

Williamsport Area Transportation Study

Metropolitan Planning Organization

LONG RANGE TRANSPORTATION PLAN
2018 - 2038

CHAPTER 3 - MULTIMODAL
TRANSPORTATION SYSTEM INVENTORY

Multimodal Transportation System Inventory

This Chapter of the WATS Long Range Transportation Plan provides a description of the existing multi-modal transportation system in Lycoming County encompassing highways and bridges, public transportation, airports, railroads, and active transportation facilities. There are no waterway or inland ports located in the County. An inventory of current transportation assets by transportation mode will be provided, including a current physical condition and operational performance needs assessment. This data driven inventory and assessment is important to properly address transportation asset management needs and to improve operational performance of the overall system in terms of public safety, security, efficiency and cost effective movement of people and goods.

Highway System

Highway Designations / Classification System

According to PennDOT data, there are 2,098 linear miles of publicly owned roadways throughout Lycoming County. PennDOT owns 903 linear miles, (43%) of public roadways in Lycoming County. In addition, there are 1,195, (57%) of locally-owned roadways owned by 52 different local municipalities included on the PennDOT Liquid Fuels System. Other agencies own the remainder of roads in the County. Lycoming County government only owns two roads which are County Farm Road at the Lysock View county complex housing the Department of Public Safety (911 center), Pre-Release and county farm and an entrance road to the White Deer Recreation Complex. There are federal designations and classifications established for highway systems in the nation as noted in the following sections.

Road Functional Classification System

The Federal Highway Administration, PennDOT and Metropolitan & Rural Planning Organizations cooperatively establish and update maps that delineate various road classifications which group roadways along a spectrum based on the type of highway service provided. The idea is that our roadway network must simultaneously meet two contradictory goals: mobility and access. The functional classifications indicate where a particular road exists along the spectrum between pure mobility (e.g. limited access, high speed highways intended for long distance travel) and pure access (e.g. low speed neighborhood streets). The hierarchy of functional classifications established by the Federal Highways Administration, from the most mobility-centric to the most access-centric is as follows:

Interstates: “Limited access, divided highways offering high levels of mobility while linking the major urban areas of the United States”

Other Freeways and Expressways: “Directional travel lanes are usually separated by some type of physical barrier, and their access and egress points are limited to on- and off-ramp locations or a very limited number of at-grade intersections”

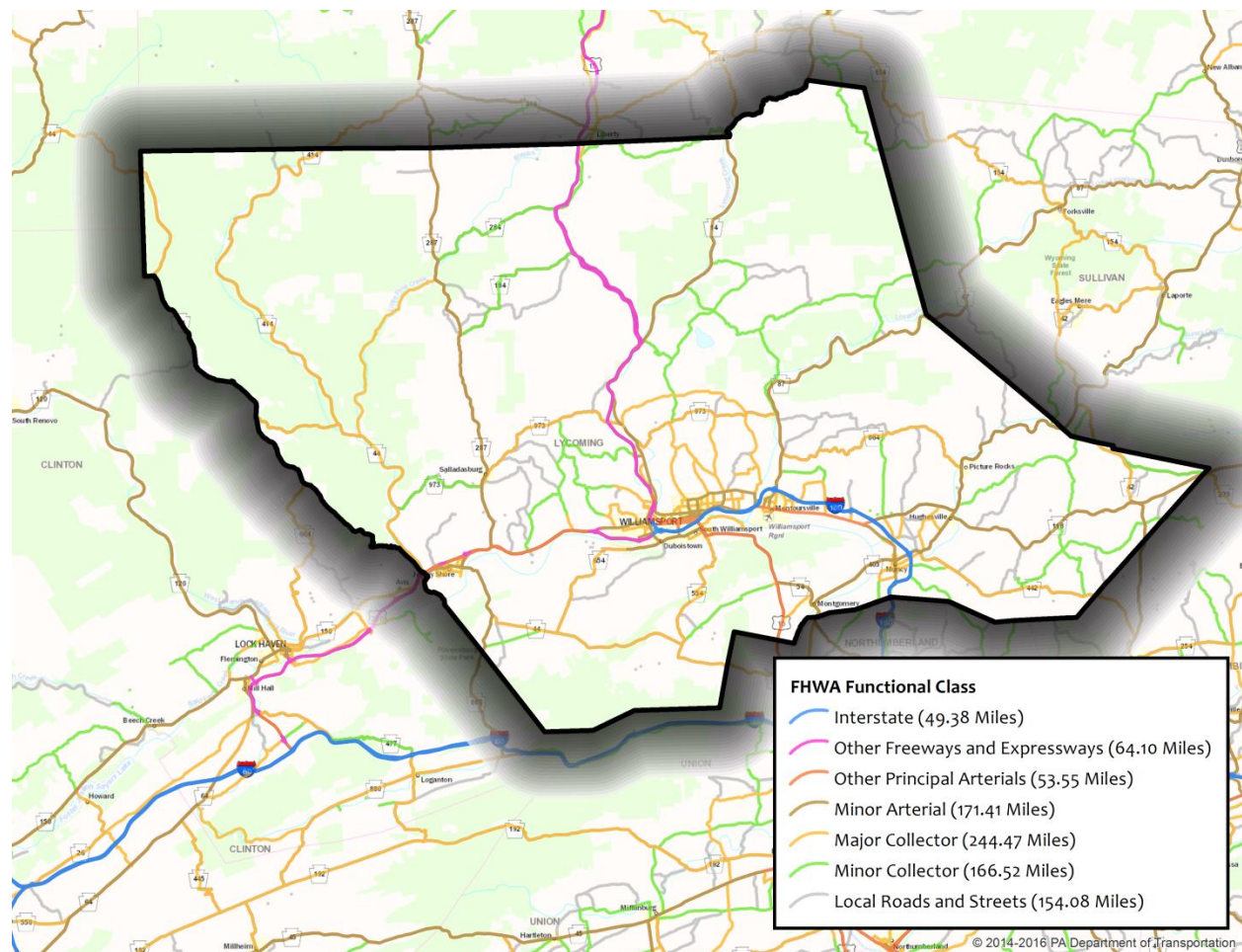
Other Principal Arterials: “Serve major centers of metropolitan areas, provide a high degree of mobility and can also provide mobility through rural areas. Abutting land uses can be served directly.”

Minor Arterials: “Provide service for trips of moderate length, serve geographic areas that are smaller than their higher Arterial counterparts and offer connectivity to the higher Arterial system.

Major and Minor Collectors: “Gather traffic from Local Roads and funnel them to the Arterial network. Major Collector routes are longer in length, have lower connecting driveway densities, have higher speed limits, are spaced at greater intervals, have higher annual average traffic volumes, and may have more travel lanes than Minor Collectors”

Local Roads and Streets: “Not intended for use in long distance travel, except at the origin or destination end of the trip, due to their provision of direct access to abutting land”

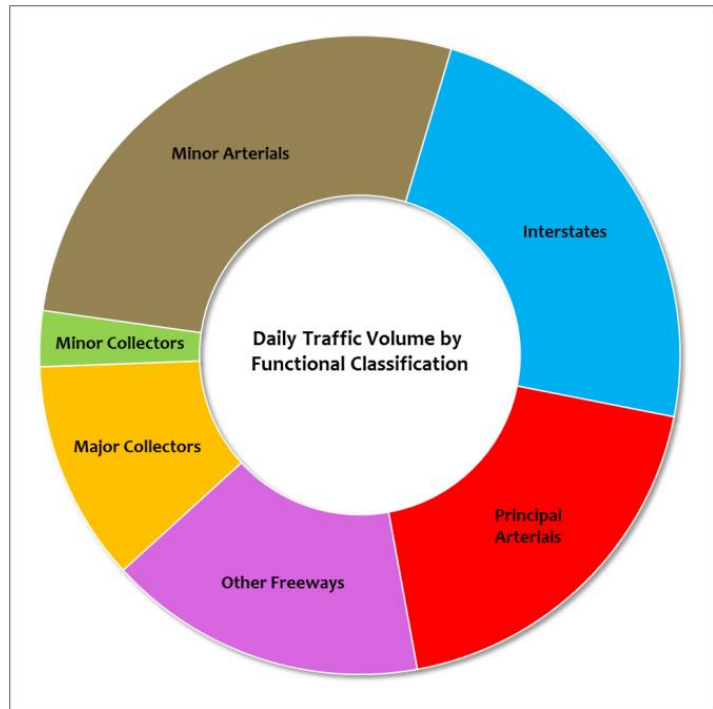
The map below depicts the roadway functional classification system and mileage within Lycoming County (mileage of divided highways is counted a separate roadways).



The only federally designated Interstate highway in Lycoming County is Interstate 180 which is 19.5 miles long between US-15 in the City of Williamsport and the Lycoming/Northumberland County line. I-180 continues through Northumberland County terminating with Interstate 80, the longest coast to coast east-west Interstate highway in the nation connecting the Atlantic and Pacific Oceans.

Of the PennDOT managed highway system in Lycoming County, the majority of road mileage (63%) is classified as either local roads or collectors. The remaining mileage is classified as arterial or interstate/freeways underscoring the vast rural nature of the county-wide road system. Of the total road system, approximately 499 linear miles of roadway (25%) are on the approved federal-aid system. Of these linear miles, 446.8 miles (89%) are State-owned roads while only 52.2 miles (11%) are locally-owned roads. Consequently, approximately 1,496 linear miles of roadway (75%) do not qualify for federal aid and most of those linear road miles are owned by local municipalities.

In terms of 2017 traffic volumes on functionally classified state roadways, the Daily Vehicle Miles of Travel, (DVMT) is the measure used for determining total travel by all vehicles. Although most road mileage in the county is classified as either local roads or collectors and does not qualify for federal aid, the Interstate and arterial system clearly carries the majority of traffic flows as shown in the chart below:

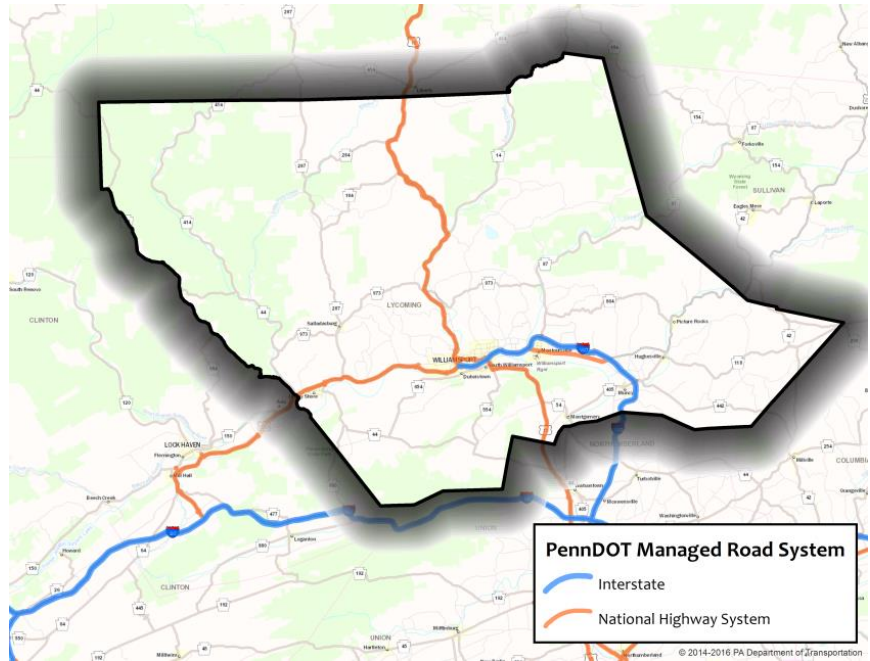


FHWA Functional Classification, State Roads	DVMT(2017)
Interstate	614,103
Other Freeways and Expressways	421,739
Other Principal Arterials	497,661
Minor Arterials	716,762
Major Collectors	292,098
Minor Collectors	73,577
Local Roads and Streets	41,529
TOTAL	2,675,469

The arterial highway system throughout the County accounts for approximately 85% of all daily traffic flows on state roads with just Interstate 180 comprising 23% of total flow. The federal aid roads carry about 63% of all daily traffic flows in the County's state road system.

National Highway System

The National Highway System, (NHS) consists of roadways important to the nation's economy, defense and mobility including the Interstate Highway System as well as other roads important to National defense. The NHS is developed by the US Department of Transportation in cooperation with States, local officials and metropolitan planning organizations, such as WATS. Originally, I-180, US-15 and a portion of US-220 were identified as NHS routes. MAP-21 created an Enhanced NHS where a portion of SR 104 was added to the system. A portion of federal funding authorized under MAP-21 is dedicated to the maintenance, preservation and upgrade of the National Highway System referred to as the National Highway Performance Program, (NHPP). NHPP funding levels for Lycoming County will be more fully discussed in Chapter 4 of this plan.



I-180 Extension

It should be acknowledged and emphasized that considerable resources have already been devoted to the maintenance, preservation and improvement of the National Highway System in Lycoming County and the surrounding region, especially in regard to I-180 preservation and the upgrade of US Route 15 between Williamsport and Corning, New York as a four lane limited access highway over the last several decades. In fact, the National Highway System Designation Act of 1995 further establishes the Interstate 99 Corridor along US-220 and US-15 between Bedford, PA and Corning, NY. Although, future I-99 signage has been installed along US-15 north of Williamsport, several major projects in Lycoming, Clinton and Centre Counties must first be completed in order to fully upgrade this highway corridor to meet Interstate design standards.

Dedication of the US 220/Future I-99 corridor in Lycoming County



I-99 has been officially designated along US-220 between I-76 PA Turnpike at Bedford and I-80 in Centre County as well as from the New York/Pennsylvania state line north to Corning. However, several major corridor improvements still need addressed to further extend I-99 in PA as authorized by Congress such as completion of the US-220/I-80 Bellefonte Interchange upgrades in Centre County. US-15 design exceptions north of Williamsport would also need federal approval. Final cost estimates to complete I-99 in PA are not yet available, however it is anticipated cost would be hundreds of millions dollars to undertake. This might not be a feasible project for many years.

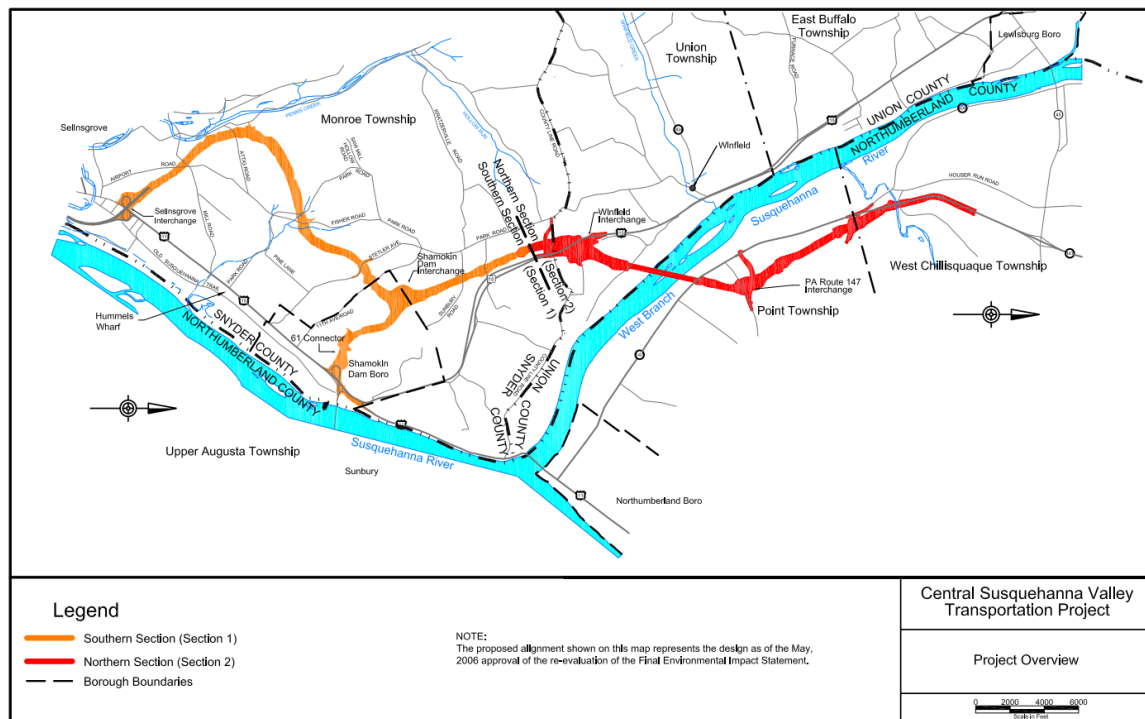
Therefore, a better short term alternative would be to extend I-180 designation along US-15 north from the current I-180 terminus to the New York state line. While this would add future interstate maintenance requirements for 61 additional miles of Interstate 180, it appears there would be no immediate effect on the amount of poor pavement measured on the Pennsylvania Interstate system as a whole. In fact, because of the high pavement quality of US-15 the redesignation of US-15 from Williamsport/current I-180 terminus north to the New York state line as I-180 would reduce the amount of poor pavement on the overall state interstate system.

Existing Pennsylvania Interstate system			Pennsylvania Interstate system including additional 61 miles of Interstate 180 (Redesignation of US-15 from Williamsport/I-180 north to the New York state line)
IRI	Excellent	51%	52%
	Good	30%	29%
	Fair	16%	16%
	Poor	4%	3%
OPI	Excellent	18%	18%
	Good	67%	67%
	Fair	14%	14%
	Poor	1%	1%

Central Susquehanna Valley Thruway, (CSVT)

Although not directly located in Lycoming County or a direct part of future I-99, the Williamsport MPO also continues to strongly support the completion of the Central Susquehanna Valley Thruway project in Union, Snyder and Northumberland Counties as part of modernizing US-15 into a core north-south highway system through central Pennsylvania consisting entirely of four lane freeway.

Specifically, the CSVT project entails phased construction of a new 12 mile long four lane, limited access highway system connecting I-80 near Milton with US 11/15 just north of Selinsgrove with a bypass around congested Northumberland Borough and a major bridge crossing over the Susquehanna River near Winfield.

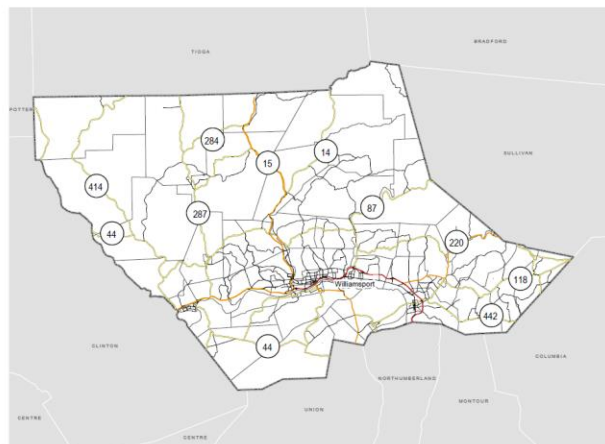


Scenic Byways Program Designations

There are Federal and State Scenic Byway Programs that recognize roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological intrinsic qualities. At the federal level, Title 23, Section 162 establishes a National Scenic Byways Program with 3 designations consisting of (1) National Scenic Byways, (2) All-American Roads or (3) America's Byways. Nominations for scenic byway candidates must come from states, Indian Tribes or a Federal land management agency and the road must already be designated as a state scenic byway. Corridor Management Plans are developed and proposed projects along the scenic byway must be consistent with these plans. Federal funding assistance is available for eligible improvements. Control of outdoor advertising (such as billboards) must also be exercised along scenic byway corridors. In terms of state byway designations, PennDOT designates the PA Byways at the request of local communities or through state legislation. A nomination process must be followed largely paralleling the national scenic byways program. Appropriate signage is erected along roadways promoting these byways.

Currently, there are no National Scenic Byways or PA Byways officially designated along roadways in Lycoming County. The Lycoming County Comprehensive Plan recognizes and supports scenic byways and even supports a County Byways Program, however an evaluation of roads to be nominated as PA Byways or eventually

Selected Potential Scenic Byway Corridors for Further Evaluation



National Scenic Byways would need to be conducted. The emergence of Marcellus Shale heavy hauling truck traffic on many roadways has affected some of the intrinsic qualities of these roads so the County has not aggressively pursued such designations. The WATS MPO supports an evaluation of PA Byway suitable candidates at the appropriate time when Marcellus traffic impacts and trends are more fully understood. The following map depicts County identified potential scenic byway corridors for further evaluation consistent with state byways program criteria as originally identified “A Scenic Byways Program for Lycoming County”, approved by the WATS MPO in 2005.

