Route 29 Bridge over Harveys Creek, in Jackson Township, Luzerne County.	Luzerne	Jackson	X	X			
8606	HRST	Chase Road (County Rd 13)	Jackson Township CHase Rd(CO.RD. #13) base repair, widening, resurfacing, milling drainage, shoulder repair, guide rail, box culvert reconstr., signing, tree remova	Luzerne	Jackson	X	X			
96931	HRST	SR 1012 Slide	Slope repair on State Route 1012 (Chase Road) in Jackson Township, Luzerne County.	Luzerne	Jackson	X				
8608	HRST	Hillside-Huntsville CR 16	Jackson & Kingston Townships Hillside-Huntsville Rd..(CO.RD. #16) base repair, widening, resurfacing, milling drainage, shoulder repair, guide rail, box culvert reconstr., signing, tree removal TR 309 to Huntsville Dam	Luzerne	Jackson & Kingston	X	X	X		
93025	BRPL	SR 2017 over SR 2021	Bridge replacement on State Route 2017 (Yatesville Road) over State Route 2021 (James A. Musto Bypass) in Jenkins Township, Luzerne County.	Luzerne	Jenkins	X		X		
93032	BRPL	SR 2035 over Mud Run Cr	Bridge replacement on State Route 2035 (Bear Creek Road) over Mud Run, in Jenkins Township, Luzerne County.	Luzerne	Jenkins	X			X	
102609	HRST	I-81 off Ramp @ Exit 175	Highway widening and entension of deceleration lane on State Route 8017 (Ramp E Road) from mainline to Armstrong Road, in Jenkins Township, Luzerne County.	Luzerne	Jenkins	X				
102007	SAFE	SR 2015 / 2004 Int Imprv	Intersection Improvements on State Route 2015 (Saylor Avenue) and State Route 2004 (River Road) in Jenkins Township, Luzerne County.	Luzerne	Jenkins			X	X	
102011	SAFE	SR 315 / 2017 Inters Imp	Intersection Improvements on State Route 315 (Dupont Highway) and State Route 2017 (Yatesville Road) in Jenkins Township, Luzerne County.	Luzerne	Jenkins			X	X	
9024	BPRSF	SR 1036 ov Leonards Cr	Bridge preservation on State Route 1036 (Caverton Road) over Leonards Creek, in Kingston Township, Luzerne County.	Luzerne	Kingston		X	X	X	
101388	BPRSF	SR 1036 ov Abrahams Cr	Bridge preservation on State Route 1036 (Caverton Road) over Abrahams Creek, in Kingston Township, Luzerne County.	Luzerne	Kingston					X
102000	BPRSF	SR 2010 ov Pocono NE Rail	Bridge preservation on State Route 2010 (South Main Street) Bridge preservation on State Route 1036 (Caverton Road) Bridge preservation on State Route 3024 (Weston Road)	Luzerne	Kingston			X	X	