Roadway Pavement Condition Assessment

Details of pavement conditions in Lycoming County are only known on PennDOT owned roadways. Comprehensive pavement condition data and assessments are not available on locally owned roadways as 52 different local municipalities own these roads and each has their own asset management data and approach to maintenance and preservation of roads under their ownership. PennDOT has developed Performance Measures Annual Reports for State-owned Highways as a key tool to assist in proper asset planning and management – collectively known as PM-2. These reports are used by PennDOT and MPO/RPO planning partner agencies, including the WATS MPO to provide key measures to formulate investment decisions in meeting pavement asset management needs.

Roadway Asset Definitions

PennDOT defines its roadway assets by establishing four Business Plan Networks:

Business Plan Network 1 – Interstate

Business Plan Network 2 – National Highway System (NHS), Non-Interstate

Business Plan Network 3 – Non-NHS with Average Daily Traffic, (ADT) greater than 2,000

Business Plan Network 4 – Non-NHS with Average Daily Traffic, (ADT) less than 2,000

Pavement Performance Measures

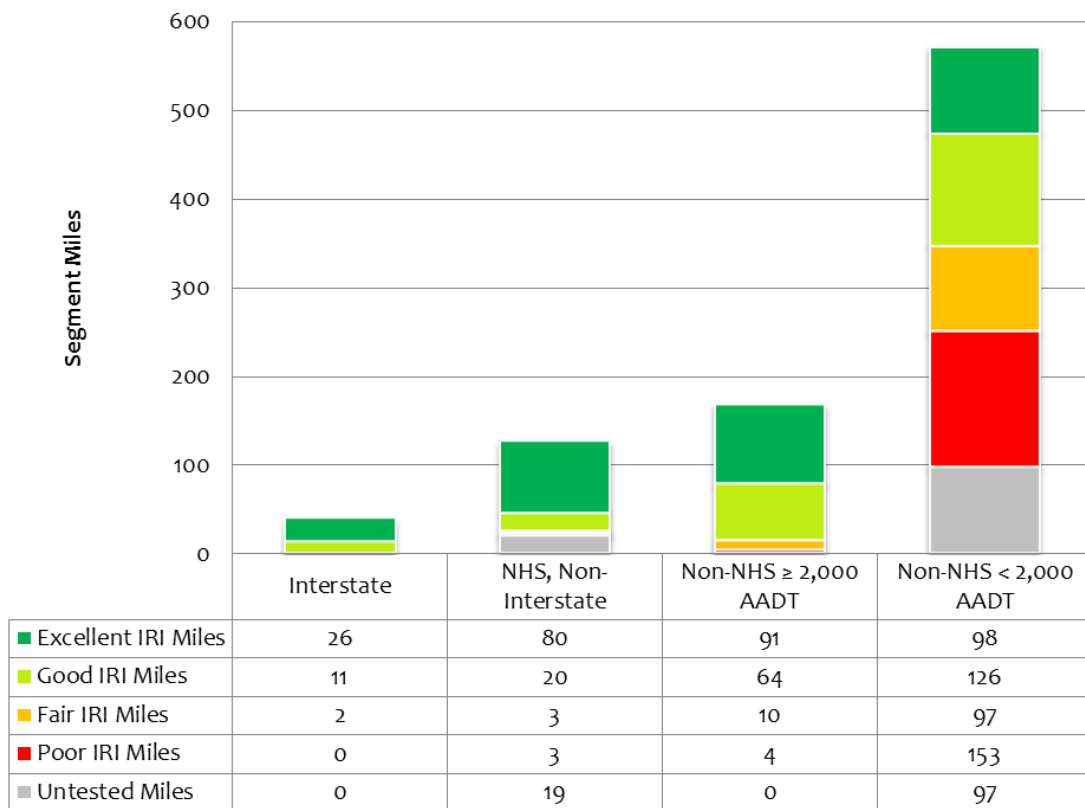
The primary performance measures to assess roadway pavement conditions consist of International Roughness Index, (IRI) data and the Overall Pavement Index, (OPI) data.

International Roughness Index, (IRI)

IRI is a worldwide standard for measuring pavement smoothness. This index measures pavement roughness in terms of the number of inches per mile that a laser, mounted in a specialized van, jumps as it is driven across the roadway system. The lower the IRI number, the smoother the ride. IRI pavement conditions are then classified as excellent, good, fair or poor for each of the four Business Plan networks are depicted on the following table.

IRI Ranges (inches per mile)	National Highway System (NHS)		Non - National Highway System	
	Interstate	Non-Interstate	ADT ≥ 2000	ADT < 2000
≤ 70	Excellent	Excellent	Excellent	Excellent
71-75	Good	Excellent	Excellent	Excellent
76-100	Good	Good	Good	Good
101-120	Fair	Good	Good	Good
121-150	Fair	Fair	Fair	Fair
151-170	Poor	Fair	Fair	Fair
171-195	Poor	Poor	Poor	Poor
196-220	Poor	Poor	Poor	Poor
> 220	Poor	Poor	Poor	Poor

IRI of Segment Miles by Business Plan Network



The next chart shows Lycoming County Business Network pavement results in relation to meeting PennDOT IRI targets.

IRI Targets

Business Plan Network	2017 % Segment Miles Poor IRI	Target % Segment Miles Poor IRI
Interstate	0%	5%
NHS (Non-Interstate)	2%	5%
Non-NHS, $\geq 2,000$ AADT	2%	No Target Set
Non-NHS, $< 2,000$ AADT	27%	No Target Set

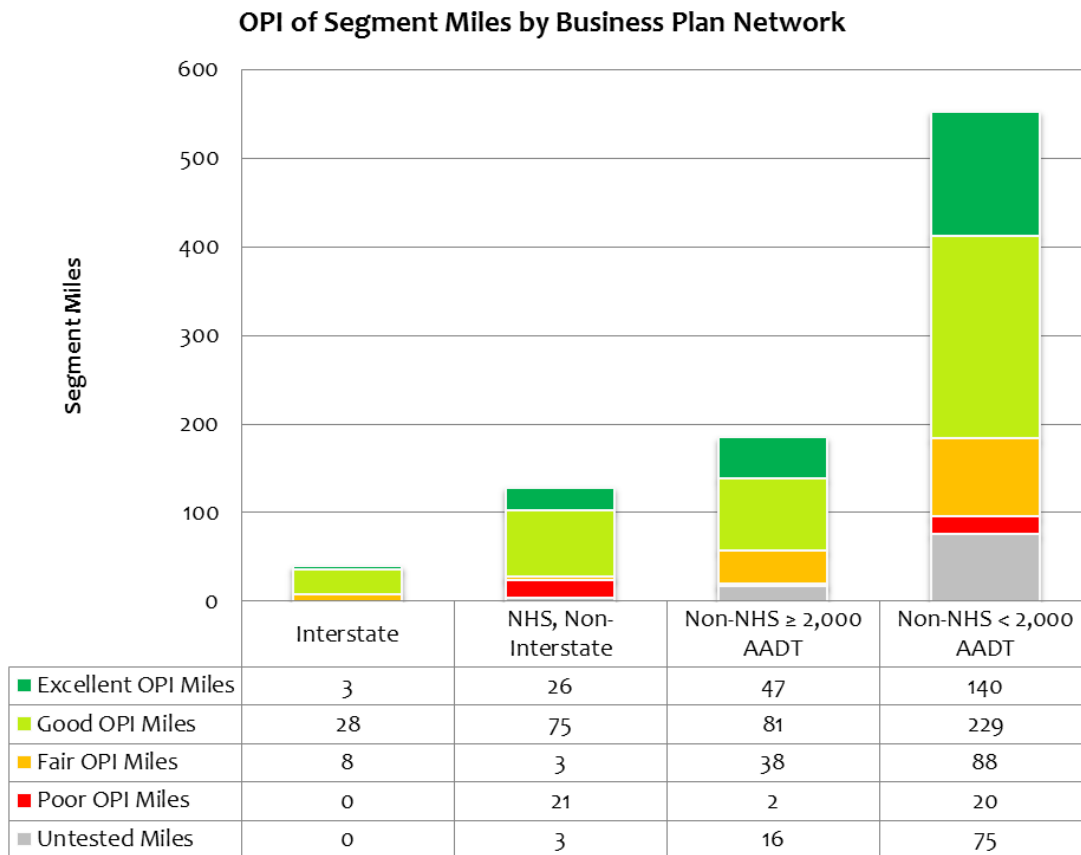
Of total tested mileage, there are no poor IRI miles along Interstate 180. There are 3 miles of poor IRI along the remainder of the NHS system. Along non-NHS routes with greater than 2,000 ADT, there are only 4 miles of poor IRI pavement. However, non-NHS routes with less than 2,000 ADT shows 153 miles of poor IRI pavements. Most of this poor IRI is located on the secondary road system (Business Plan Network 4) carrying lower traffic volumes.

Overall Pavement Index (OPI)

PennDOT also uses a calculation to determine a more comprehensive assessment of pavement condition called the Overall Pavement Index, or OPI, which is specific to Pennsylvania. The index calculates the existing performance of the pavement using inputs that include the IRI and the initial pavement distresses including cracking, edge deterioration, rutting, and other signs of deterioration that are collected as part of the videologging process, which is used for the Systematic Techniques to Analyze and Manage PA Pavements, (STAMPP) assessment. The more severe and/or extensive the distress (high, medium or low), the greater the deduct value, resulting in a lower pavement index value. It is important to note that the OPI only rates the pavement surface and cannot evaluate the base nor the state of the pavement cycle. The higher the OPI score, the better condition of the road. Like, IRI the OPI pavement conditions are then classified as excellent, good, fair or poor for each of the four Business Plan networks.

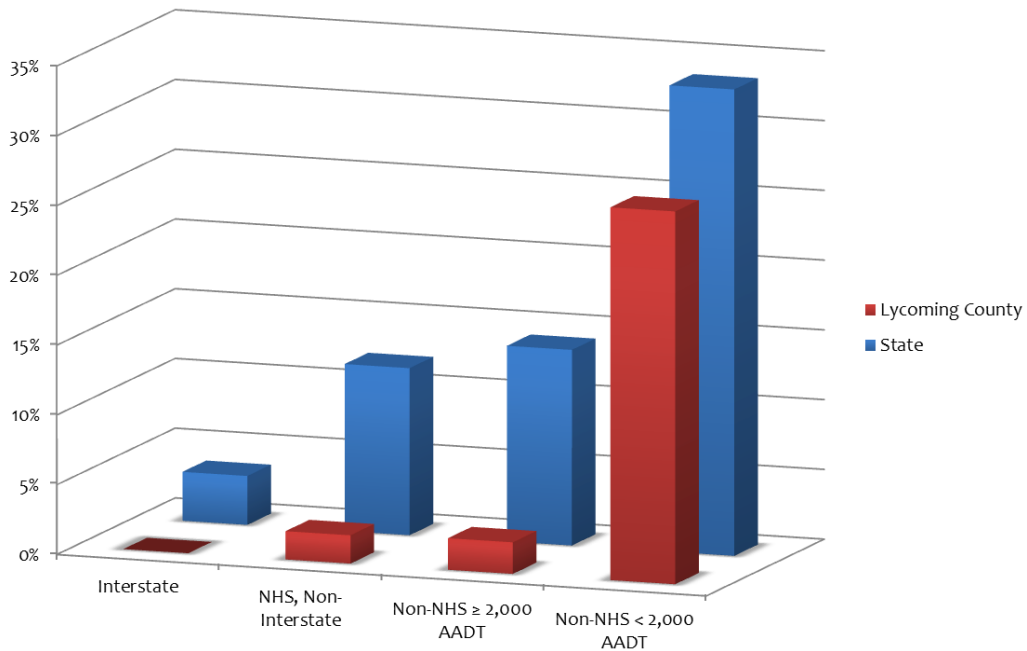
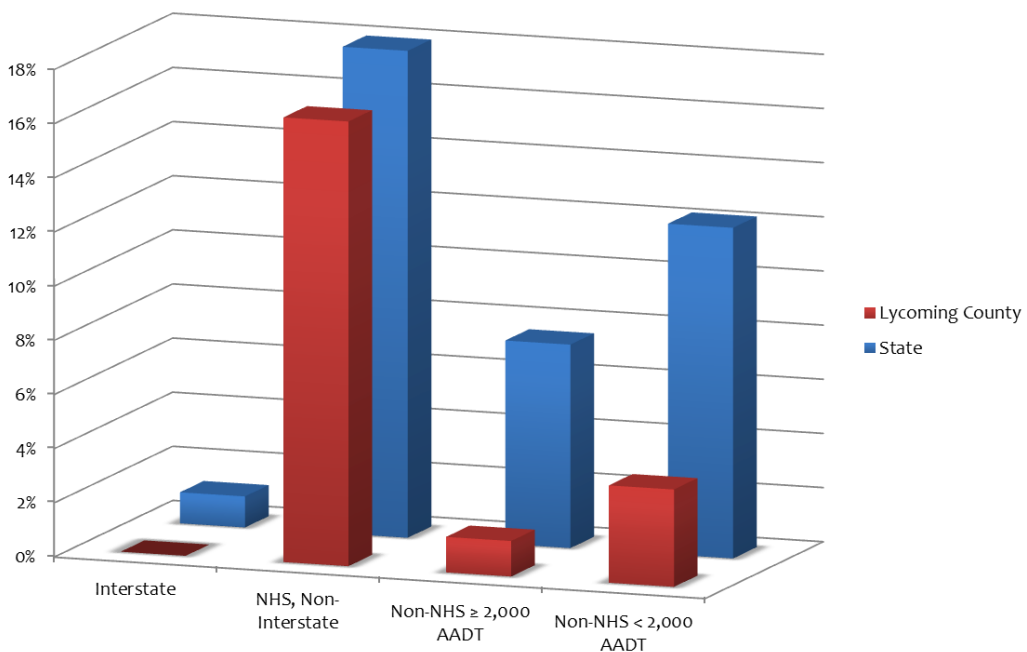
Category	National Highway System (NHS)		Non-National Highway System	
	Interstate	Non-Interstate	ADT ≥ 2000	ADT < 2000
> 95	Excellent	Excellent	Excellent	Excellent
91-95	Good	Good	Excellent	Excellent
86-90	Good	Good	Good	Good
81-85	Fair	Good	Good	Good
76-80	Fair	Fair	Fair	Good
71-75	Poor	Fair	Fair	Fair
66-70	Poor	Poor	Poor	Fair
60-65	Poor	Poor	Poor	Poor
< 60	Poor	Poor	Poor	Poor

PennDOT OPI Classification for each Business Plan Network

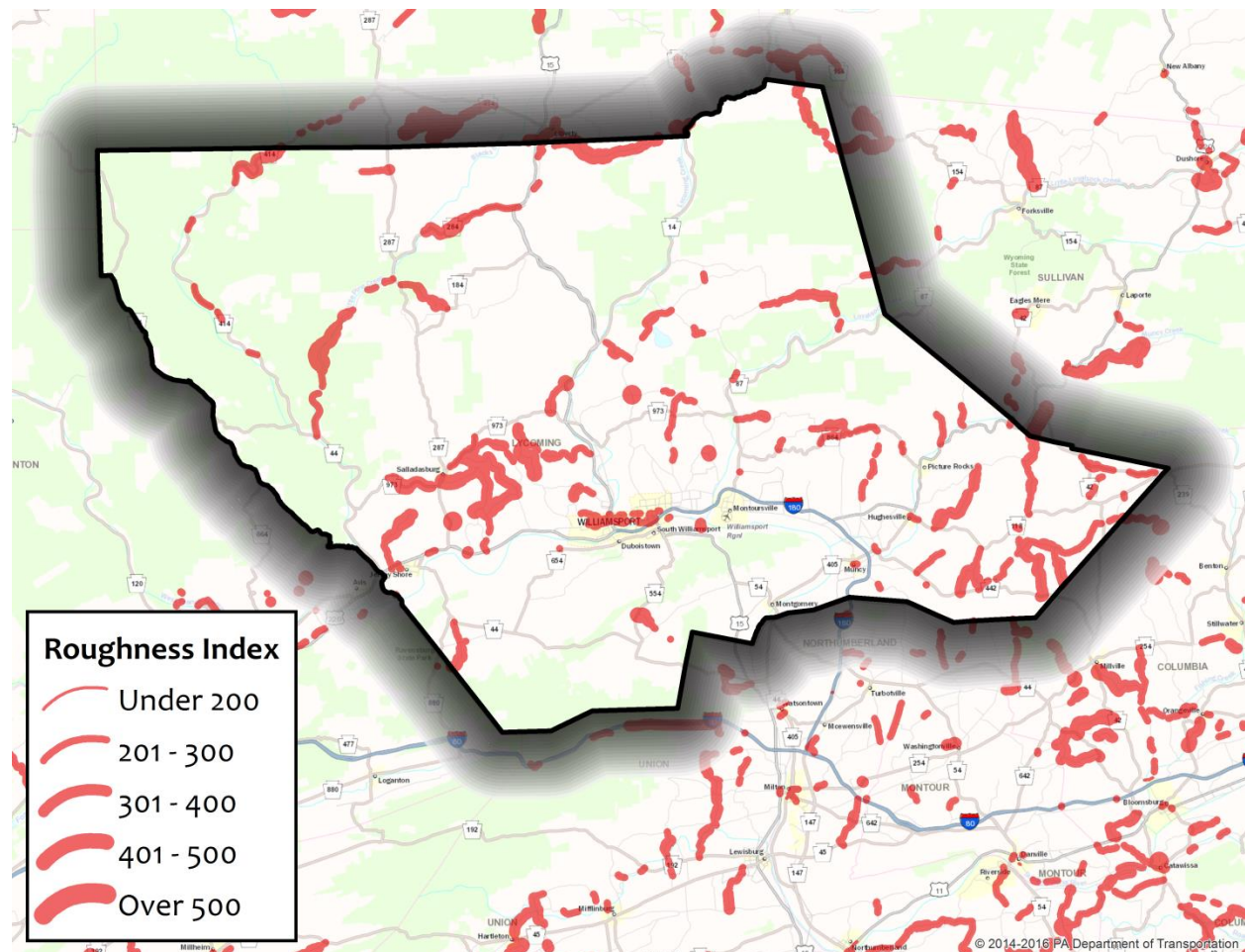


Above are current OPI summary results for all four Business Plan networks within Lycoming County based most recent 2017 data.

The next two graphs show Lycoming County Business Network pavement results in relation to meeting PennDOT OPI goals. Of total tested mileage, there are 8 fair or and no poor OPI miles along Interstate 180. There are 21 miles of poor OPI along the remainder of the NHS system. Along non-NHS routes with greater than 2,000 ADT, there are only 2 miles of poor OPI pavement. However, non-NHS routes with less than 2,000 ADT shows 20 miles of poor OPI pavements. Therefore, approximately 2.6% of Lycoming County state-owned roads tested mileage has poor OPI pavements. The following graphs compare Lycoming County poor IRI and OPI roadway sections with state-wide figures.

Percent of Segment Miles with Poor IRI by Business Plan Network**Percent of Segment Miles with Poor OPI by Business Plan Network**

These graphics illustrate that State-owned highway pavements within Lycoming County are in much better overall condition than statewide pavements on all business plan networks in terms of both OPI and IRI. In terms of specific locations within Lycoming County having poor IRI pavements, the following map shows where they are located:



PennDOT Engineering District 3-0 typically addresses poor IRI routes by scheduling and prioritizing resurfacing for these routes based on IRI data and other appropriate information such as field verification by segment to identify why IRI is low such as problems with pipe trenches or base failure. These methods have kept poor pavements within Lycoming County below the statewide levels across all business plan networks.

Roadway Operational Characteristics

When assessing the adequacy of the roadway network, it is important to look beyond pavement conditions when identifying improvement needs. There also needs to be a focus on improving highway safety and promoting efficient traffic flows to manage congestion. Again, it is essential to utilize data driven methods to evaluate highway safety and efficiency and to determine appropriate

strategies to enhance overall system performance. This section of the plan will address overall highway safety and operational efficiency of the highway network within Lycoming County.

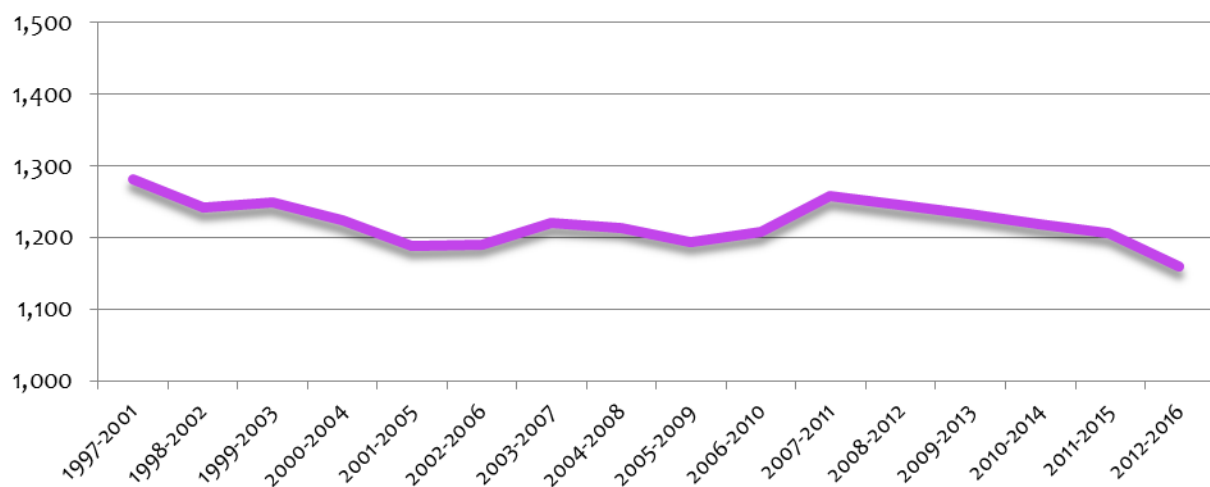
Highway Safety

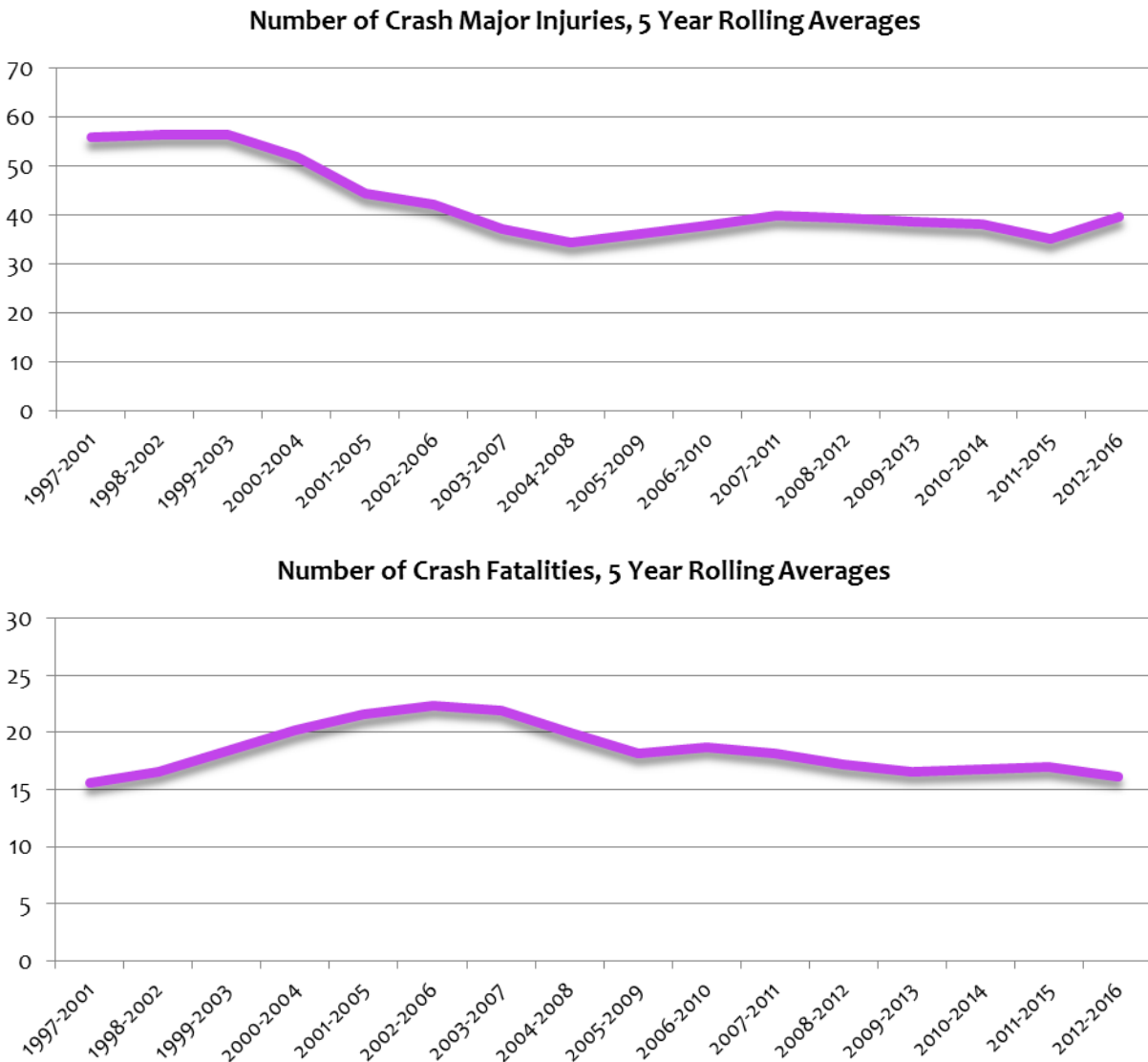
The FAST Act federal legislation places high significance on highway safety mandating the development of State Strategic Highway Safety Plans, dedicated federal funding for a Highway Safety Improvement Program, (HSIP) to drive investment decisions by States in cooperation with MPOs and RPOs, and requiring state DOTs to set specific performance targets related to safety – these performance measures are collectively known as PM-1. The [2017 Pennsylvania Strategic Highway Safety Plan](#) establishes goals of reducing fatalities and serious injuries by 2% annually. The WATS MPO has adopted the safety targets set for our area to meet statewide goals which are as follows:

Performance Measure	5-year Rolling Averages	
	TARGET	BASELINE
	2014-2018	2012-2016
Number of Fatalities	17.0	16.2
Fatality Rate (per 100 million DVMT)	1.539	1.494
Number of Serious Injuries	48.3	39.6
Serious Injury Rate (per 100 million DVMT)	4.373	3.648
Number of Non-motorized Fatalities and Serious Injuries	8.5	5.6

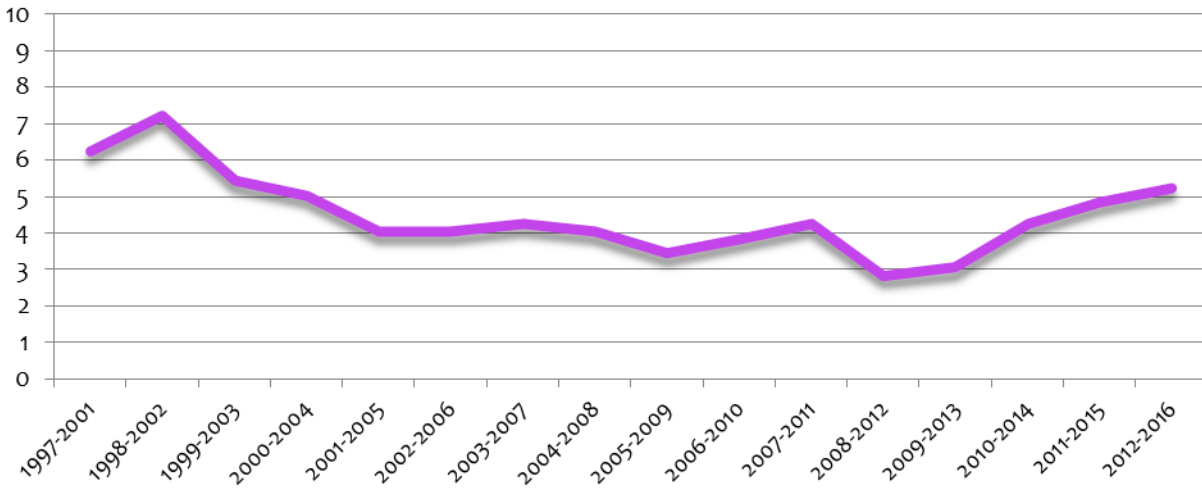
For every single performance target, the Williamsport MPO is already below the target value. Recent trends in reportable crashes on state roads show a decrease in the number of crashes, the number of major injuries, and the number of fatalities.

Number of Crashes, 5 Year Rolling Averages





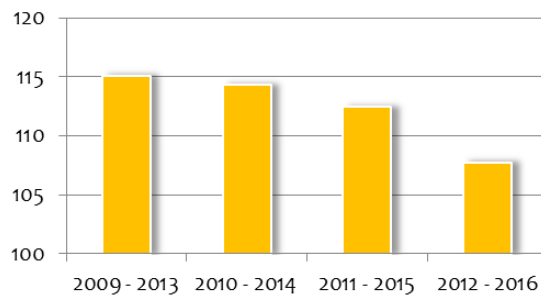
The only exception to this local trend of increased highway safety has been a recent increase in the number of non-motorized fatalities and major injuries since the adoption of the last Long Range Transportation Plan.

Number of Non-motorized Crash Fatalities and Serious Injuries, 5 Year Rolling Averages

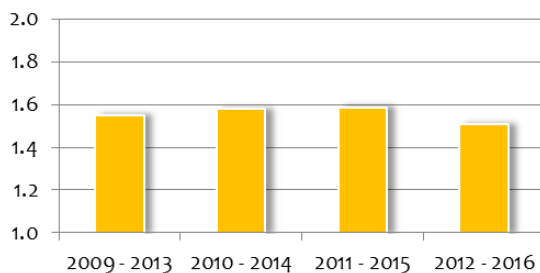
In terms of the rate of crashes, the recent trend is a decrease in the overall crash rate in Lycoming County but relatively no change in the rate of major injuries and fatalities.

Overall Crash Rate

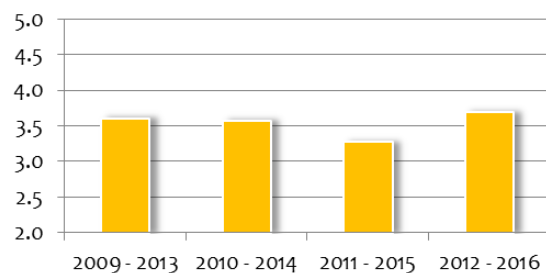
(Crashes per 100 million daily vehicle miles traveled)

**Fatality Rate**

(Crash fatalities per 100 million daily vehicle miles traveled)

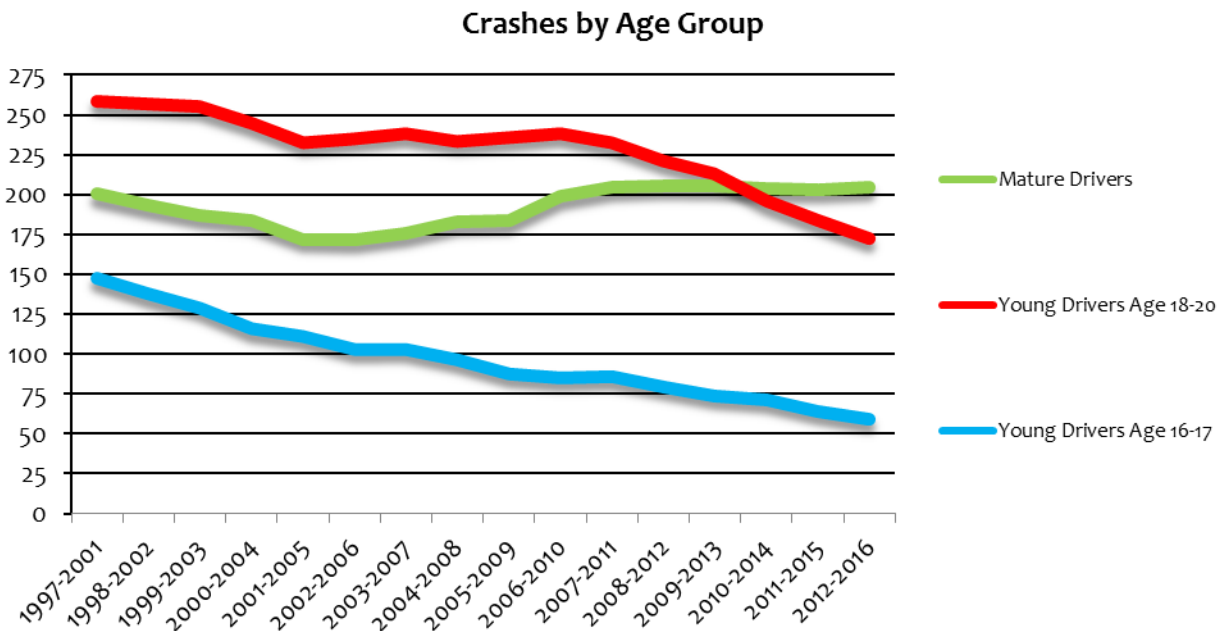
**Major Injury Rate**

(Crash major injuries per 100 million daily vehicle miles traveled)

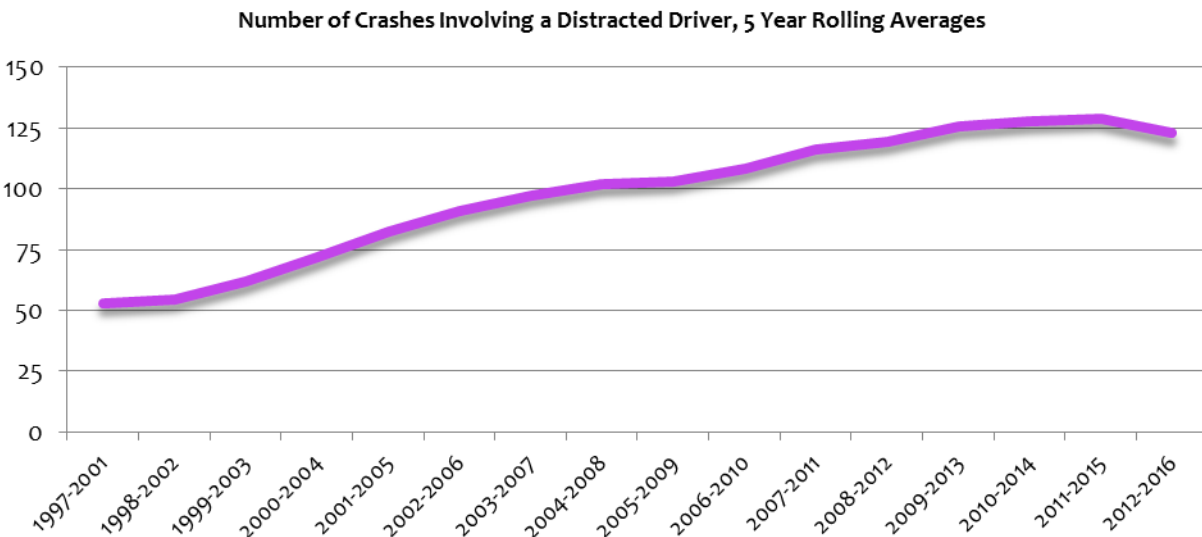


The Pennsylvania Strategic Highway Safety Plan includes focus areas of improving safety for both mature drivers (age 65 and over) and two age classes of “young and inexperienced drivers” aged 16-17 and aged 18-20. Crash data for Lycoming County shows that we are seeing large decreases in the numbers of crashes involving both age classes of young drivers. From 1997-2016, Lycoming County has seen a 60% drop in crashes involving a driver age 16-17 and a 33% drop in crashes involving a driver

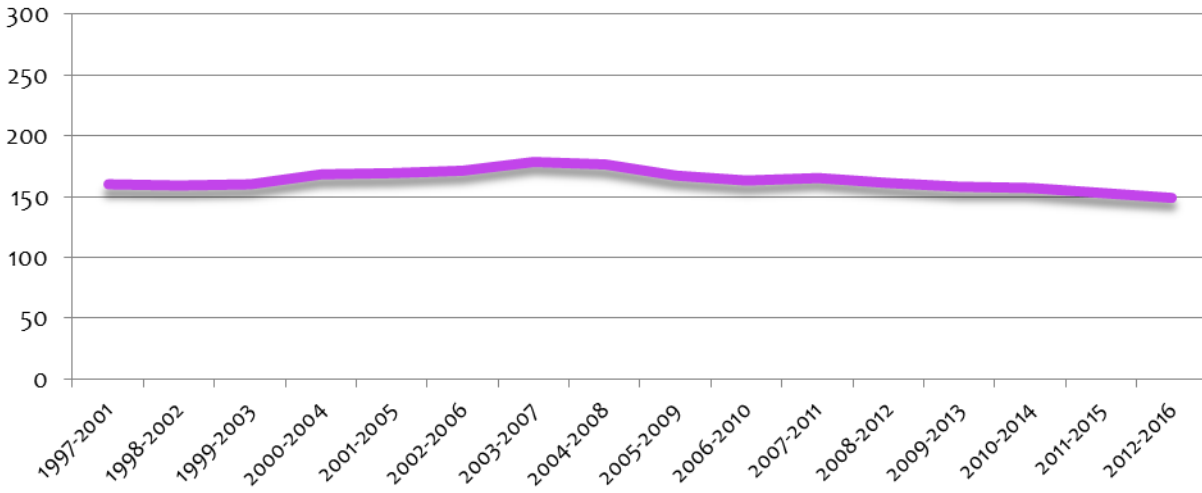
age 18-20. However, in the same time period there has been a 2% overall increase in the number of crashes involving a driver age 65 and over.



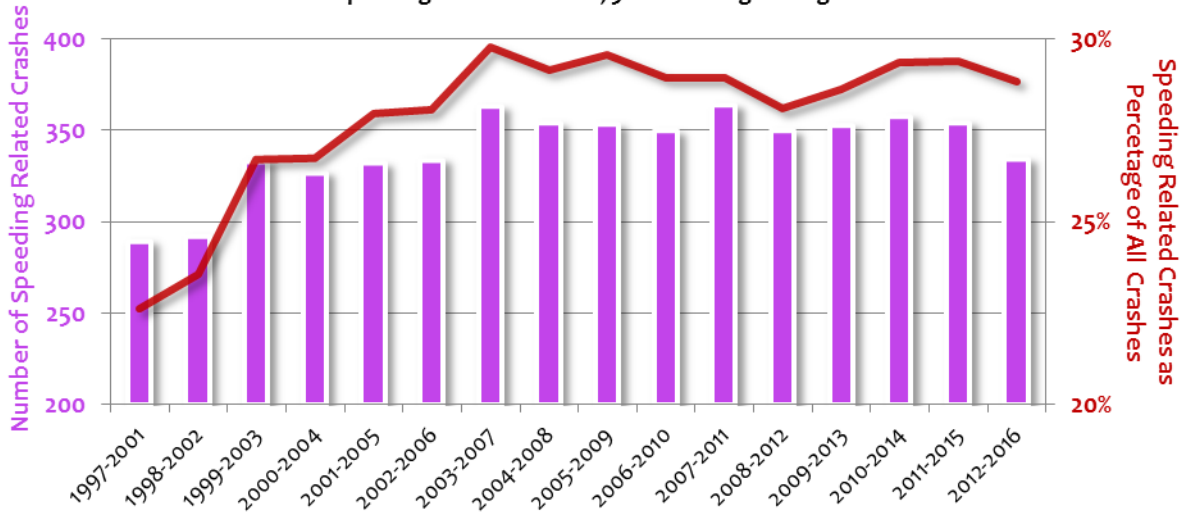
Another focus area in the Strategic Highway Safety Plan is the role of distracted driving on crashes. Lycoming County has seen a 132% increase in crashes involving a distracted driver since 1997.