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56623	BRIDG	SR 0309 TR 309 over Toby Creek	SR 0309 TR 309 over Toby Creek in Kingston Twp	Luzerne	Kingston	X	X			
96722	BRPL	SR 1044 ov Abraham's Cr	Bridge replacement on State Route 1044 (Mt Olivet Road) over Abrahams Creek, in Kingston Township, Luzerne County.	Luzerne	Kingston					X
97942	BRPL	SR 309 over Toby Creek 1	Bridge replacement on State Route 309(Memorial Highway) over Toby Creek, in Kingston Township, Luzerne County.	Luzerne	Kingston	X	X			
8920	BRPL	Old Rte11 Brg.Kingston Tw	Replacement of the bridge carring State Route 7220 (Old State Route 11) over Toby's Creek in Kingston Township, Luzerne County.	Luzerne	Kingston	X				
9029	BRPL	Eight St. Abrahams CK BR	Replacement of the bridge carrying State Route 1021 over Abraham's Creek in Kingston Township, Luzerne County.	Luzerne	Kingston	X				
9165	BRPL	Cnty Rd 16 Brg 1,Kingston	Replacement of the bridge carrying County Road number 16 over Huntsville Creek in Kingston Township, Luzerne County. (County Bridge number 1)	Luzerne	Kingston	X				
80754	HRST	SR 309 Slope Repair	Repair of slope State Route 309 South of Hilside Road Intersection in Kingston Township, Luzerne County.	Luzerne	Kingston	X				
96799	HRST	SR 1021 Slide	Slope repair on State Route 1021 (Eighth Street) in Kingston Township and West Wyoming Borough, Luzerne County.	Luzerne	Kingston & West Wyoming	X				
2015-013	SAFE	SR 309 Memorial Hwy Safety Imp	Memorial Highway corridor safety improvements including LED signal upgrades, interconnecting, pedestrian improvements, turning lanes.	Luzerne	Kingston Twp./ Dallas Twp.		X	X		
9006	BPRSF	SR 2026 ov Gardner's CK	Bridge preservation on State Route 2026 (Main Street) over Gardner's Creek in Laflin Borough, Luzerne County.	Luzerne	Laflin					X
67491	BPRSF	PA 315 ov Railroad	Bridge preservation on PA 315 (Dupont Highway) over railroad, in Laflin Borough, Luzerne County.	Luzerne	Laflin					X
93022	BRPL	SR 2015 ov Gardner Creek	Bridge replacement on State Route 2015 (Market Street) over Gardner Creek, in Laflin Borough, Luzerne County.	Luzerne	Laflin	X	X			
9181	BRPL	SR315 ov Trib Gardners Cr	Bridge replacement on State Route 315 (Dupont Highway) over the Tributary to Gardners Creek, in Laflin Borough, Luzerne County.	Luzerne	Laflin			X	X	
8790	BRPL	SR 11 over Shickshinny Ck	Replacement of the bridge State Route 11 (West Main Street) over Shickshinny Creek in Larksville Borough, Luzerne County.	Luzerne	Larksville	X				
96800	HRST	SR 1001 Slide	Slope repair on State Route 1001 (Washington Street) in Larksville Borough, Luzerne County.	Luzerne	Larksville	X				
101386	BPRSF	PA 29 ov Pikes Creek	Bridge preservation on PA 29 over Pikes Creek, in Lehman Township, Luzerne County.	Luzerne	Lehman					X
68918	BRPL	SR118 ov Trib Hunts. Dam	Bridge replacement on State Route 118 over the Tributary to Huntsville Reservior, in Lehman Township, Luzerne County.	Luzerne	Lehman					X
68992	BRPL	SR 1048 ov Harvey's Creek	Bridge replacement on State Route 1048 (Meeker Road) over Harvey's Creek, in Lehman Township, Luzerne County.	Luzerne	Lehman		X	X	X	
93001	BRPL	SR 118 ov Harvey's Creek	Bridge replacement on State Route 118 over Branch of Harvey's Creek, in Lehman Township, Luzerne County.	Luzerne	Lehman	X	X			
9085	BRST	SR 1061 over Harvey's Ck	Rehabilitation of the bridge carrying State Route 1061 (Jackson Road) over Harvey's Creek in Lehman Township, Luzerne County.	Luzerne	Lehman	X	X			
92444	SAFE	Cooks Store Intersection	Safety Improvement at Intersection of SR 118, SR 1049 (Fire House Rd) and T-700 (Mountain View Drive), and intersection of SR 118 and T-811 (Meeker Rd) and intersection of SR 118 and T-806 (Outlet Rd) in Lehman Twp, Luzerne County	Luzerne	Lehman	X	X			

Sorted by County and Municipality

LONG RANGE TRANSPORTATION PLAN PROJECT LIST

						Project Funding Years				
PROJECT ID	**PROJECT CLASS**	**PROJECT TITLE**	**PROJECT DESCRIPTION**	**COUNTY**	**MUNICIPAL**	**2015-2018**	**2019-2020**	**2021-2022**	**2023-2026**	**2027-2040**
84565	SAFE	SR 118 & Idetown Rd.	Safety/Intersection Improvement on State Route 118 at Township Road 812 (Idetown Road) and Township Road 812 (Idetown/Huntsville Road) in Lehman Township, Luzerne County.	Luzerne	Lehman	X				
2015-043	BRIDG	SR 1013 over Tobys Creek	SR 1013 over Tobys Creek in Luzerne Twp	Luzerne	Luzerne				X	X
97941	BRST	SR 309 ov SR 8039 Ramp A	Bridge rehabilitation on State Route 309(North Cross Valley Expressway) over State Route 8039 Ramp A, in Kingston Borough, Luzerne County.	Luzerne	Luzerne			X	X	
92883	BRST	SR 309 ov Railroad, Luz B	Bridge rehabilitation on PA 309 (North Cross Valley Expressway) over Luzerne County Rail Authority and Bridge Preservation on PA 309 (North Cross Valley Expressway) over Vaughn Street in Luzerne Borough, Luzerne County.	Luzerne	Luzerne	X				
98281	BRST	SR 309 ov Vaughn Street	Bridge Preservation on State Route 309 (North Cross Valley Expressway), over Vaughn Street, in Luzerne Borough, Luzerne County.	Luzerne	Luzerne	X				
102217	CNGST	SR 309 Park and Ride	Park and Ride Lot at SR 309 and Union Street in Luzerne Borough, Luzerne County	Luzerne	Luzerne				X	X
74761	ENHNC	Nanticoke Streetscape	Nanticoke Luzerne County Earmark	Luzerne	Nanticoke	X				
9234	NALGN	South Valley Parkway	New Roadway SR 3046 (Middle Rd). New Interchange SR 29 and SR 3046 (Middle Rd). Replacement of Bridge carrying SR 2008 (Middle Rd) over SR 29 in City of Nanticoke, Hanover and Newport Twp, Luzerne County.	Luzerne	Nanticoke, Hanover,Newport	X				
8868	BRPL	Nescopeck Creek Bridge	Bridge replacement on State Route 3014 over Nescopeck Creek, in Nescopeck Township, Luzerne County.	Luzerne	Nescopeck	X				
104265	HRST	SR 339 ov Nescopeck Creek	Highway restoration on State Route 339 over Nescopeck Creek in Nescopeck Township, Luzerne County.	Luzerne	Nescopeck	X				
67482	BRPL	SR 3004 over Espy Run	Bridge replacement on State Route 3004(Kirmar Avenue) over Espy Run, in Newport Township, Luzerne County.	Luzerne	Newport					X
67396	BRPL	SR 3004 over Forge Creek	Replacement of the bridge carrying State Route 3004 (West Kirmar Avenue) over Forge Creek in Newport Township, Luzerne County.	Luzerne	Newport	X				
8864	BRST	SR 3001 ov SB Newport Ck	Rehabilitation of the bridge carrying State Route 3001 (Robert Street) over Branch of Forge Creek in Newport Township, Luzerne County.	Luzerne	Newport	X				
69001	BPRSF	SR 2019 over I-81	Bridge preservation on State Route 2019 (Oak Street) over Interstate 81, in Pittston Township, Luzerne County.	Luzerne	Pittston			X	X	
57521	ENHNC	Kennedy and Riverfront Pk	Streetscaping along State Route 2037(Kennedy Boulevard) including sidewalks, curbing, plantings, safety flashers, crosswalks, ADA ramps, etc.	Luzerne	Pittston	X				
103196	RAILG	CP Pittston / Dupont Corr	Replacement of existing antiquated flashing lights and gates with new lights and gates at (3) crossings in Dupont Borough, Luzerne County.	Luzerne	Pittston	X	X			
2015-305	TRANS	LCTA Pittston Industrial Park transfer	Pittston Industrial Park transfer center with COLTS	Luzerne	Pittston			X		
67366	BPRSF	SR 309 ov SR 2022 and RR	Bridge preservation on PA 309 (North Cross Valley Expressway) over State Route 2022 and railroad in the City of Wilkes-Barre, Luzerne County.	Luzerne	Plains		X	X	X	