The reduction of impaired driving is another objective of the Strategic Highway Safety Plan. The involvement of impaired drivers in crashes in Lycoming County has remained steady since 1997 with no large increase or decrease.

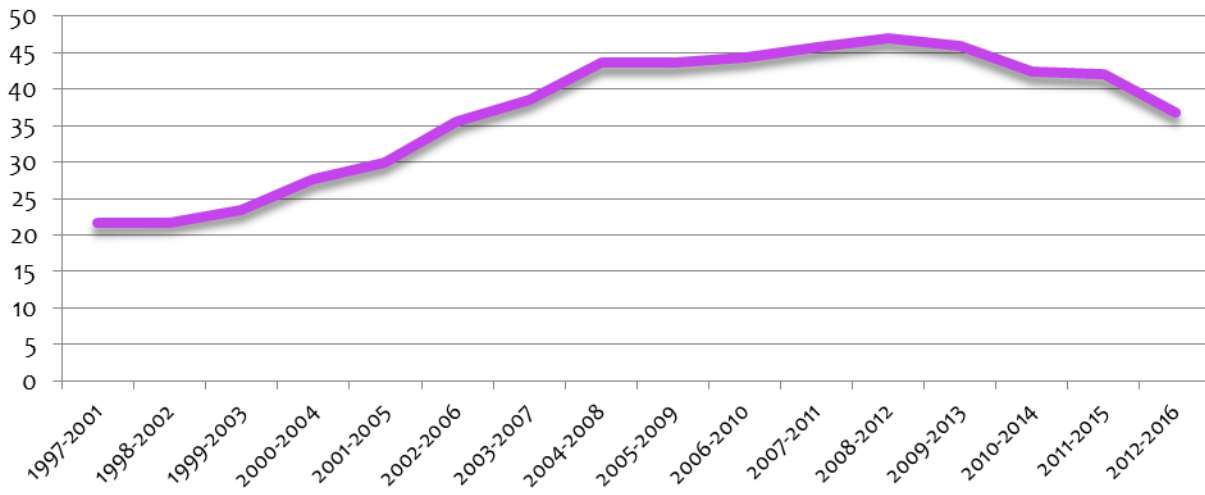
Number of Crashes Involving an Impaired Driver, 5 Year Rolling Averages

Speeding related crashes, another major focus area of the SHSP, have increased both in number and as a contributing factor to overall crashes in Lycoming County over the past 20 years. From 1997 to 2016 there has been a 16% increase in the number of speeding related crashes. From 1997-2001 23% of all crashes were speeding related. For crashes 2012-2016, 29% of all crashes were speeding related.

Speeding Related Crashes, 5 Year Rolling Averages

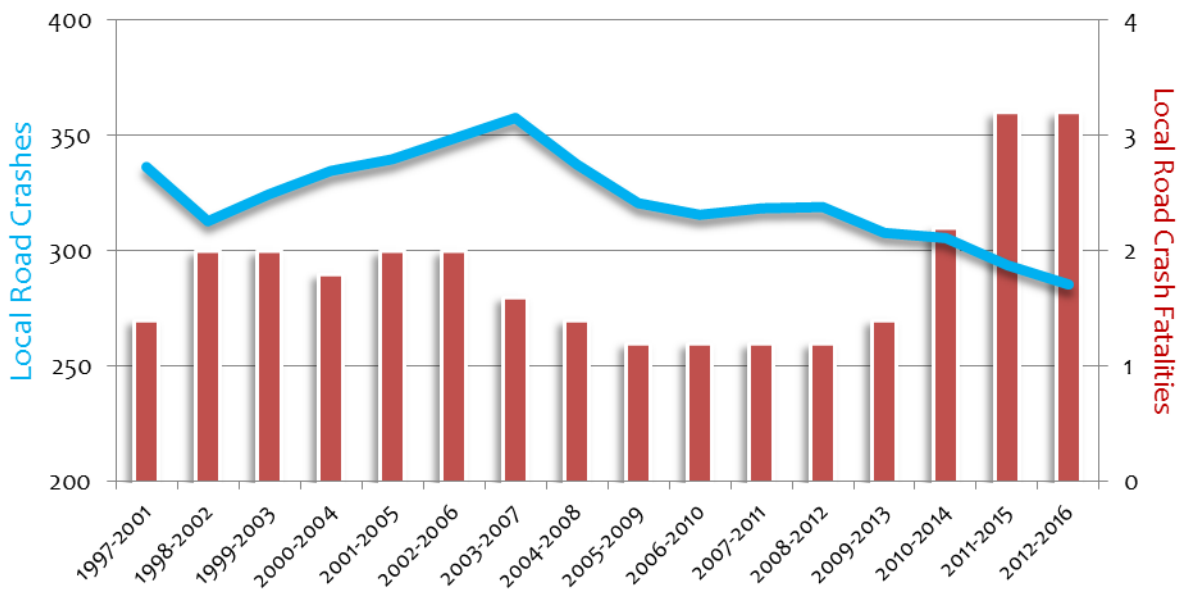
Motorcycle crash fatalities account for 10% of all crash fatalities in Lycoming County 1997-2016. The number of motorcycle crashes has nearly doubled in that time period. During the same general time period (2002 – 2016), Lycoming County saw a 78% increase in the number of motorcycle registrations from 2,822 to 5,035.

Number of Crashes Involving Motorcycles, 5 Year Rolling Averages

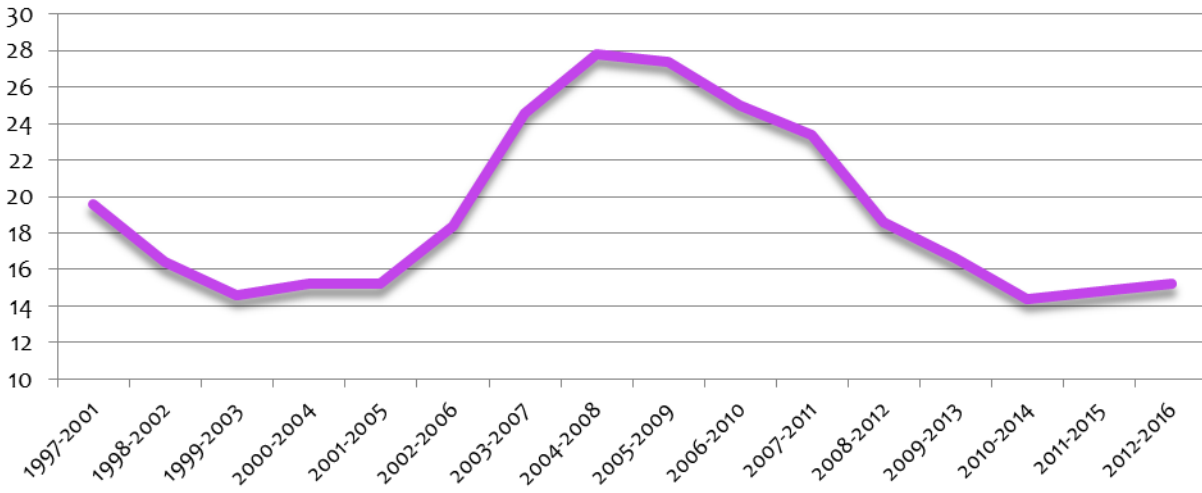


Local road safety is another key focus area for the Strategic Highway Safety Plan. In Lycoming County, local road crashes accounted for 28% of all crashes and 12% of crash fatalities in the period 1997-2016. Recent trends show a decrease in the number of local road crashes but an increase in the number of fatalities resulting from local road crashes.

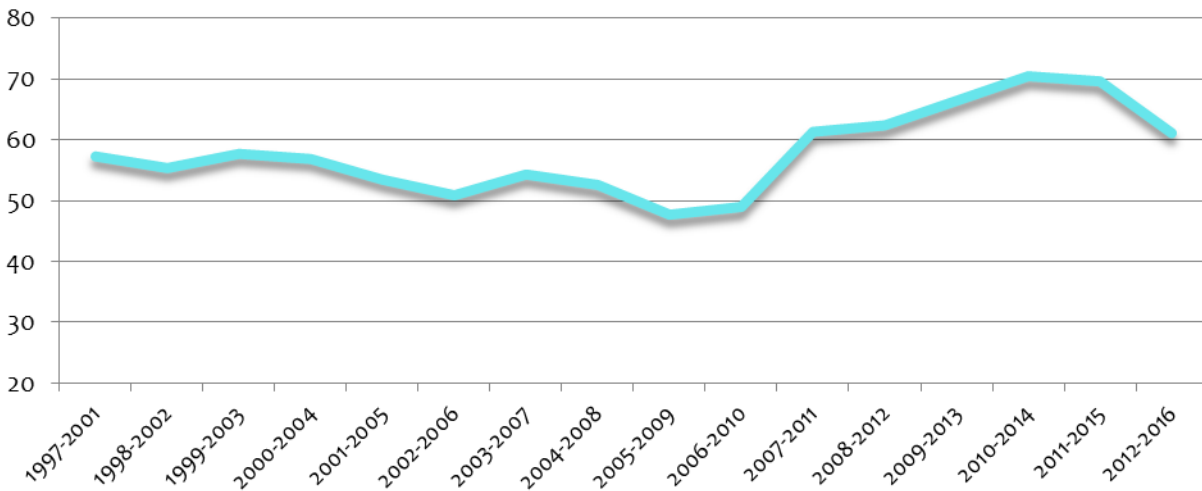
Crashes on Local Roads, 5 Year Rolling Averages



Work zone safety is also emphasized in the Strategic Highway Safety Plan. Work zone safety is especially important because maintenance and construction workers are especially vulnerable during road work. Lycoming County saw a worrying surge in work zone crashes, but the trend reversed and now the number of work zone crashes has declined back to the same level seen 20 years ago.

Number of Crashes in Work Zones, 5 Year Rolling Averages

Safety for commercial vehicles is vitally important to a reliable freight movement network. Unfortunately, Lycoming County has seen an increase in crashes involving heavy trucks over the past 10 years.

Number of Crashes Involving Heavy Trucks, 5 Year Rolling Averages

While the data shown above shows that our transportation network performs well compared to our target metrics, the WATS MPO will continue to place an emphasis on prioritizing projects that will reduce fatalities and serious injuries on the roadways within our jurisdiction.

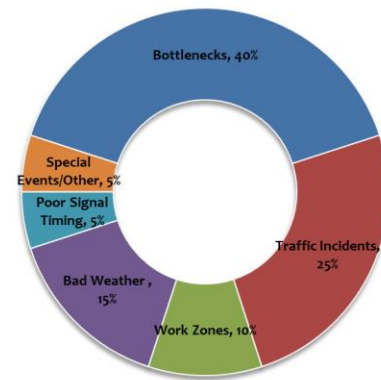
Congestion & Access Management

Congestion management is the application of strategies to improve transportation system performance and reliability by reducing the adverse impacts of congestion on the movement of people and goods. A Congestion Management Process, (CMP) is a systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assesses alternative strategies for congestion management

that meet state and local needs. FHWA has identified the primary causes of traffic congestion in the 2005 report “[Traffic Congestion and Reliability](#).” The major contributing causes to congestion are noted in the pie chart at right.

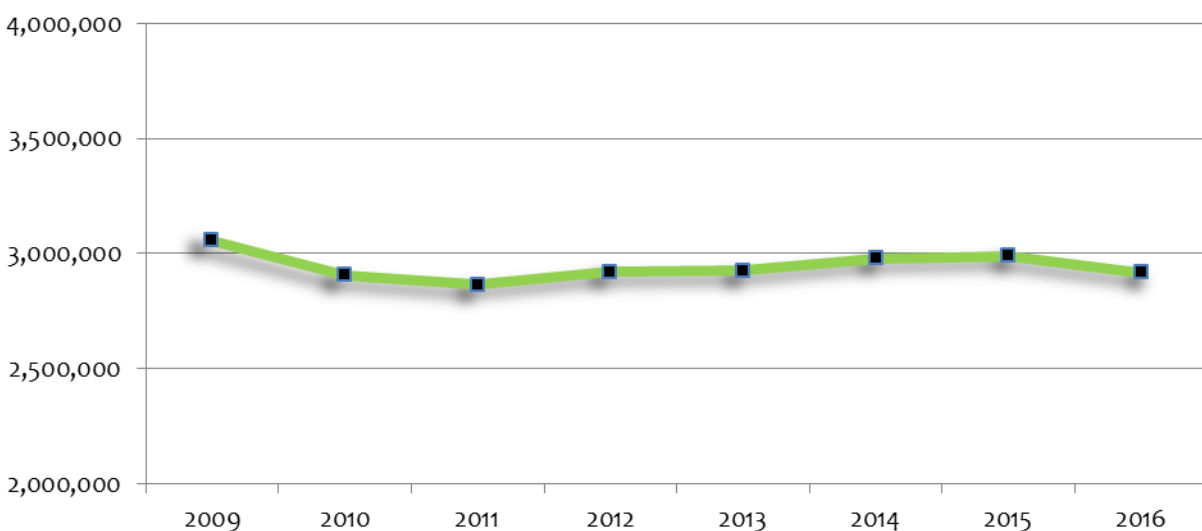
A CMP is federally required in metropolitan areas with population exceeding 200,000 known as Transportation Management Areas, (TMAs). Since Lycoming County has less than 200,000 population, the WATS MPO is not required to develop a CMP, however a CMP process tailored to local issues and needs is beneficial. Also, in TMAs designated as ozone or carbon monoxide air quality non-attainment areas, the CMP takes on greater significance as Federal law prohibits transportation projects that result in significant increases in carrying capacity for single occupant vehicles, (SOVs) from being programmed in these areas unless the project is addressed in the region’s CMP. According to the US Environmental Protection Agency, (EPA), Lycoming County is currently in attainment for all national ambient air quality standards so air quality conformity analysis is currently not required for WATS MPO Long Range Plan and Transportation Improvement programmed projects.

Causes of traffic congestion (FHWA, 2005)



Despite a drop in traffic volume in the most recent PennDOT PUB 600 (Pennsylvania Highway Statistics), the recent trend in traffic volumes has been small, steady increases in Daily Vehicle Miles Traveled (DVMT) in Lycoming County.

Lycoming County Traffic Volumes
(Daily Vehicle Miles Traveled)



Travel Time Reliability

The FHWA final rule for the National Performance Management Measures; Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program became effective on May 20, 2017. This is the third of a series of related rulemakings that establishes a set of performance measures for MPOs to use as required by MAP-21 and reinforced by the FAST Act. These performance measures include targets for Travel Time Reliability, Non-SOV Travel Measures, and Congestion Mitigation & Air Quality Emission Measures. The MPO intends to adopt these performance measure targets at their September meeting.

As explained under the Congestion & Access Management paragraph above, the WATS MPO is in attainment for all national ambient air quality standards. As such, the WATS MPO will only be held to the Travel Time Reliability Targets which are as follows:

Travel Time and Annual Peak Hour Excessive Delay Measures				
Measure	Baseline 2017	2-year Target 2019	4-year Target 2021	WATS MPO Comparison
Interstate Reliability (Statewide)	89.8%	89.8%	89.8%	100.0%
Non-Interstate Reliability (Statewide)	87.4%	N/A	87.4%	98.3%
Truck Reliability Index (Statewide)	1.34	1.34	1.34	1.16

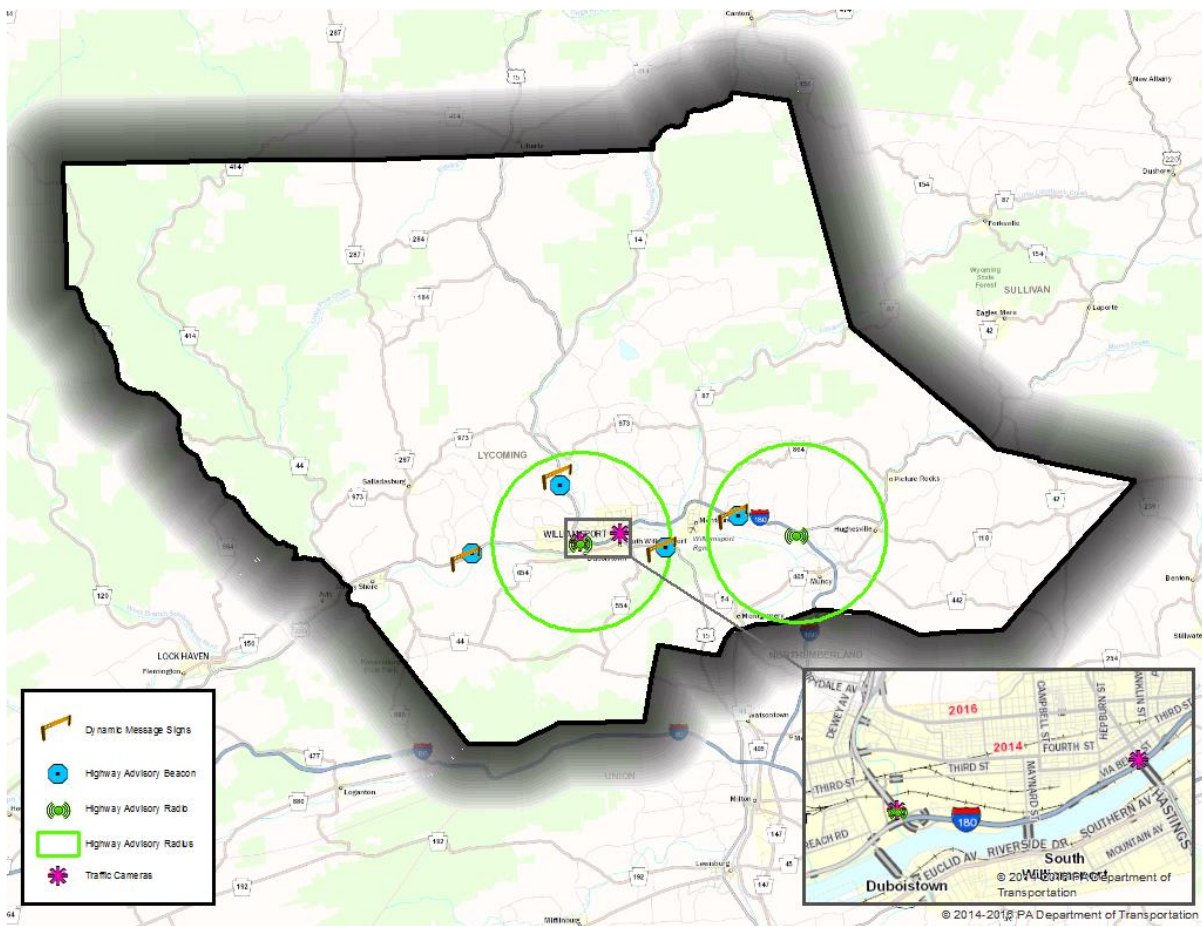
Due to potential tool enhancements, limited historic information, and the need for additional research PennDOT has established conservative targets. PennDOT will track the measures over the next two years and determine if any adjustment are needed to realistically meet the 4-year performance measure targets. The WATS MPO already compares favorably to the 4-year target set for statewide reliability, but is still committed to improving system reliability where feasible.