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LONG RANGE TRANSPORTATION PLAN PROJECT LIST

						Project Funding Years				
PROJECT ID	**PROJECT CLASS**	**PROJECT TITLE**	**PROJECT DESCRIPTION**	**COUNTY**	**MUNICIPAL**	**2015-2018**	**2019-2020**	**2021-2022**	**2023-2026**	**2027-2040**
2015-024	BRIDG	TR 309, I-81 RAMPS over Laurel Run	TR 309, I-81 RAMPS over Laurel Run Creek in Plains Twp	Luzerne	Plains				X	X
9128	BRPL	SR 115 over I-81	Replacement of two bridges carrying State Route 115 over Interstate 81 and Drainage Improvement of the Interchange in Plains Township and Wilkes Barre Township, Luzerne County.	Luzerne	Plains	X	X			
67306	BRPL	Gardners CK, Plains TWP	Replacement of the bridge carrying State Route 2011 (Old Tioga Pike) over Gardners Creek in Plains Township, Luzerne County.	Luzerne	Plains	X				
89012	BRST	309 ov 2004, RR, Susq Riv	Bridge Rehabilitation SR 8031 (N Cross Valley NB on ramp and SB off ramp) over L & S RxR, Susquehanna River; Bridge Preservation SR 309 (N Cross Valley) over SR 2004 (River St), L & S RxR, Susquehanna River in Plains Twp, Luzerne County.	Luzerne	Plains	X				
2015-100	DRAIN	SR0115/0081 - Drainage System Repair	Collapsed Parallel Pipe System	Luzerne	Plains				X	X
57728	SAFE	River Street Corridor, WB	Safety Improvement/Traffic Calming/Travel Lane Reduction from 4 to 2/Traffic Signal Modification at 5 Intersections on State Route 2004 (River Street) from North Street to South Street in Plains Township, Luzerne County.	Luzerne	Plains	X				
62968	SAFE	PA 115 Rock Fence	Installation of a Rock Fence on PA Route 115 between the truck escape ramp and East Mountain Boulevard in Plains Township, Luzerne County.	Luzerne	Plains	X				
2015-104	STRUC	SR0115 - Retaining Wall	Three sections of deteriorated steel retaining wall - 1,346 total length. Temp. repair completed to one section via Bridge Maintenance Contract.	Luzerne	Plains				X	X
2015-005	CONST	SR 309 Exit 3 River Rd	Congestion mitigation/safety improvement Exit 3 River Rd. Study Alternate intersection configurations for SR 2004 River Street & SR 309 Ramps, project could include signal upgrades, aux lane, structure modifications, possible relocation of Maffet St	Luzerne	Plains Twp		X	X		X
92884	BPRSF	SR 0309 over SR 1013	Preservation of the bridge carrying State Route 309 over State Route 1013 in Pringle and Luzerne Boroughs, Luzerne County.	Luzerne	Pringle & Luzerne	X				
105115	BRST	SR 309 over SR 1013 Union and Evans Street	SR 309(North Cross Valley Expressway) over SR 1013 Union Street and Evans Street	Luzerne	Pringle, Luzerne Borough	X				
67310	RBRDG	SR 2047 Ov. Henry Drive	Removal of the bridge carrying State Route 2047 over Township Road 447 (Henry Drive) in Rice Township.	Luzerne	Rice	X				
79525	BRPL	SR 4024 Ov Laurel Run	Bridge replacement on State Route 4024 over Laurel Run, in Ross Township, Luzerne County.	Luzerne	Ross					X
93045	BRPL	SR 4037 over Salem Creek	Bridge replacement on State Route 4037 (Stone Church Road) over Stone Church Hollow Creek, in Salem Township, Luzerne County.	Luzerne	Salem	X				
67440	BRPL	SR 3006 Trib Lilly Lake	Bridge replacement on State Route 3006 (Lily Lake Road) over Tributary to Lily Lake, in Slocum Township, Luzerne County.	Luzerne	Slocum					X
67409	BRPL	SR 3007 ov Little Wap Ck	Bridge replacement on State Route 3007 (Blue Ridge Trail) over Little Wapwallopen Creek, in Slocum Township, Luzerne County	Luzerne	Slocum					X
67333	BRPL	SR3040 ov Trib Nescopeck	Bridge replacement on State Route 3040 (Saint Johns Road) over the tributary to Nescopeck Creek, in Sugarloaf Township, Luzerne County.	Luzerne	Sugarloaf					X
9079	BRST	SR 93 ov Nescopeck Creek	SR 0307 TR 307 over Outlet Summit Lake	Luzerne	Sugarloaf	X	X			
93041	BRPL	SR 4016 ov Shickshinny Ck	Bridge replacement on State Route 4016 (Hunlock-Harveyville Road) over Branch Shickshinny Creek, in Union Township, Luzerne County.	Luzerne	Union	X	X			

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LONG RANGE TRANSPORTATION PLAN PROJECT LIST

						Project Funding Years				
PROJECT ID	PROJECT CLASS	PROJECT TITLE	PROJECT DESCRIPTION	COUNTY	MUNICIPAL	2015-2018	2019-2020	2021-2022	2023-2026	2027-2040
67329	BRPL	SR 4016 ov Unknown Stream	Bridge replacement on State Route 4016 (Main Road) over Unknown Stream, in Union Township, Luzerne County.	Luzerne	Union					X
8983	BRPL	SR 4016 ov Shickshinny Ck	Replacement of the bridge carrying State Route 4016 (Main Road) over Shickshinny Creek in Union Township, Luzerne County.	Luzerne	Union	X				
9026	BRST	SR 4007 ov Shickshinny Ck	Rehabilitation of the bridge carrying State Route 4007 (McKendree Road) Over Shickshinny Creek in Union Township, Luzerne County.	Luzerne	Union	X		X		
101988	HRST	Group 4-15-Surface Treatment 8	Resurface sections of the following State Routes: SR 1032, SR 3022, SR 1057, SR 309, SR 2415, Lake, Butler, Dallas, and Lehman Townships and Dallas and Harvey's Lake Boroughs, Luzerne County.	Luzerne	Various			X		
102005	HRST	Group 4-16-Surface Treatment 8	Resurface sections of the following State Routes: SR 487, SR 4011, SR 1034, SR 1055, SR 1063, and SR 1041 in Fairmount, Lake, and Dallas Townships and the Harvey's Lake Borough, Luzerne County.	Luzerne	Various		X			
102013	HRST	Group 4-17-Surface Treatment 2	Resurface State Route's 1001, 8035, 8045, 8047, 8039, 1002, 8013, 8019, 8037, 1027, 1037, 1026, 1038, 2057	Luzerne	Various			X		
102062	HRST	Group 4-17-Surface Treatment 8	Resurface sections of the State Routes: SR 2006, SR 4025, SR 4027, SR 4035, SR 4009, SR 1028, SR 309, in City of Pittston, Huntington, Hunlock, Hanover, Ross, and Lake Townships, Harvey's Lake, Duryea and Ashley Boroughs, Luzerne County	Luzerne	Various			X	X	
102068	HRST	Group 4-18-Surface Treatment 2	Resurface sections of the following State Routes: SR 115, SR 1031, SR 3004, SR 2048 in Bear Creek, Kingston, Exeter, Plains, Newport and Foster Townships and Edwardsville, Kingston, and Larksville Boroughs, Luzerne County.	Luzerne	Various				X	
102073	HRST	Group 4-18-Surface Treatment 8	Resurface sections of the following State Routes: SR 2028, SR 3017, SR 1011, SR 2015, SR 29, SR 118 in Jenkins, Pittston, Lehman, Hanover and Plymouth Townships, Cities of Hazleton and Wilkes Barre and Sugar Notch Borough, Luzerne County	Luzerne	Various				X	
102088	HRST	Group 4-19-Surface Treatment 2	Resurfacing of 118 from State Route 4028 (Mooretown Road) to Bridge over Fades Creek in Lakes, and Ross Townships and PA 29 from US 11 to Township Road 497 (Pavlick Road) in Jackson and Plymouth Townships, Luzerne County	Luzerne	Various					X
102091	HRST	Group 4-19-Surface Treatment 5	Resurface PA 93 (Main, Broad, Susquehanna Avenue, Berwick-Hazleton Highway, and Third) from the Carbon County Line to the Columbia County Line in Hazle, Sugarloaf and Nescopeck Townships, and WHazleton and Nescopeck Boroughs, Luzerne County	Luzerne	Various				X	
102093	HRST	Group 4-20-Surface Treatment 2	Resurface US 11 from the Columbia County Line to On ramp for State Route 0029 in Salem, Union, Hunlock, and Plymouth Townships, Shickshinny, Plymouth Boroughs, Luzerne County	Luzerne	Various					X
102095	HRST	Group 4-20-Surface Treatment 4	Resurface US 11 from State Route 1019 (Dennison Street) to the Lackawanna County Line in Pittston Township, Forty Fort, Wyoming, Exeter, West Pittston, Hughestown, DuPont, and Avoca Boroughs, and the City of Pittston, Luzerne County	Luzerne	Various				X	
102113	HRST	Group 4-21-Surface Treatment 2	Resurface PA 118 from Ricketts Glen Entrance Road to PA 415 (Memorial Highway) in Fairmount, Ross, Lake, Lehman, and Dallas Townships, Luzerne County	Luzerne	Various				X	

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						Project Funding Years				
PROJECT ID	PROJECT CLASS	PROJECT TITLE	PROJECT DESCRIPTION	COUNTY	MUNICIPAL	2015-2018	2019-2020	2021-2022	2023-2026	2027-2040
2015-022	BRIDG	SR 0011 TR 11 over Susq River, RR, SR 2037	SR 0011 TR 11 over Susq River, RR, SR 2037 in West Pittson Twp	Luzerne	West Pittston Boro				X	X
8997	BRPL	SR 1010 ov Abraham's Ck	Replacement of the bridge carrying State Route 1010 (Shoemaker Avenue) over Abraham's Creek in West Wyoming Borough, Luzerne County.	Luzerne	West Wyoming	X				
70235	CNGST	White Haven Park-n-Ride	Construction of a Park and Ride Lot on State Route 940 at the Interstate 80 Interchange in White Haven Borough, Luzerne County.	Luzerne	White Haven	X				
2015-046	BRIDG	SR 1009 MARKET ST over Susquehanna	SR 1009 MARKET ST over Susquehanna River in Wilkes Barre	Luzerne	Wilkes Barre				X	X
2015-090	BRST	SR 2004 River Street over Mill Creek	SR 2004 River Street over Mill Creek	Luzerne	Wilkes Barre			X	X	
2015-091	BRST	SR 2005 Blackman over Luz Co Rail	SR 2005 Blackman over Luz Co Rail Authority	Luzerne	Wilkes Barre				X	X
8999	BPRSF	SR 2005 ov Bowman Sp Run	Bridge preservation on State Route 2005 (Blackman Street) over Bowman Spring Run in the City of Wilkes-Barre, Luzerne County	Luzerne	Wilkes-Barre		X	X		
79594	BRIDG	SR 309 over SR 2022	SR 309 over SR 2022, City of Wilkes-Barre	Luzerne	Wilkes-Barre	X				
67417	BRST	PA 309 ov W. B. Blvd.	Bridge Preservation on PA 309 (North Cross Valley Expressway) over Wilkes Barre Boulevard, in City of Wilkes Barre, Luzerne County.	Luzerne	Wilkes-Barre				X	X
104323	ENHNC	Wilkes Univ. Streetscape	The project will consist of streetscape and pedestrian safety improvements for two streets in the City of Wilkes-Barre: South Franklin Street and West South Street.	Luzerne	Wilkes-Barre	X				
85008	HRST	Blackman St SB Ramp	Lengthening of Interstate 81 South Bound off ramp Exit 165 (Mountain Top / Wilkes Barre) at State Route 2005 (Blackman Street) in Wilkes Barre Township, Luzerne County.	Luzerne	Wilkes-Barre	X			X	
99524	HRST	Wilkes Barre K-Route 2014	Local K-Route Paving Market St (K055) Pennsylvania Ave to River St Hazle St (K062) Blackman St to Wilkes-Barre Blvd Pennsylvania Ave (K070) Main St to Market St City of Wilkes-Barre, Luzerne County	Luzerne	Wilkes-Barre	X				
2015-301	TRANS	LCTA CNG Fueling Station,Vehicles, and Maintenance Facility	Compressed Natural Gas fueling station, vehicles (on a regular replacement schedule), and maintenance facility.	Luzerne	Wilkes-Barre		X			
2015-302	TRANS	LCTA New Paratransit Facility	New paratransit facility with indoor storage and room for overflow fixed-route storage.	Luzerne	Wilkes-Barre		X			
2015-306	TRANS	LCTA New Intermodal Facility	New Intermodal facility with increased capacity and potential rail connections	Luzerne	Wilkes-Barre				X	
2015-458	CNGST	SR 6309 Intersection improvements @ Mundy st & alt intersection study @ Pine/sherman, signal upgrades throughout	Corridor stretches from Blackman to Mundy Streets - Signal Upgrades Along Entire Corridor, study alternative intersection configuration at Pine/Sherman St and addition of Aux lanes at Mundy St intersection	Luzerne	Wilkes-Barre Township				X	X
67449	BRPL	SR 2045 over Bow Creek	Reinforced concrete box culvert on State Route 2045 (South Main Road) over Bow Creek, in Wright Township, Luzerne County.	Luzerne	Wright Township					X
91214	HRST	Group 4-16-Surface Treatment 2	Surface Treatment Various Locations Luzerne County	Luzerne			X			
95494	LNITM	K-Route Luzerne County	Resurfacing on various County owned Federal Aid Routes in Luzerne County.	Luzerne		X				
2015-351	TRANS	Hazelton Public Transit - Operating and Maintenance Costs		Luzerne			X	X	X	X