Highway Occupancy Permits

It should be noted that PennDOT regulates access onto State-owned road right of way in accordance with Title 67 PA Code Chapter 441. PennDOT has recently made significant efforts to enhance municipal coordination during the review and approval of driveway permit applications through their newly established e-permitting system affording municipalities to review and comment on permit applications, especially during their review of local land development plans to improve transportation and land use decision-making. The WATS MPO strongly supports such efforts in order to better manage highway access to preserve the operational integrity and capacity of the existing roadway system as funding is very limited to undertake new capacity improvement projects. As part of the PennDOT HOP process, large scale higher traffic volume generators proposing access onto state-owned roads are required to prepare either a Transportation Impact Study, (TIS) or Transportation Impact Assessment (TIA) to document impacts from their development and identify transportation improvement needs. There are some local municipalities in Lycoming County that do issue driveway permits on roadways under local ownership. The most significant example of a

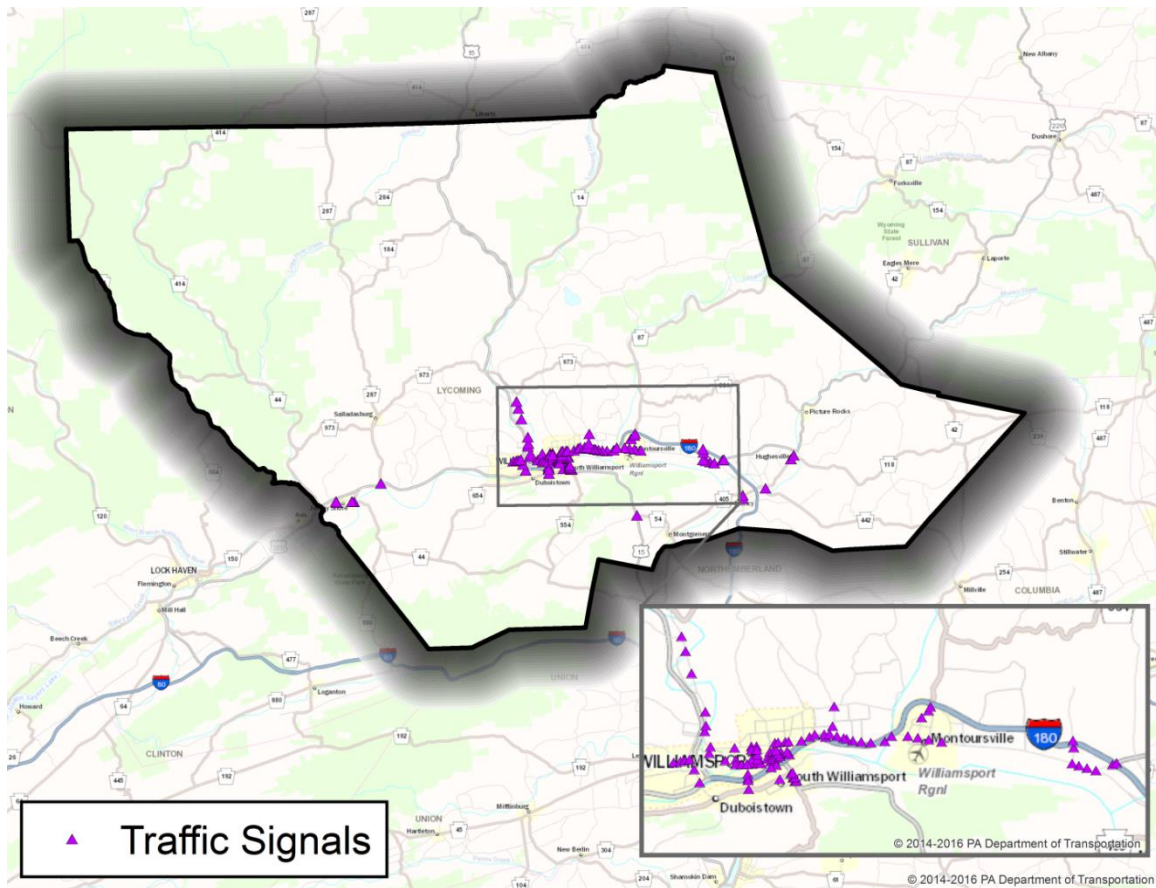
PennDOT highway access management project now underway in Lycoming County is the US-220 Corridor Access Management Project between the Williamsport and Jersey Shore Areas.

Transportation Systems Management & Operations (TSMO)



In order to effectively implement Transportation Systems Management & Operations (TSMO) initiatives in the Commonwealth, PennDOT is undertaking a planning process to create four Regional Operation Plans (ROPs). These plans will inventory existing ITS and Operations infrastructure, needs, vision, and goals to help guide district level decisions that are in-line with regional, state, and federal policies. While the Central Region's ROP, which includes District 3-0, has not yet been completed – District 3-0 has still managed to implement various ITS field devices to help make the roadway system work more efficiently. Improvements to date include four dynamic message signs, two traffic cameras, two highway advisory radio broadcast locations, and four highway advisory beacons. See location of field devices in the location map above. These devices are helping District 3-0 better monitor and respond to incidents on the key transportation corridors throughout Lycoming County.

Lycoming County Traffic Signal Inventory



There are 105 traffic signals located along state and locally owned roadways throughout Lycoming County. PennDOT issues permits for all traffic signals regardless of location, and local municipalities maintain and operate these traffic signals as per the permit requirements and in virtually all cases pay the installation, maintenance and energization costs. Most traffic signals are situated within the Williamsport Urbanized Area where roadway intersections have higher traffic volumes or crash histories that meet traffic signal warrants.

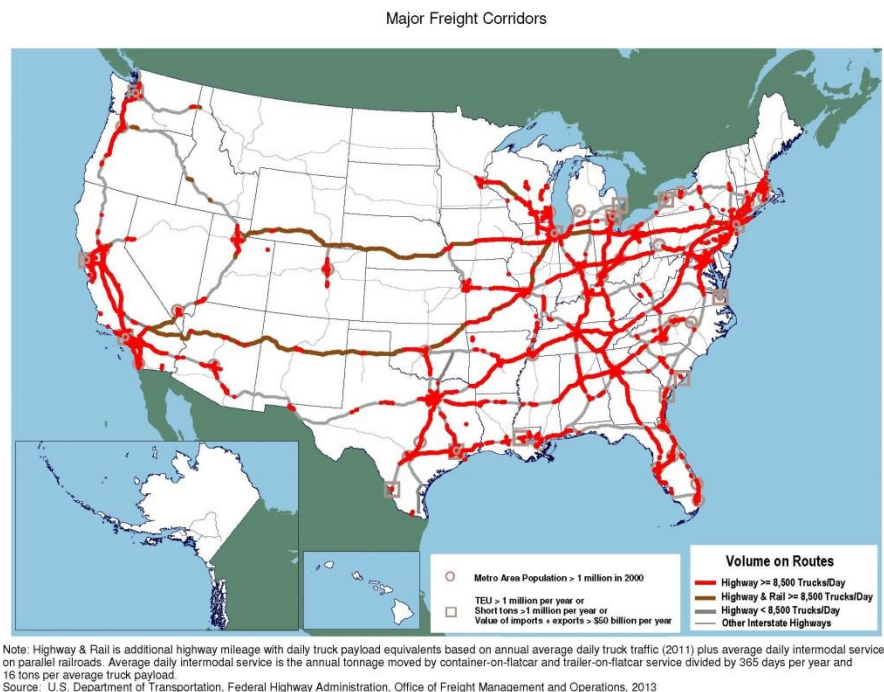
Municipality	Number of Traffic Signals
WILLIAMSPORT	50
LOYALSOCK	16
SOUTH WILLIAMSPORT	9
MUNCY TOWNSHIP	8
MONTOURSVILLE	7
JERSEY SHORE	4
OLD LYCOMING	4
HUGHESVILLE	2
MUNCY BOROUGH	2
CLINTON	1
MUNCY CREEK	1
PIATT	1
TOTAL	105

Freight Movement

Freight planning is an important component of statewide and metropolitan transportation planning processes. In Lycoming County, freight is moved among several modal systems consisting of highways, freight railroads and air freight service. Securing accurate and reliable freight data is essential to good planning, however challenging to compile as there is no single source of freight related data and distribution. The advent of Marcellus Shale gas exploration has only underscored the importance of understanding freight movement so that bottlenecks and gaps affecting the efficient movement of freight can be properly addressed to support the regional economy.

At the federal level, freight data is available from the Federal Highway Administration Freight Analysis Framework database. This data shows national freight movement patterns and provides future forecasts to the Year 2045. It is useful in examining long haul freight movements nationally and by state but does not supply detailed freight data specific to planning regions. PennDOT has completed a Comprehensive Freight Movement Plan, (CFMP), as part of the overall State Long Range Plan Update referred to as PA On Track.

In terms of the national picture, the map below shows the major freight corridors. As you will note the closest major freight corridors near Lycoming County are I-80 and I-81.



The latest long-haul freight truck traffic data on the National Highway System is 2015 as shown below.

Average Daily Long-Haul Truck Traffic on the National Highway System: 2015



Note: Major flows include domestic and international freight moving by truck on highway segments with more than twenty five FAF trucks per day and between places typically more than fifty miles apart.
 Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 4.3, 2017.

The FHWA forecasts freight movement to dramatically increase on the National Highway System by Year 2045 as shown below.

Average Daily Long-Haul Truck Traffic on the National Highway System: 2045



Note: Major flows include domestic and international freight moving by truck on highway segments with more than twenty five FAF trucks per day and between places typically more than fifty miles apart.
 Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 4.3, 2017.

In fact, the PennDOT Comprehensive Freight Movement Plan estimates that freight shipments through and within Pennsylvania are expected to increase 46% in tonnage and 95% in value from 2011 to 2040. 7% of all tonnage and 10% of all value of freight moved nationwide travels over Pennsylvania's freight transportation system at some point. As the maps show, Pennsylvania is truly a keystone state in terms of freight movement as much of freight traveling through the Northeast US Corridor usually must travel through the Commonwealth. Therefore, freight congestion is likely to substantially grow thereby stressing the importance of a balanced freight network that also fully utilizes rail and air service with good modal connectivity. Lycoming County's direct connection to I-80 via I-180 will play a more important role in the future in terms of freight movement, especially with Williamsport serving as the regional service center for natural gas extraction. The US-15 Corridor is also expected to grow in importance as well, especially with the completion of the Central Susquehanna Valley Thruway. I-99 designation for the portion of US-15 from the I-180 interchange north to the New York state line will also play an important piece in routing and planning for freight movements through Lycoming County since this will place this section of highway on the National Highway Freight Network.

It should be also noted that there are Federally mandated maximum weights on the National Highway System of 80,000 pounds gross vehicle weights, 20,000 pound single axle weight or 34,000 pound tandem axle weight, however the federal government does not issue permits for oversize or overweight vehicles. Issuance of such permits is a state option and the PA Motor Vehicle Code, Chapter 179 authorizes PennDOT to oversize or overweight load permits for state-owned roadways.

Multi-Modal Freight Transfer Center Feasibility Study

The only major local effort to compile and analyze freight movement data was undertaken by the Lycoming County Planning Commission, in cooperation with PennDOT, SEDA-COG and other agencies was part of a Multi-Modal Freight Transfer Center Feasibility Study process completed in June, 2006. The study focus was a 12 county area of Northcentral PA including Lycoming, Bradford, Centre, Clinton, Columbia, Mifflin, Montour, Northumberland, Sullivan, Snyder, Tioga and Union Counties where a market analysis was conducted based on a telephone survey of 111 companies involved in manufacturing and wholesale trade to determine the overall feasibility of developing a regional transfer center where freight traffic moving to or from companies within this study area could be transferred between railroad cars and trucks. The market analysis found a substantial interest in and traffic base for intermodal transportation service and identified more than 80,000 units (truckloads and container-loads) on an annual basis, that could comprise a market base for a transfer facility in the region. The two types of intermodal transfer considered were trailer on flat car (TOFC) and container on flat car (COFC) and transfer of liquid and dry bulk commodities, termed bulk intermodal.



The analysis found that, despite a strong interest and substantial volume of traffic suitable for box intermodal service, the concept of a satellite box intermodal terminal in the region was not feasible because such a facility would not be competitive with current intermodal service through the Harrisburg terminals. A regional intermodal facility would not likely attract intermodal traffic due to longer transit times and uncompetitive costs with truck drayage between this area and Harrisburg terminals. However, the study did conclude that bulk commodities transported to and from the area directly by truck over intermediate and long distances could benefit from a lower cost alternative of a rail / truck routing through a bulk transfer facility at the Newberry Rail Yard.

Bridges

The bridge system is of extreme importance to the transportation system serving Lycoming County. As stated in Chapter 2, Lycoming County is the largest county in Pennsylvania in terms of geographic square miles and also has over 2,200 miles of river, creeks and tributaries where the highway system must cross which creates the need for many bridges. There are 733 bridges either owned by PennDOT, Lycoming County or local municipalities that are 8 feet in length or greater. A total of 515 bridges (70%) are PennDOT-owned structures. Local municipalities and Lycoming County own 218 bridges. It should be noted that other bridges exist and are owned either by other government agencies, such as PA DCNR which owns 76 bridges, or are privately owned. Those bridges are not addressed in this plan as funding sources for those bridges are outside the jurisdiction of the WATS transportation planning process.



New DuBoistown River Bridge Dedication Ceremony

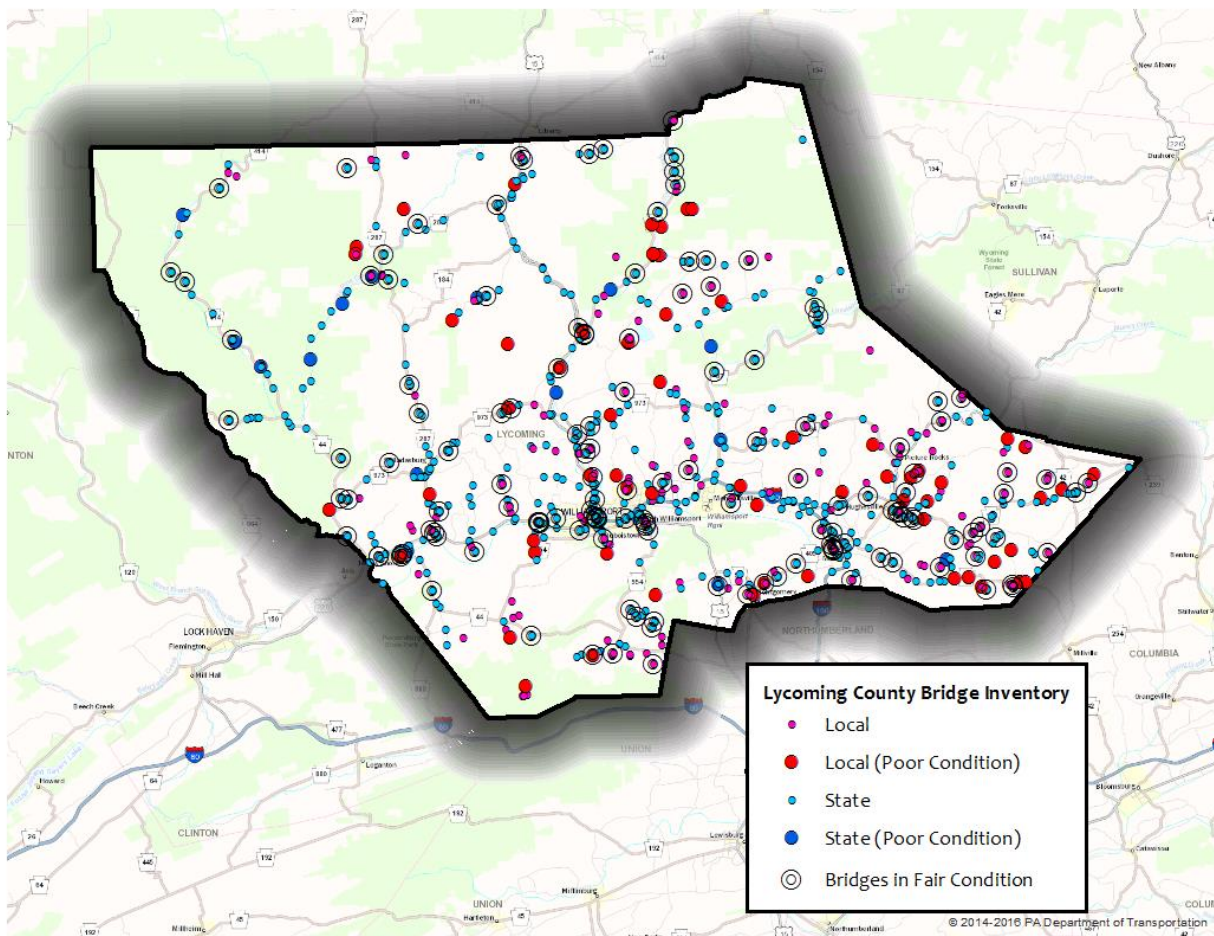
In terms of the overall state of repair regarding the bridges in Lycoming County, the situation is better than the Commonwealth as a whole. With the recent replacement of the DuBoistown Bridge, all of the major bridges over the Susquehanna River have been recently replaced or rehabilitated, which is also largely the case for bridges on the remainder of the Enhanced National Highway System. The bridge condition problem is more evident on the lower volume state and local road system. This is still a concern because many of these bridges are in rural areas involving long detour routes and can adversely impact goods movement and emergency response times.

Bridge Inspection Process

During the bridge construction boom of the 1950's and 1960's little emphasis was placed on safety inspection and maintenance of bridges. Then in December 1967 the 2,235 foot long Silver Bridge located in Point Pleasant West Virginia collapsed into the Ohio River killing 46 people prompting Congress to amend federal legislation requiring the establishment of a national bridge inspection standard. As a result, the National Bridge Inspection Standards, (NBIS) program was created federally requiring systematic inspection procedures, frequency of inspections, qualifications of personnel, bridge inspection reports and maintenance of a bridge inventory for all of the nation's publicly-owned bridge structures that are 20 feet or greater in length.

In Lycoming County, PennDOT inspects all state-owned bridges that are 8 feet or greater span length exceeding the NBIS requirements. Since 1995, the Lycoming County Commissioners have assumed the lead role to ensure federally required NBIS inspections of all 103 county and locally-owned bridges 20 feet or greater in length under a Reimbursement Agreement between Lycoming County and PennDOT which ensures 80% federal reimbursement to the County for the cost of these bridge inspections. The County fully covers the 20% local match using a portion of its Liquid Fuels Fund so local municipalities in Lycoming County pay no cost to have their bridges inspected. County Engineer, Larson Design Group is the consultant performing these bridge inspections.

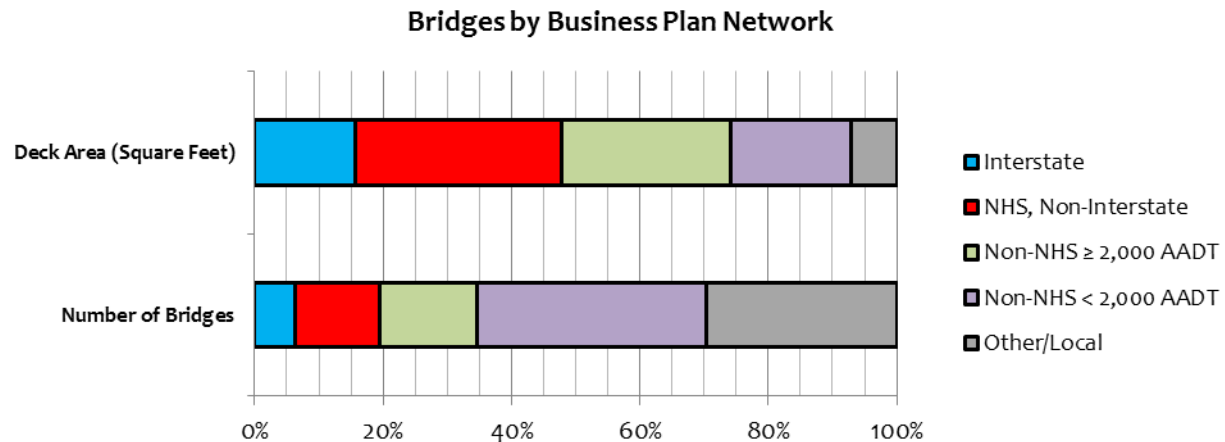
In addition, Lycoming County served as a PennDOT pilot by conducting a first ever inventory of all smaller locally-owned bridges between 8 and 20 feet in length in 2010. Although other MPO/RPO planning partners are also conducting similar inventories of small local bridges in their regions, Lycoming County is the only County that has also decided to systematically inspect the condition of these 8-20 foot long small local bridges using NBIS standards even though Federal law does not require inspection of these structures. The County uses its Liquid Fuels funding to perform these inspections with no federal or municipal reimbursement of bridge inspection costs. Alternate County Engineer, Bassett Engineering, Inc. is the consultant that performs these bridge inspections. All inspection data for locally-owned bridges in Lycoming County 8 feet in length or greater is entered into the PennDOT Bridge Management System 2, (BMS2) database. Therefore, the quality and comprehensiveness of bridge inspection data available regarding bridges in Lycoming County is the best in PA since no other planning region has NBIS quality data for locally owned bridges between 8-20 foot span lengths. Quality and complete bridge inspection data is essential to accurate assessments of bridge conditions.