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PROJECT ID	**PROJECT CLASS**	**PROJECT TITLE**	**PROJECT DESCRIPTION**	**COUNTY**	**MUNICIPAL**	**2015-2018**	**2019-2020**	**2021-2022**	**2023-2026**	**2027-2040**
2015-352	TRANS	LCTA Operating and Maintenance Costs		Luzerne			X	X	X	X
101922	HRST	Group 4-15-Surface Treatment 1	"Resurface State Routes 106, 1001, 1002, 1007, 2019, 2026 in Carbondale, Green Field, Fell, Pittston, Plains, Townships, Carbondale, Pittston Cities, Laflin, Plymouth, Edwardsville, Kingston Boroughs, Lackawanna, Luzerne Counties.		Various	X				
101928	HRST	Group 4-15-Surface Treatment 2	Resurface sections of the following State Routes: SR 2019, SR 1006, SR 2004, SR 239, SR 2026, SR 8001, SR 8002, SR 8003, SR 8005, SR 2037, and SR 1010, Various Municipalities, Luzerne County		Various	X				
102327	HRST	Fed Aid Paving 4-18-FP 1	Federal Aid Paving on various State Routes, in various Municipalities, Lackawanna and Luzerne Counties.		Various	X	X			
104227	HRST	Fed Aid Paving 4-15-FP 2	Resurface State Routes 11, 3023, 2004 in City of Scranton, City of Wilkes Barre, Plains Township, Lackawanna, Luzerne Counties.		Various	X				
104392	SAFE	Wrong Way Ramp Updates	Sign upgrades, and pavement markings on Wrong Way Ramps on various State Routes, in various municipalities, Lackawanna, Luzerne and Susquehanna Counties.		Various	X				
104396	SAFE	Int/Run-off-Road Saf Imp	Intersection, Curve, and Signing upgrades on various State Routes, in various Municipalities, various Counties.		Various	X				
95435	HRST	Fed Aid Paving 4-16-FP 1	Lackawanna / Luzerne Counties, Various Municipalities, Various SR's, Surface Treatment			X				
97220	HRST	Fed Aid Paving 4-17-FP 1	Surface Treatment on various State Routes, in various Municipalities, Lackawanna and Luzerne Counties.			X				
2015-500	LAND	Wetland/Gameland Mitigation Bank	Create a wetland/gameland mitigation bank				X	X		
102314	LNITM	LLTS 916 oversight costs				X				
64077	LNITM	LLTS CMAQ Line Item				X	X	X	X	X
64279	LNITM	LLTS Enhancement Line				X	X	X	X	X
73300	LNITM	LLTS Highway Reserve				X	X	X	X	X
73301	LNITM	LLTS Bridge Reserve Line				X	X	X	X	X
73359	LNITM	Lck Co 'K' Rts Line Item				X				
75761	LNITM	LLTS HSIP Line Item				X	X	X	X	X
84388	LNITM	LLTS Bridge Review				X				
86914	LNITM	LLTS Project Delivery				X	X	X		
96143	NALGN	New Commerce Blvd Acc Rd				X				

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CANDIDATE PROJECTS OUTSIDE FISCAL CONSTRAINTS

Project ID	County	MUNICIPAL	Project Class	Project Title
2015-157	Lackawanna	Archbald	HRST	Phase 5 Main Street
2015-075	Lackawanna	Benton	BRIDG	SR 0407 TR 407 over Lackawanna Lake
2015-152	Lackawanna	Blakely	HRST	Phase 4 Main Street Paving - Joseph St. to Bridge St.
2015-158	Lackawanna	Blakely	HRST	Phase 6 Main Street
67190	Lackawanna	Carbondale	BRIDG	SR 6006 BUSINESS 6 over Racket Brook
2015-082	Lackawanna	Clarks Summit	BRIDG	SR 4026 WEST GROVE over Delaware & Hudson RR
2015-077	Lackawanna	Clifton	BRIDG	SR 2011 over Lehigh River
2015-154	Lackawanna	Clifton	BRIDG	Keystone Road Bridge
2015-159	Lackawanna	Clifton	BRIDG	Plank Road Bridge
2015-156	Lackawanna	Covington	BRIDG	Lehigh Road Bridge
2015-065	Lackawanna	Dunmore	BRIDG	SR 2020 DRINKER ST over Little Roaring Brook
2015-061	Lackawanna	Jefferson	BRIDG	SR 2002 WIMMERS RD over BR W BR Wallnpaupck Crk
2015-161	Lackawanna	Jefferson	BRIDG	Old Mill Road Bridge
2015-160	Lackawanna	Jermyn	HRST	Phase 7 Main Street
2015-454	Lackawanna	Jessup	CNGST	SR 1016 Jessup Intersection Improvements
2015-153	Lackawanna	Moosic	HRST	Montage Mountain Road
2015-155	Lackawanna	Moosic	HRST	Glenmaura National Blvd
2015-064	Lackawanna	Moscow	BRIDG	SR 0690 TR 690 over Beak Brook
2015-021	Lackawanna	Newton	BRIDG	TR 307 WINOLA ROAD over Fords Lake Creek
2015-053	Lackawanna	Newton	BRIDG	SR 3006 over Gardner Creek
2015-081	Lackawanna	Newton	BRIDG	SR 3006 over Gardner Creek
2015-456	Lackawanna	Old Forge	CNGST	SR 3013 Corridor Improvements - Drake to Taylor line
2015-047	Lackawanna	Old Forge	BRIDG	SR 3015 over Lackawanna River
2015-457	Lackawanna	Olyphant	CNGST	SR 347 Burke Bypass/South Valley Ave Intersection Improvements
2015-039	Lackawanna	Ransom	BRIDG	SR 3002 over BR St. Johns Creek
2015-074	Lackawanna	Ransom	BRIDG	SR 3001 over Gardner Creek
2015-051	Lackawanna	Scott	BRIDG	SR 0347 TR 347 over Kennedy Creek
2015-172	Lackawanna	Scranton	BRIDG	Myrtle Street Bridge
2015-174	Lackawanna	Scranton	BRIDG	Mary Street Bridge
2015-175	Lackawanna	Scranton	BRIDG	Hollow Avenue Bridge
2015-176	Lackawanna	Scranton	BRIDG	Poplar Street Bridge