Condition Assessment of Bridges in Lycoming County

The following PennDOT data provides a comprehensive summary of bridge conditions for all State-owned bridges 8 feet or greater in length and all locally-owned bridges 8 feet or greater in length. Please note, posted bridges refer to those bridges that cannot carry a 40 Ton legal load based on engineering analysis and are therefore posted with signs showing the weight the bridge can safely accommodate. Bridges that are rated with an overall condition of “Poor” are those bridges that have significant load carrying elements that are found to be in a deficient condition due to deterioration and / or damage, or where the adequacy of the waterway opening provided by the bridge is determined to be extremely insufficient to the point of causing overtopping with intolerable traffic interruptions. Major bridge components such as the deck, superstructure, substructure are evaluated using a 0-9 condition ratings scale where a 9 rating is excellent condition and 0 means deterioration is so severe the bridge must be closed to traffic. A condition rating of 4 or less for a major bridge component will classify the overall condition of the bridge as “Poor”, and condition rating of 2 or less for waterway opening also triggers the overall condition of “Poor” according to federal criteria.

It should be noted that a “Poor” overall bridge designation does not mean that the bridge is unsafe to accommodate traffic. It means that deterioration is to a point where significant rehabilitation or replacement is typically the course of action to address the poor bridge condition.



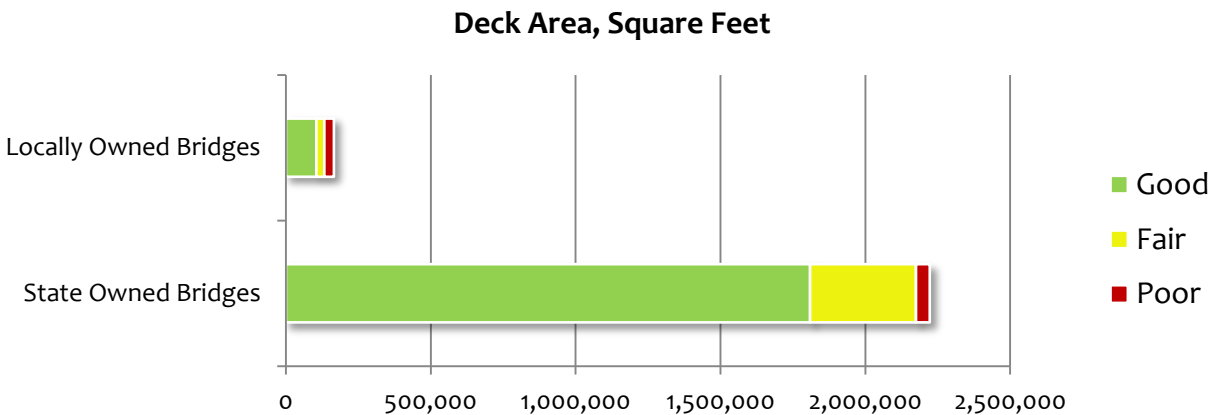
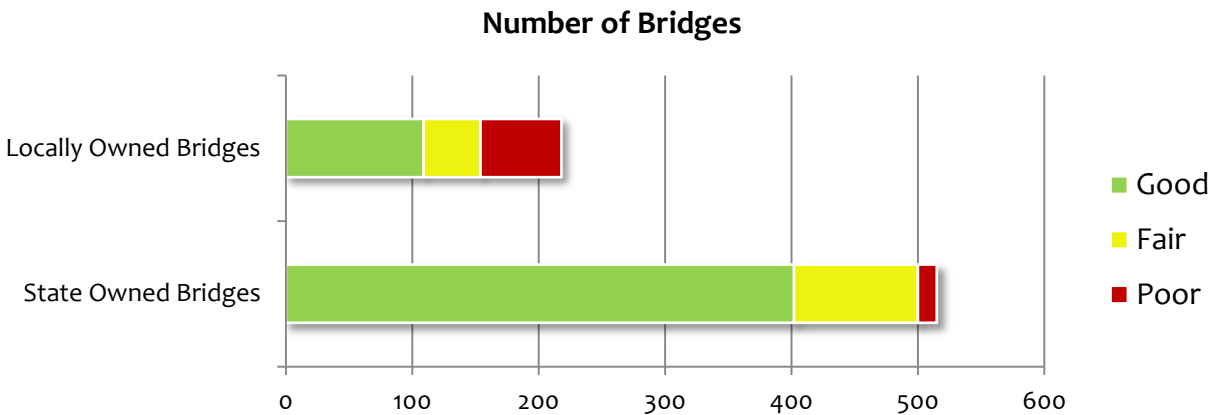
When examining current PennDOT bridge data the :

- 143 bridges, approximately 20% of all bridges, are on the National Highway System. This is also nearly half of all bridge deck area.
- Of the 143 bridges on the National Highway System, none are found to have the overall condition of “Poor.”
- No bridges are currently posted for weight limits or closed on the National Highway System.
- There are 15 state-owned bridges that have been determined to have an overall condition of “Poor” which represents approximately 3% of all state-owned bridges in Lycoming County.
- 1 state-owned bridge has a posted weight limit restriction.

In terms of statewide comparisons, Lycoming County is significantly better than the state-wide averages where 10% of state-owned bridges in PA have been determined to have an overall condition of “Poor.” 5.5% of National Highway System state-owned bridges in PA have been determined to have an overall condition of “Poor.” It is significant to note that there are an additional 86 state-owned bridges that are about to degraded to an overall condition of “Poor” unless targeted investment is made soon to correct deficiencies.

The story regarding the condition of locally-owned bridges 8 feet or greater in length in Lycoming County is much different than the condition of state-owned bridges.

- Approximately 29% of these local bridges are rated with an overall condition of “Poor.” Another 21% will be classified as “Poor” with any significant degradation in deck, substructure, or superstructure condition.
- One of these local bridges is closed to traffic and 40 bridges are posted for weight limits.



Wooden Covered Bridges

It should be noted that there are only three remaining covered bridges in Lycoming County and all are owned by the Lycoming County Commissioners and listed on the National Register of Historic Places. The Fraizer covered bridge near Lairdsville was reconstructed by the County in 2011 and this project received the state award by the County Commissioners Association of PA in partnership with the PA Highway Information Association and PennDOT as well as a PA Preservation Association Award. The other covered bridges located at the Village of Buttonwood and White Pine received major restoration in 1998, however additional minor repairs are now needed.



Fraizer Wooden Covered Bridge Near Lairdsville

Public Transportation

Lycoming County is served by an excellent public transportation system consisting of fixed route bus service, community shared ride service, intercity bus service, taxi service, and ride hailing services. This section of the plan will provide an overview of each type of transit service that is provided.

Fixed Route Bus Service

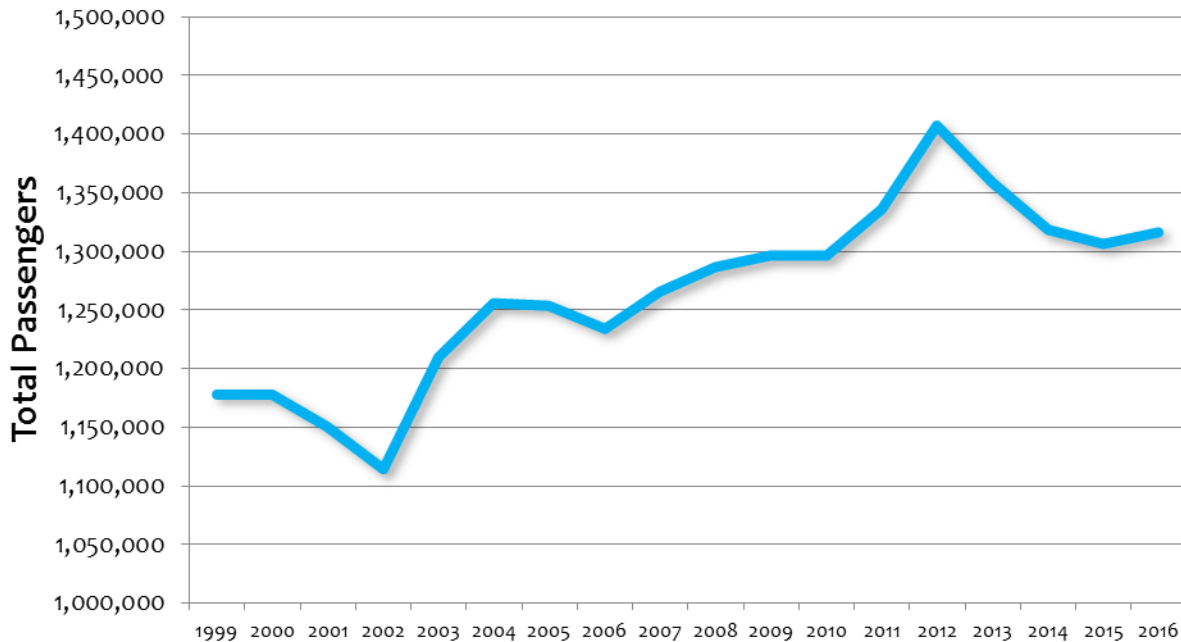
River Valley Transit (RVT) is the only fixed route bus service provider in Lycoming County. RVT manages a bus network of 19 fixed routes operated in-house by RVT employees. The system is comprised of a fully accessible fleet of 27 buses consisting of standard 35 and 40 foot long transit coaches, including 18 Compressed Natural Gas (CNG) buses.

The RVT primary service area includes most of the growth areas of Lycoming County serving over 70,000 residents. Approximately half (54%) of the current urbanized area of Lycoming County is within 1,000 feet straight-line distance of a transit stop. Parts of 21 of Lycoming County's 52 municipalities are within the urbanized area which includes 77% of the county's total population. It is estimated that half of the population of this urban core of the county is with 500 ft straight line walking distance of an RVT transit stop. In total, approximately 43,750 people (38% of the total county population) is within ideal walking distance of a transit stop.

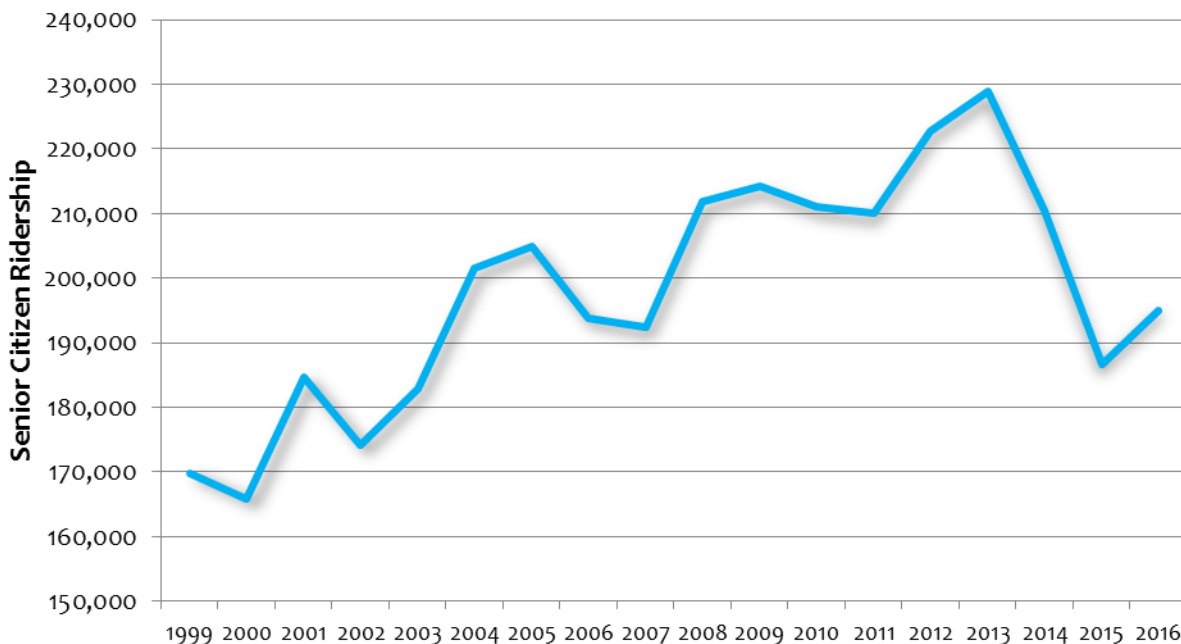


RVT Ridership Characteristics and Trends

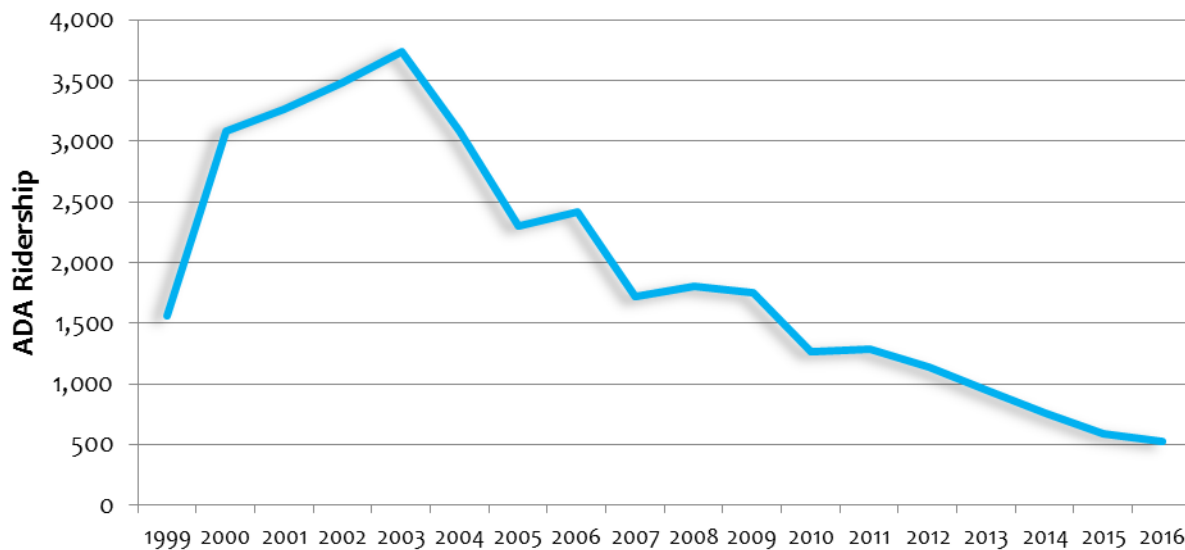
RVT has increased ridership steadily since 1999 with an overall 12% increase in total passengers served and an all-time passenger record in 2012 of 1,406,478 passengers. The chart below shows RVT total annual passengers over the period 1999-2016:



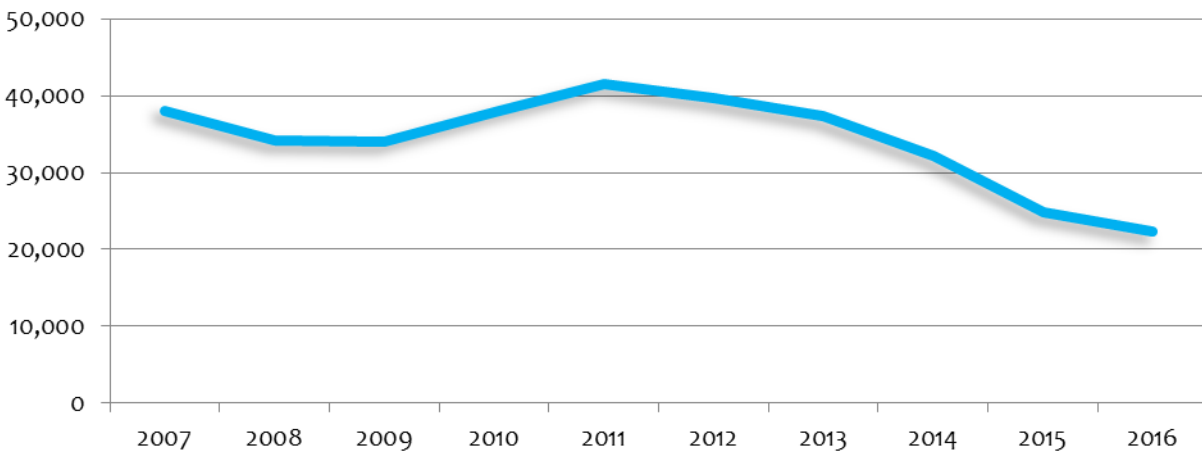
Because of special RVT promotional programs such as “Senior Bonus Bucks” where senior citizen bus patrons aged 65 or older earn bonus bucks for every ride that can be redeemed for merchandise, RVT senior citizen ridership saw steady increase from 1999-2013. However, from 2013-2016, RVT saw a sudden 15% decrease in senior citizen ridership.



River Valley Transit Plus, under contract with STEP, Inc. provides complimentary demand responsive van service as required by the Americans with Disabilities Act of 1990, (ADA) since 1992. This service continues to meet the needs for individuals with disabilities in the RVT service area and has transported more than 40,000 passengers since its inception. However, ridership has been declining during the past decade as programs have been initiated by other agencies to transport persons with disabilities along with increased ADA eligible passenger use of RVT low-floor buses equipped with lift ramps.



Due to funding issues, STEP suspended all night time service after 6:00 PM and weekend service. RVT now provides ADA complementary demand responsive paratransit service after 6:00 PM on weekdays and all day Saturdays as well as holidays when RVT provides regular fixed route service in compliance with ADA law. Trip reservations for ADA service are still coordinated between RVT and STEP. RVT continues to provide deviated fixed route transit service to Hope Enterprise clients employed at the sheltered workshop at the Reach Road Industrial Park. However, Hope ridership has decreased by nearly 50% since peak ridership of 41,547 in 2011 as noted below:



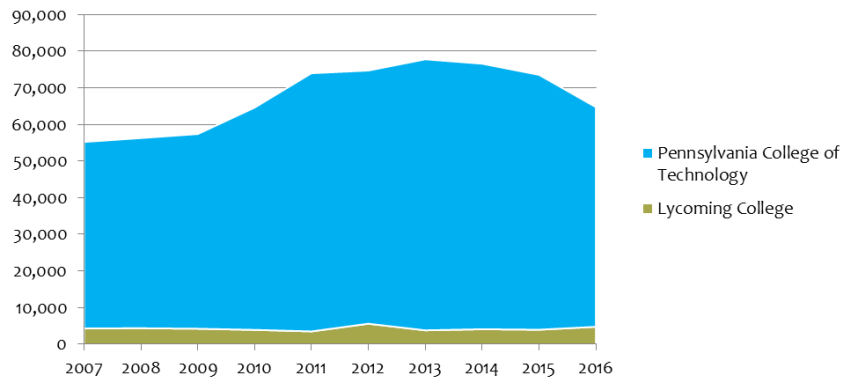
Also, RVT continues to provide fixed route transit service for Williamsport Area High School participants in the life skills classes for job training at the Susquehanna Health's Williamsport Hospital Campus and free student rider services benefitting over 7,000 area college students.

RVT also provides special transit services to support a wide variety of activities and community events throughout their service area including Lycoming County Fair, Little League World Series, Williamsport Crosscutters minor league baseball games, Penn College Earth Science Center, Lycoming College

Homecoming and other college functions along with charter services using a process that complies with new FTA regulations.