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CANDIDATE PROJECTS OUTSIDE FISCAL CONSTRAINTS

Project ID	County	MUNICIPAL	Project Class	Project Title
2015-177	Lackawanna	Scranton	BRIDG	Green Place Bridge
2015-422	Lackawanna	Scranton	BRIDG	Reopen Rockwell Avenue over I-81
53	Lackawanna	Scranton	CNGST	Main Street/Luzerne Street Intersection Improvement
2015-330	Lackawanna	Scranton	TRANS	Bus Rapid Transit COLTS
2015-025	Lackawanna	South Abington	BRIDG	SR 0307 TR 307 over Outlet Summit Lake
2015-057	Lackawanna	South Abington	BRIDG	SR 0011 TR 11 over Leggetts Creek
2015-078	Lackawanna	Waverly	BRIDG	SR 4007 over Ackerley Creek
2015-063	Luzerne	Avoca	BRIDG	SR 2029 YORK AVE over Mill Creek-BR Lacka River
2015-034	Luzerne	Bear Creek	BRIDG	SR2035 SUSCON RD over Bear Creek
2015-026	Luzerne	Dallas	BRIDG	SR 0309 TR 309 over Leonards Creek
2015-027	Luzerne	Dallas	BRIDG	SR 0415 TR 415 over Toby Creek
2015-072	Luzerne	Dallas	BRIDG	SR 0415 TR 415 over Huntsville Creek
2015-101	Luzerne	Dallas Borough	DRAIN	SR1043 - Drainage System Replacement
2015-006	Luzerne	Dallas Township	CNGST	SR 0415 and SR 0118 Park and Ride
2015-031	Luzerne	Dennison	BRIDG	SR 0437 TR 437 over Br Little Nescopeck Cr
2015-036	Luzerne	Duryea	BRIDG	SR 2033 over Run Off
2015-067	Luzerne	Fairview	BRIDG	SR 0309 TR 309 over Wapwallopen Creek
2015-070	Luzerne	Hanover	BRIDG	SR 0309 TR 309 over Pine Run
2015-426	Luzerne	Hanover	RAILG	Railroad crossing at Crossroads
2015-054	Luzerne	Hazle	BRIDG	SR 3019 over Hazle Creek
2015-331	Luzerne	Hazleton	TRANS	Bus Rapid Transit Hazleton
2015-058	Luzerne	Hunlock	BRIDG	SR 4016 over Hunlock Creek
2015-080	Luzerne	Huntington	BRIDG	SR 0239 TR 239 over Pine Creek
2015-052	Luzerne	Jackson	BRIDG	SR 0029 TR 29 over Harveys Creek
185	Luzerne	Kingston	CNGST	PA 309/Wyoming SPUI
2015-050	Luzerne	Kingston	BRIDG	SR 1050 (DEAD END) over Toby Creek
2015-045	Luzerne	Lake	BRIDG	SR 1030 CHURCH RD over Harveys Creek
2015-059	Luzerne	Lake	BRIDG	SR 0118 TR 118 over Pikes Creek
2015-073	Luzerne	Lake	BRIDG	SR 0029 TR 29 over Pike's Creek
2015-079	Luzerne	Lake	BRIDG	SR 0118 TR 118 over Fades Creek
2015-041	Luzerne	Lehman	BRIDG	SR 0118 TR 118 over Harveys Creek

Sorted by County and Municipality

CANDIDATE PROJECTS OUTSIDE FISCAL CONSTRAINTS

Project ID	County	MUNICIPAL	Project Class	Project Title
2015-076	Luzerne	Lehman	BRIDG	SR 1061 JACKSON RD over East Fork of Harvey's Creek
2015-103	Luzerne	Lehman	BRIDG	SR1059 - Parapet Damage
2015-040	Luzerne	Nanticoke	BRIDG	SR 2008 over Espy Run
2015-049	Luzerne	New Columbus	BRIDG	SR 4014 ACADEMY ST over Pine Creek
2015-083	Luzerne	Pittston	BRIDG	WATER ST over Susq River / Luz & Susq RR
2015-068	Luzerne	Plains	BRIDG	SR 0115 TR 115 over Trib to Laurel Run
2015-044	Luzerne	Plymouth	BRIDG	SR 0029 TR 29 over Ceasetown Dam Outlet
2015-032	Luzerne	Ross	BRIDG	SR 0118 TR 118 over Arnolds Creek
2015-423	Luzerne	S. Wilkes Barre, Hanover	BRIDG	Reopen/Repair/New Bridge - Division St. (between Keith St. and Carey Ave.) and in S. Wilkes-Barre and Hanover Twp
9025	Luzerne	Salem	BRIDG	SR4004 SHKSHY VALY over Little Shickshinny
2015-037	Luzerne	Sugar Notch	BRIDG	SR 2010 MAIN ST over SR 0029 TR 29 NB & SB
2015-030	Luzerne	White Haven	BRIDG	SR 0940 TR 940 over Linesville Creek
2015-062	Luzerne	Wilkes Barre	BRIDG	SR 2007 SOUTH ST over RR and Local Streets
2015-168	Luzerne	Wilkes-Barre	NALGN	Coal Stret Extension
2015-332	Luzerne	Wilkes-Barre	TRANS	Bus Rapid Transit LCTA
2015-165	Luzerne	Wilkes-Barre	BRIDG	S. Empire Street Bridge Repair
2015-166	Luzerne	Wilkes-Barre	BRIDG	Strauss Lane Bridge
2015-169	Luzerne	Wilkes-Barre	BRIDG	N. Washington Street Bridge
2015-023	Luzerne	Wright	BRIDG	SR 0309 TR 309 over Bow Creek
2015-069	Luzerne	Wright	BRIDG	SR 0309 TR 309 over Wapwallopen Creek

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