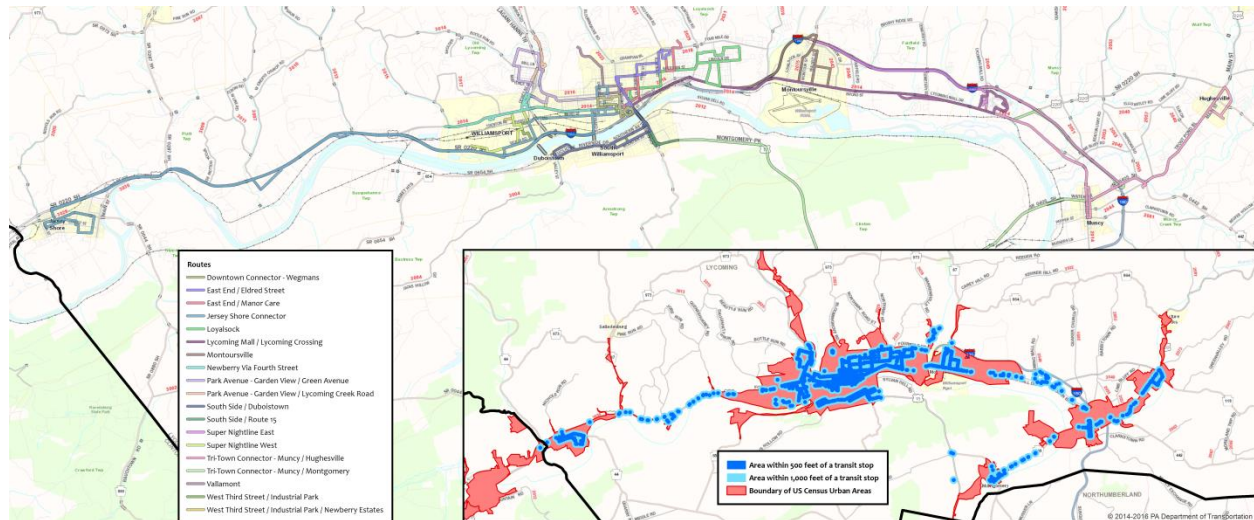
RVT ridership is heavily influenced by local unemployment levels and the price of gasoline representing the cost of the most likely alternative travel

mode for many potential transit passengers, as well as vehicle miles operated and basic fare structures. For example, RVT regression analysis results over a 96 month period (2004-2011) show among other explanatory factors affecting ridership that an increase of 1% in the members of the workforce who are unemployed is associated with an increase of 475 RVT passenger trips per month and an increase of 1 cent in the price of a gallon of unleaded gasoline results in an increase of 41 additional RVT passenger trips per month.



RVT Fixed Route System

The current routes and service area of RVT are:



Due to varying service levels within the fixed route transportation system, there is considerable variation among these routes in terms of scheduling operations, ridership, revenue. System

performance on these routes changes over time. Therefore, it is helpful to monitor RVT's system performance on a more detailed basis by comparing a variety of indicators across individual routes. All RVT transit vehicles have electronic validating fareboxes which record passengers as the board and pay fares thus assisting RVT in providing more detailed analysis of performance of each route.

RVT Fares

Below is the RVT fixed route fare structure. RVT traditionally has one of the lowest transit fare structures in Pennsylvania in order to ensure accessible and affordable public transit service to those that need it. However, it must also be recognized that fare increases will be necessary in order to keep pace with increasing operating costs. The RVT goal is to raise fares when needed with only minimal disruption of ridership, and thus RVT has moved to a policy of more frequent, incremental increases in selected categories rather than more dramatic across-the board fare hikes which have tended to drive more patrons away from the system.

EZ Fares		Standard Fares	
One-Day EZ Pass from Trade & Transit Center	\$2.25	Cash	\$2.00
One-Day EZ Pass from Driver	\$2.50	Tokens (4 for \$5.00)	One
2-Ride pass from Trade & Transit Center	\$2.25	Senior 65+ (with I.D.)	Free
2-Ride pass from Driver	\$2.50	Youth (17 and under)	\$1.00
7-Day EZ Pass	\$12.00	Disabled (with I.D.)	\$1.00
10-Ride EZ Pass	\$12.00	Child (age 5 and under)	Free
20-Ride EZ Pass	\$22.00	Transfers	Free
31-Day EZ Pass	\$40.00		

RVT's EZ Fares magnetic pass cards represent nearly 63% of all revenue paying passengers utilizing these cards. Less than 2% of these passengers paid cash fares or used tokens.

RVT Facilities

Garage & Office Facility

In 2011, RVT completed a \$ 12 million project to renovate and double the size of its garage and office facility located at 1500 West Third Street in the City of Williamsport. The new facility will meet RVT's operational, administrative, and fleet maintenance needs for the foreseeable future. Numerous "green" technology features were incorporated as part of the project such as geo-thermal heating and cooling, time controlled lighting, rapidly rising and dropping garage doors to reduce heating and cooling costs, etc.

In 2011, RVT was awarded \$ 3.5 million through FTA's Clean Fuels Program further retrofit this maintenance facility to create a fast-fill CNG fueling station that will accommodate CNG fueled vehicles that will accommodate RVT's strategy to eventually replace all of its diesel buses with CNG buses to significantly lower



its operating costs and reduce carbon emissions while capitalizing on the Marcellus Shale natural gas resources abundant in the County. This CNG fueling facility will be completed in September, 2013 which can be open for business to other municipalities, private companies and the general public.

Church Street Transportation Center

Opened in April 2012 the Church Street Transportation Center is a Williamsport Parking Authority parking deck facility. The four level building provides 350 parking spaces and houses Fullington Trailways, an intercity motorcoach company. The facility offers state-of-the art, self service ticketing and payment options, elevators and a security system. Park and ride facilities supporting RVT's Downtown Connector and bus bays are included along with public art depicting the heritage of Lycoming County.



Trade and Transit Centre

The Williamsport Trade and Transit Centre was dedicated in 1999 as an intermodal transportation facility in the heart of the Williamsport Central Business District. This facility accommodates about 4,100 RVT riders daily and includes bus bays, a restaurant, community meeting room, and a community theater. The completion of this project led to a 16% increase in transit ridership of the RVT system so planning began in 2001 to further expand this facility as part of Trade and Transit Center II.

Trade and Transit Centre II

This expansion began with the demolition of the existing 300 vehicle Mid-Town Parking Deck which was in severely deteriorated condition. The new building greatly enhanced the utility and function of the existing Trade and Transit Centre by including a drivers lounge, second passenger waiting area, community room, additional commercial areas rented to small retail outlets, three additional bus bays. Additionally, a large open public square was created to enhance the walkable public space in the Williamsport Central Business District.



RVT capital and operating financing will be addressed in Chapter 4 of this plan.

Community Shared Ride Program

Incorporated in 1966, the Lycoming-Clinton Counties Commission for Community Action (STEP), Inc. is a private, non-profit community action agency. Success Through Engagement and Partnership is achieved in two ways. First, STEP's Programs engage individuals, families and communities in their own strategies for success - the customers become involved directly, and truly own that which they achieve. Secondly, because no single organization can "do it all", success is achieved through partnerships with the complementary groups and entities that can also assist these individuals, families and communities.

One of the many social services STEP, Inc. provides is shared ride demand responsive transportation services to the residents and visitors of Lycoming and Clinton Counties. According to STEP, their vision is “to provide safe, dependable and timely transportation services”.

Service Description

STEP Transportation provides door-to-door, shared ride service from 6:00 AM – 6:00 PM Monday through Friday except STEP observed holidays. Formerly until 2012, service was provided 24 hours daily/ 7 days per week, however due to limited funding resources and overall system ridership declines, service cut-backs were deemed essential to preserve the overall future financial viability of the system. Transportation is available for trips within the primary service area consisting of Lycoming and Clinton Counties with special services within Centre, Union, Northumberland, Columbia, Snyder, and Montour counties. STEP services cover 5,004 square miles and serving a population base of 155,349 with 16.4% of the population comprising senior citizens aged 65 and older. Once per day service to Geisinger Medical Center (GMC) is available with the van arriving at GMC at 9:30 am and departing at 2:00 pm. Transportation is also available to K&C Dentures in Lamar on Tuesdays and Thursdays.

Through the Medical Assistance Transportation Program, (MATP), transportation is provided on an as-needed basis to serve medical appointments throughout the Commonwealth. Consumers must reserve their ride with STEP before noon on the preceding business day. Although all residents and visitors within Lycoming and Clinton Counties are eligible for transport by STEP, some consumers may be eligible in transportation sponsoring programs, such as Persons with Disabilities, Medical Assistance Transportation Program, Area Agency on Aging, Shared Ride and Employment Transportation Programs making fares more reasonable.



STEP operates a 35 vehicle fleet that was used to provide over 110,302 total shared ride passenger trips between July 2016-June 2017. Of these total trips, 41,047 were senior citizen (aged 65+) or 37% of total trips which has remained steady declining over the past five years, with an actual increase in Program Year 16-17. Another 9,201 trips or 8% of total trips were attributed to the Persons with Disabilities Program.

Fares

Transportation fares per one-way trip are based on ride sponsorships and a zone-based, miles-driven fare structure.

Sponsored Transportation

Medical Assistance Transportation Program-Sponsored Trip	No Charge
Age 60-64 STEP Office of Aging-Sponsored Trip	Refer to Fare Structure
Age 65+ STEP Office of Aging-Sponsored Trip	No Charge
General Public (Full Fare) and Third Party-Sponsored Trip	Refer to Fare Structure

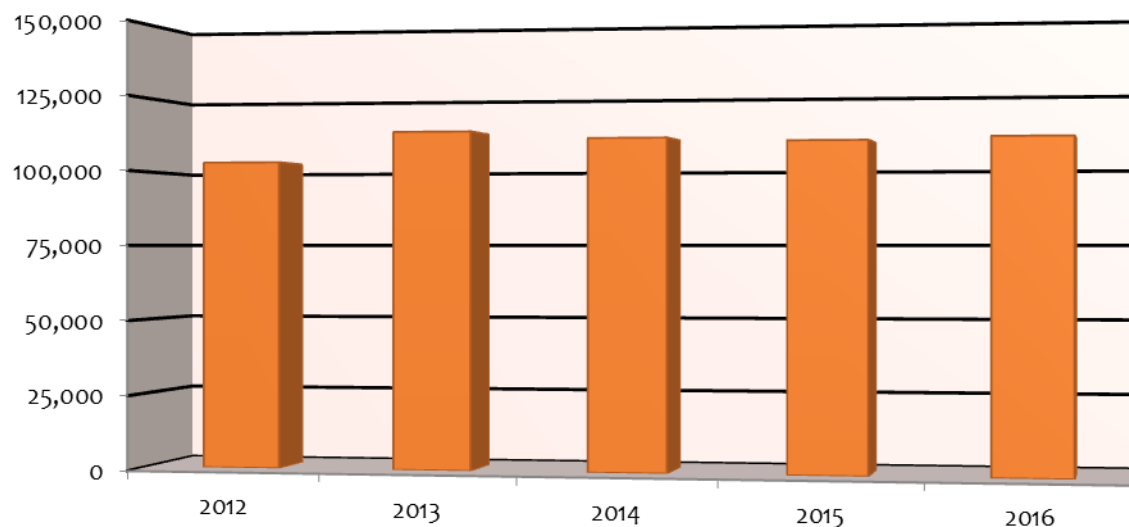
Fare Structure

Mileage Zone	General Public (Full Fare)	Persons with Disabilities and Americans with Disabilities Sponsored Trips	Lottery Sponsored (65 and Older but not Office of Aging Sponsored)	Age 60-64 (STEP Office of Aging Sponsored Trip)
Less than 5 Miles	\$18.30	\$4.00	\$2.75	\$1.00
5 to 10 Miles	\$20.00	\$4.00	\$3.00	\$2.00
10 to 15 Miles	\$25.00	\$4.00	\$3.75	\$3.00
15 to 25 Miles	\$30.00	\$4.50	\$4.50	\$4.00
25 to 35 Miles	\$45.00	\$6.75	\$6.75	\$5.00
Over 35 Miles	\$50.00	\$7.50	\$7.50	\$6.00

Ridership Trends

The impact STEP has on the communities it serves is tremendous as there are thousands of consumers who maintain their health and independence by using shared ride services. This also includes employed persons seeking transportation to and from employment and Pre-school children and their families being connected to school readiness activities through transportation services. Usage of STEP transportation services has been very steady for the past 5 years.

Total STEP Transportation Ridership



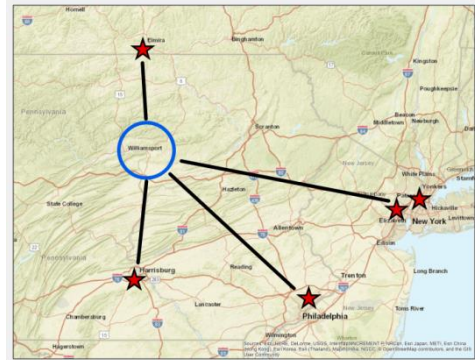
STEP operating and capital assistance program financial information will be provided in Chapter 4.

Intercity Bus

There is one privately-owned company that serves the intercity bus passenger terminal in Lycoming County.

Fullington Trailways

This private motorcoach company based in Clearfield, PA took over intercity bus service through Williamsport from Susquehanna Trailways in 2017. Fullington offers charter tours and daily service from the RVT Church Street Transportation Center to New York City, Newark, Philadelphia, Harrisburg, and Elmira, New York. Buses run daily, seven days a week, with two departures each day to Philadelphia, Harrisburg, NYC, and Elmira and one daily departure to Newark.

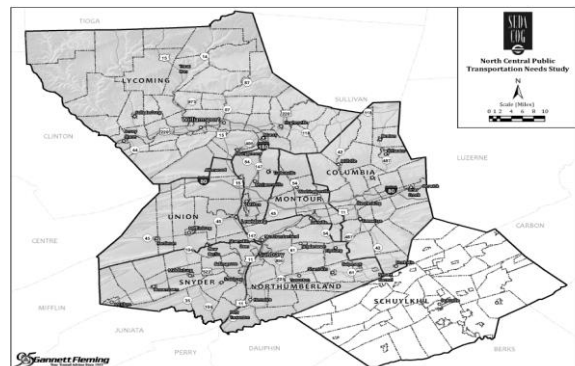


Regional Transit Coordination

Central PA Transportation Coalition

Over the past five years, the Lycoming County Transportation Supervisor has chaired this Coalition consisting of numerous public and private sector human service and transportation related organizations in the Northcentral PA region whose mission is to establish a mechanism to meet the regional needs for public transportation so that area residents have alternative, accessible, efficient and affordable means of travel. River Valley Transit, STEP and Susquehanna Health Staff also participate on the Coalition from Lycoming County. The Coalition recognizes that a more regional approach not limited by county boundaries should be considered when conducting strategic planning for delivery of public transportation services and full cooperation is essential among providers and stakeholders to achieve success. The SEDA-Council of Governments undertook a comprehensive needs assessment which was finalized in 2011 that reviewed current transportation services in a six county region consisting of Lycoming, Union, Snyder, Northumberland, Montour and Columbia Counties with funding assistance primarily from PennDOT. Gannett Fleming was the study consultant. The study area is shown on the map depicted on the right-hand side of this page:

The study provided an inventory and analysis of existing transportation services, documented community characteristics, assessed current transit needs and potential new demand, developed alternative strategies to address present and future needs and prioritized strategies for future plan implementation.



A regional transit summit was held in November of 2011 in Danville, PA to publicly present the study recommendations. Over 100 individuals representing a large cross-section of public transportation providers, social service organizations and transit consumers were in attendance.

The plan recommended six primary alternatives as the highest priorities for future implementation

- **Regional Public Transportation System**
- **Regional Coordination Council**
- **Evening and Weekend Service Expansion**
- **Centralized Resources Directory**
- **Local Community Routes with Deviation**
- **PennDOT Coordination Pilot Project**



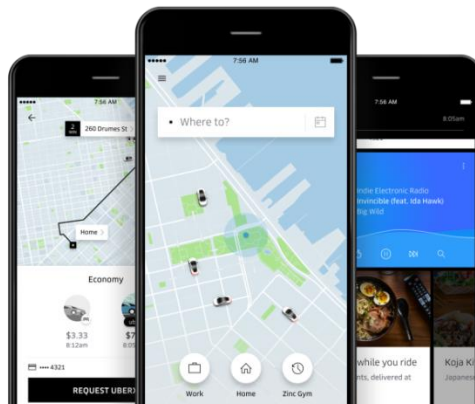
Currently the Coalition is focused on working on exploring expansion of fixed route transit services within the six county region. In addition, RVT has secured PennDOT approval and funding to initiate transit service extensions to the Lock Haven area in Clinton County scheduled for February 2018. Also, WATS has been partnering with the SEDA-COG MPO to update the Joint Human Services Coordinated Transportation Plan. This joint approach has been helpful during the implementation of the Coalition recommendations.

Taxi Service

The Billtown Cab Company, located at 3575 West Fourth Street is the PA PUC licensed taxi provider in Lycoming County providing 24 hour per day service.

Ride Hailing Services

Ride hailing services use a smart phone app interface to allow users to contract directly with drivers to schedule rides. Both Uber and Lyft have a presence in the greater Williamsport area. Uber began service in Williamsport on August 4, 2016. As of November 2017 there were fewer than 500 active drivers working for Uber and over 3,000 active users. No data on Lyft is available.



Uber app interface (Uber, 2017)

Air Service

The Williamsport Regional Airport is the only scheduled commercial air carrier service airport in Lycoming County. There are 15 scheduled commercial air service airports in the Commonwealth.

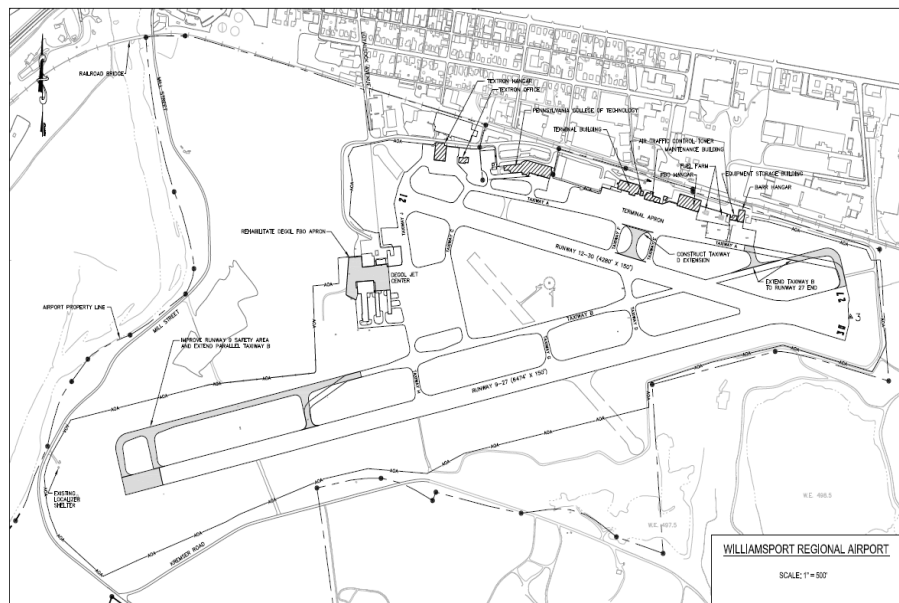


The Williamsport Regional Airport is located in the Borough of Montoursville approximately 5 miles east of the City of Williamsport. The airport was originally developed in 1929. On January 27, 1947 a joint resolution was adopted by the City of Williamsport and Lycoming County Commissioners creating the Williamsport Municipal Airport Authority incorporated under the 1945 PA Municipal Authorities Act. . The Airport Authority Board of Directors consist of seven members appointed by the Lycoming County Commissioners who are responsible for determining airport policy and directing the overall airport operations employing full and part-time staff. On July 21, 1947 the airport land and improvements were deeded by the City of Williamsport to the newly created Airport Authority.

Major Airport Facilities Inventory

There is a large land area (735 acres) and numerous physical facilities that are under Airport Authority ownership and control. This area is depicted on the official Airport Layout Plan, (ALP) approved by the Federal Aviation Administration

Existing Airport Layout Plan, (ALP)

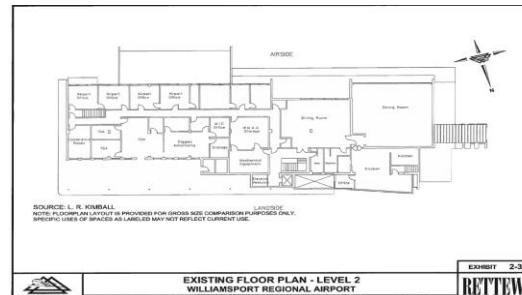
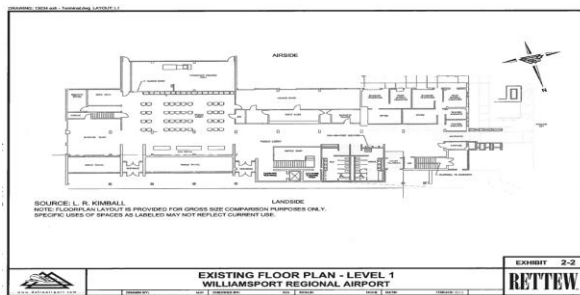


Terminal Building

The Airport Terminal Building, originally constructed in 1947, is a two-story facility consisting of approximately 27,000 square feet of space. There are restrooms, airline ticket counters and offices,

baggage screening, while public seating, passenger security checkpoint, and secure passenger hold room occupy the middle of the building. Car rental, baggage claim and a travel agency are located to the east of the central entryway. The second floor is occupied by a restaurant (Cloud 9), Airport Authority administrative offices, Transportation Security Administration, (TSA) offices, storage, a mechanical and electrical room.

Existing Airport Terminal Building



In June, 2012, the Airport Authority publicly announced a major project to replace the existing terminal building given its poor physical condition and limited space for current operations and future anticipated growth. This project will be more fully discussed under the Proposed Airport Improvements section of this plan.

Air Traffic Control Tower, (ATCT)



The Airport has an air traffic control tower, originally constructed in 1959, to promote the safe, orderly, and expeditious flow of air traffic. The tower is operated through a contract operator, Air Midwest and federally subsidized under the FAA Air Traffic Control Tower Cost Sharing Program with a county match. The hours of operation are from 6:30 a.m. to 10:30 p.m. daily.

Runways and Taxiways



Runway 09-27 is the primary runway at the Airport. This grooved bituminous paved runway is 6,824 feet long by 150 feet wide and is in good condition. The runway pavement strength is single wheel 65,000 lbs., dual wheel, 100,000 lbs and double dual tandem wheel, 190,000 lbs. The runway length was recently extended by 350 lineal feet at the western end in 2009 to enhance aircraft operational

safety. A full parallel taxiway system was also recently completed for this runway leading to the main aprons and other aircraft parking facilities so it is in excellent condition. This runway is served by high intensity runway lights. All runway pavement markings are in accordance with FAA standards for Airport Markings. All signage is in compliance with Part 139 requirements.

Runway 12-30 is the secondary runway at the Airport. This bituminous over concrete runway was rehabilitated in 2002 and is in good condition. A parallel taxiway is available for this runway leading to the main aprons and other aircraft parking facilities. All lighting, signs and pavement markings are in compliance with FAA requirements.

Other runway related aviation navigational aids at the airport include a rotating beacon, lighted wind indicator, Medium Intensity Approach Lighting System, (MALSR), Visual Approach Slope Indicators, (VASI), and Precision Approach Indicators (PAPIs).

Fixed Base Operator, (FBO)

There is one full service fixed base operator at the airport, Energy Aviation. The FBO provides a full range of general aviation services which include aviation fuel sales, aircraft ground handling, aircraft parking (ramp or tiedown), hangars, corporate passenger terminal and lounge, charter flights, flight training, aircraft rental and other services. 100 Low Lead and Jet A fuel is available.

Based Aircraft

As of November 2017, there are 34 based aircraft at the airport consisting of 24 single engine, 11 multi-engine, 2 jets, 1 helicopters.

Hangers

There are 10 hangers at the airport; 1 ten unit hanger, 2 six unit hangers, 4 unit hangers with combination hanger / office, and 3 unit hangars. All hangers are currently occupied but additional space is available.

Other Airport Facilities

There are Aircraft Rescue and Firefighting, (ARFF) and Equipment Storage buildings that house fire and rescue and maintenance vehicles. There is a fuel farm and aircraft de-icing pad. The main parking area is located west of the terminal building providing 268 parking stalls. An additional 73 parking spaces are reserved for rental cars. An additional 33 parking spaces are provided for airport tenants, employees and restaurant patrons. The PA College of Technology owns and operates the Kathryn Lumley Aviation Center which provides college student instruction on aviation and avionics related programming.



Lumley Aviation Center

Currently, the Airport Authority leases building space or land to 24 different tenants operating at the airport.

Current Airport Tenants*Piedmont Airlines**Hertz Rent-a-Car**Avis/ Budget Rent-a-Car**Enterprise Rent-a-Car**Cloud 9 Restaurant**World Travel International**Lycoming Engines**FAA**Energy Aviation, IPT**Barr Motors**McClure-Johnson Company**AIRMEN HVAC Services**Civil Air Patrol**Diggins Advertising**Duraclean Restoration**TSA**Michael D. Mertes, Inc.**Exsentry Data Solutions**Geisinger Medical Center Life Flight**Tom Drewett & Tom Brown**Sooner Pipe**EXCO Resources**Exsentry Data Solutions**Consolidated Graphics*Airport Hazard Zoning

Pennsylvania's Airport Hazard Zoning Law, Act 164 of 1984, requires those local municipalities that fall within an airport hazard area to adopt, administer and enforce airport zoning regulations (ordinances) to ensure a safe and reliable network of public use airports as a key mechanism to preserve and protect these key transportation assets.

Twelve Lycoming County municipalities are required to enact an airport hazard zoning either as an amendment to their overall zoning ordinance or as a free standing ordinance. According to the PennDOT Bureau of Aviation, only three of these municipalities are in compliance with Act 164 as illustrated below:

Airport Hazard Zoning Compliance Status

AIRPORT	MUNICIPALITY	COUNTY	Ownership	Airport Use	AIRPORT CLASS	ACT 164 Ord.?	Ord On file?
WILLIAMSPORT REGIONAL AIRPORT	WOLF TOWNSHIP	LYCOMING	PUB	PUB	Commercial Service	No	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	CITY OF WILLIAMSPORT	LYCOMING	PUB	PUB	Commercial Service	No	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	UPPER FAIRFIELD TOWNSHIP	LYCOMING	PUB	PUB	Commercial Service	Yes	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	SOUTH WILLIAMSPORT BOROUGH	LYCOMING	PUB	PUB	Commercial Service	No	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	MUNCY TOWNSHIP	LYCOMING	PUB	PUB	Commercial Service	Yes	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	MONTOURSVILLE BOROUGH	LYCOMING	PUB	PUB	Commercial Service	Yes	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	MILL CREEK TOWNSHIP	LYCOMING	PUB	PUB	Commercial Service	No	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	LOYALSOCK TOWNSHIP	LYCOMING	PUB	PUB	Commercial Service	No	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	HUGHESVILLE BOROUGH	LYCOMING	PUB	PUB	Commercial Service	No	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	FAIRFIELD TOWNSHIP	LYCOMING	PUB	PUB	Commercial Service	No	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	CLINTON TOWNSHIP	LYCOMING	PUB	PUB	Commercial Service	No	<input type="checkbox"/>
WILLIAMSPORT REGIONAL AIRPORT	ARMSTRONG TOWNSHIP	LYCOMING	PUB	PUB	Commercial Service	No	<input type="checkbox"/>

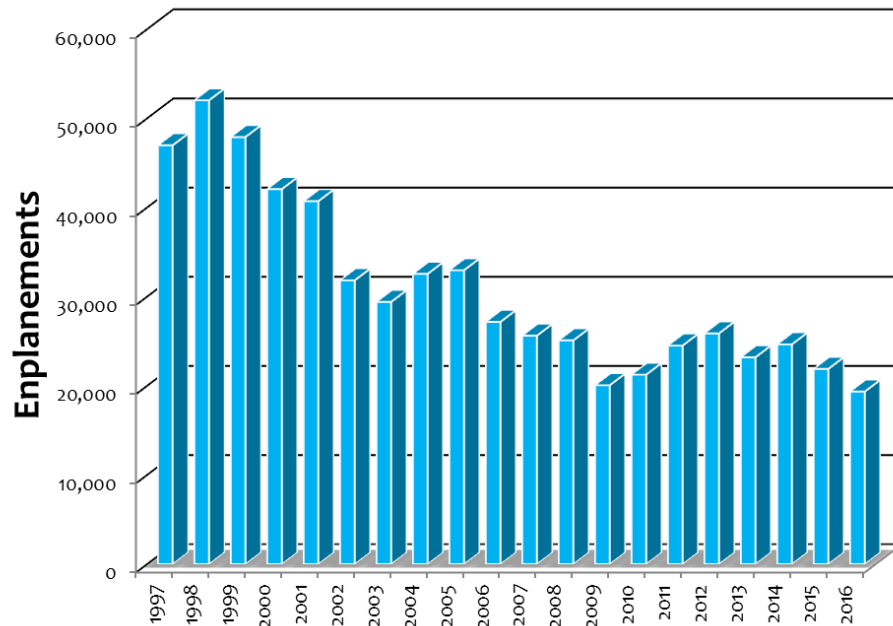
From a statewide perspective, only about 40% of PA municipalities required to enact airport hazard zoning are in compliance according to PennDOT BOA. The PennDOT, MPO/RPO and airport operators are now conducting additional municipal outreach to strengthen the compliance rate, including the WATS MPO and Airport Authority.

Commercial Air Service Description and Trends

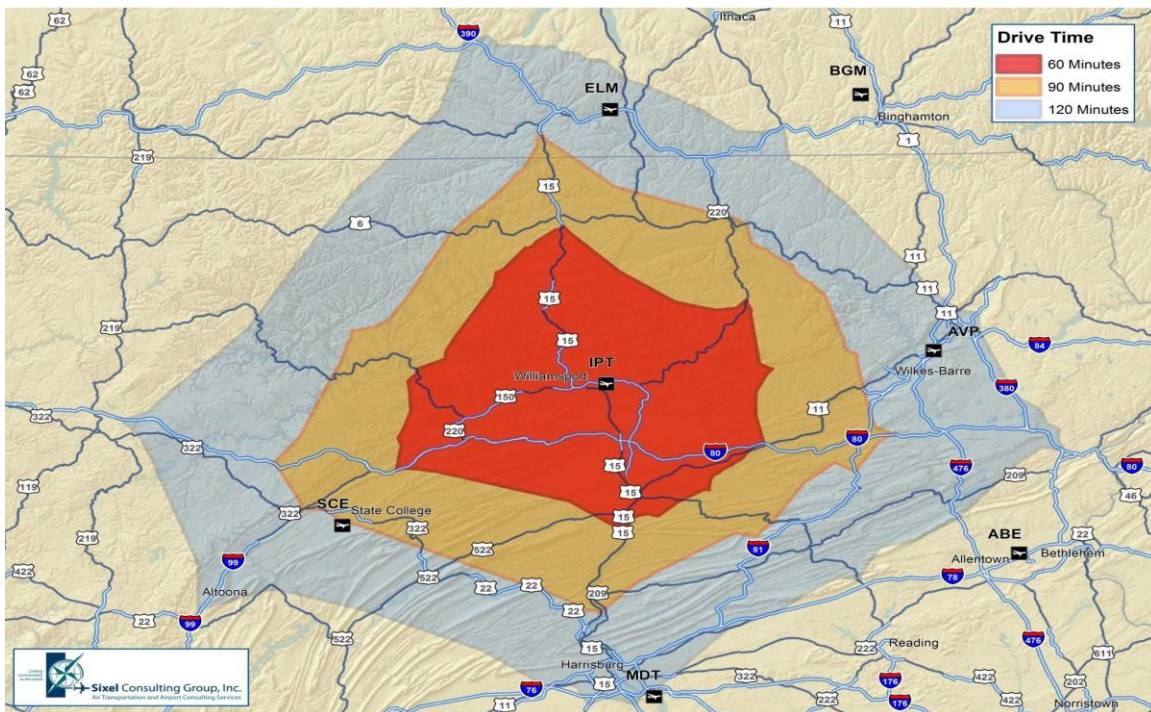
The Williamsport Regional Airport has had continuous scheduled airline service for 71 years. During that time, the nature and type of service has varied considerably. For example, in the 1970s, airline service was provided by Allegheny Airlines and Pocono Airlines with service to Pittsburgh, Philadelphia, Newark and Wilkes/Barre/Scranton providing as many as 15 arriving and 15 departing flights per day. However, since airline deregulation, numerous airline organizational restructurings, reduced aviation demand stemming from 2001 terror attacks and other factors, commercial service availability at the airport has been significantly reduced culminating in the loss of Pittsburgh service in 2004 as part of US Airways downgrading the Pittsburgh International Airport from a hub to a “focus city”. Therefore, since 2004 thru November 2017, the airport commercial service is limited to three daily round trip flights provided by US Airways Express to US Airway’s hub at the Philadelphia International Airport using DeHavill and Dash-8 aircraft configured in a 36 seat arrangement. It should be noted that the Philadelphia airport connects to over 160 additional cities worldwide. On November 29, 2017, American Airlines, through their wholly-owned regional carrier Piedmont Airlines, began regular jet service at Williamsport, utilizing 50-passenger Embreair EMB-aircraft. American will use jets exclusively on Williamsport service in the future.

The following Chart illustrates historical passenger enplanement activity at the airport during the past 20 years. Enplanements were strong until the 9/11/01 terror attacks occurred which negatively affected national air travel and caused a steep passenger decline at the airport. Enplanements have

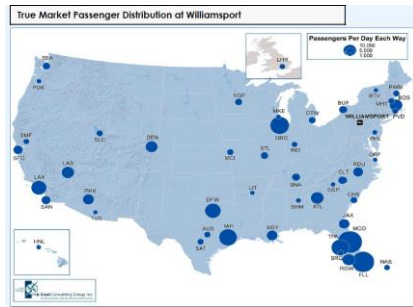
been steadily rebounding since the Marcellus gas boom activity has emerged in a substantial way since 2009.



To better understand the potential air service market opportunities, the Airport Authority and Williamsport-Lycoming Chamber of Commerce engaged Sixel Consulting Group, Inc. to conduct a True Market Study for the Airport which was completed in January, 2013. This study better defined the airport catchment area as shown below:



Using a variety of data sources such as air passenger ticket information, demographic and socio-economic data in the catchment area, Sixel was able to determine the estimated air service demand within the catchment area and determine how much of this demand was actually captured by the Airport. The study concluded that only 12.5% of 414,772 total air travelers within the catchment choose the Airport as their originating airport.



About 35% of Williamsport

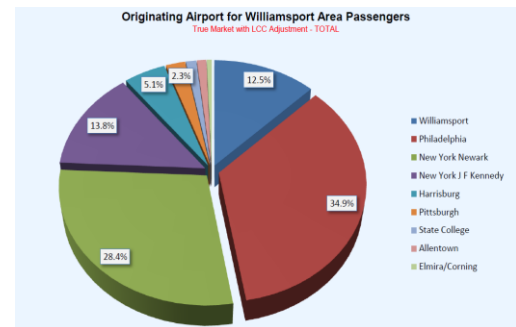
catchment area

passengers originate

their flight at the Philadelphia International Airport while most of

the remaining passengers use Newark and JFK Airports in the

New York City / NJ Areas.

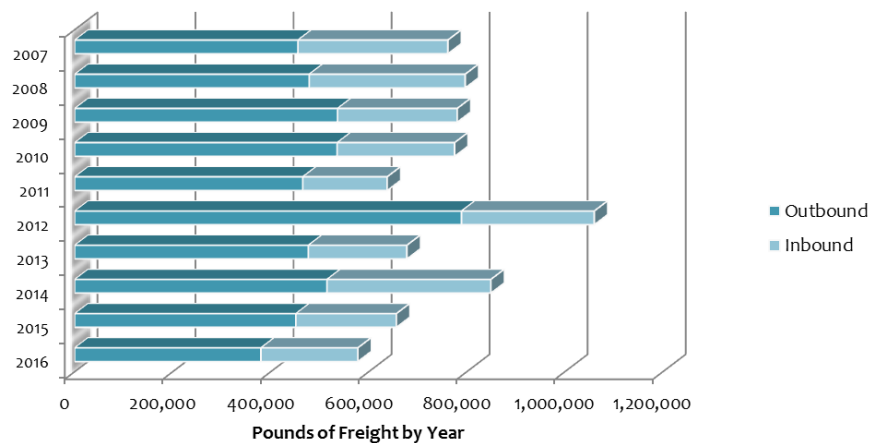


The top five passenger markets for the Williamsport Area are Orlando/Sanford FL, South Florida, Chicago Ill, Houston, Tx and

Tampa / St. Petersburg, FL. The study concluded that the Airport's air passenger market is large enough to support additional service and the Airport Authority is currently recruiting additional air carriers to capture a greater share of passenger leakage with priority emphasis on direct air service to Washington / Dulles and Charlotte. This initiative will introduce airline competition, more customer choices and reasonable fares.

Air Freight Service

There are three types of scheduled air cargo operations at the airport which use aircraft: airline passenger related baggage and cargo, integrated express carriers, (Fed Ex and UPS) and business and industry generated cargo. In 2012, a total of 789,265 lbs. of outbound air freight was generated and 270,755 lbs. of inbound air freight was received at the airport. This is a substantial increase over 2011 air freight activity where only 465,387 lbs. of outbound air freight was generated and 172,106 lbs of inbound freight was received.



Major Airport Facility Planned Improvements

The Williamsport Municipal Airport Authority has taken an aggressive approach toward modernizing airport facilities to ensure continued availability of safe convenient affordable and reliable air services for airport customers and tenants. Toward this end, the Airport Authority has adopted an

Airport Master Plan and a supplemental Long Range Plan which defines and prioritizes proposed improvements. Major planned improvements are highlighted in this section.

Terminal Building Replacement Project

To address numerous structural and operational space deficiencies associated with the aging airport terminal building outlined earlier in this chapter, the Airport Authority retained Rettew as its consultant to complete the FAA required feasibility studies, environmental assessment and design of a replacement airport terminal building that will better meet the growing needs of the airport during the coming decades. The proposed two story new terminal building will expand available space from 27,000 to nearly 35,000 gross square feet incorporating the following major features amenities based on extensive input from community leaders, airport customers and tenants. Murray Architects and Reynolds Construction provided final design and construction management services.

New Terminal Building Highlights



The new terminal building will provide numerous benefits:

- Provides space for two additional airlines
- Provides passenger screening lanes and a secure hold room sized to accommodate boarding of larger aircraft for approximately 150-200 passengers, with comfort facilities
- Provides for a modern baggage claim facility
- Provides 1500 sq ft of concession area
- Provides sufficient space to adequately accommodate all current and future office layout space needs of existing tenants and airport administration
- Incorporates energy efficient green technology building features
- Offers modern aesthetic look using glass and steel indicative of an airport terminal, thus enhancing the gateway to the community.
- Utilizes timber-frame structure showcasing area's lumbering history
- Enhances views of airfield and mountains for terminal users

- Improves vehicular and pedestrian ground access at terminal entrance with enhanced lighting and more efficient traffic flow configuration

A new two lane access road was programmed by the WATS MPO to connect the airport with Interstate 180, but the County discontinued the project due to weak needs justification and limited funding availability. The FHWA has approved use of the federal earmark for improved airport access for the Montour Street Extension Project.

The Airport Authority sited the new terminal building east of the existing building with the current terminal remaining operational until the new facility is constructed to avoid disruption to airport customers and tenants. The existing terminal building would then be demolished and additional parking supply would be provided. The Authority completed the feasibility study in early 2014 and the environmental assessment and design phase completed in Summer, 2015. (Project financing information for this \$ 16.2 million project will be included in Chapter 4.) Former Governor Corbett visited the airport in March, 2013 to review the plans for this exciting new project and to showcase Lycoming County's use of Act 13 funds for aviation purposes.



Governor Tom Corbett visits Airport Terminal

Construction of the new terminal facility began in July 2017 with a substantial completion date set for the end of August 2018. The new 30,000 square foot facility is located east of the existing Air Traffic Control Tower and has been designed with future expansion capabilities.



New Airport Terminal Construction, 2017

Airport Runway Approach Improvements

While the Williamsport Regional Airport has the facilities and capacity to provide service to nearly any type or size of aircraft, the major problem with the Airport had been the runway approach minimums. Up until 2010, there was a single published approach to the Airport – the Instrument Landing System (ILS) approach to Runway 27. Additionally, this approach was the highest minimums of any scheduled-service Airport in Pennsylvania. The minimums were 500' Height Above Terrain (HAT) and 1 1/4 mile Visibility.

In the 2006 Airport Master Plan, the primary goals for the development of the Williamsport Regional Airport were to lengthen Runway 9-27 to its maximum possible length, given the terrain and other physical constraints, to develop published approaches to all runway ends, to develop a second ILS approach to Runway 9, and to achieve a Category 1 Approach for Runway 27. Since the completion of the 2006 Master Plan, Runway 9-27 has been lengthened from 6,474' to 6,824' and, in addition to the ILS approach to Runway 27, there are RNAV GPS approaches to Runways 9/27 and 12/30.

The Airport Authority is currently completing the final phases of a project to improve the Approach Minimums for Runway 9-27. This project included removing tree obstructions located within the Runway 9 approach, and displacing the Runway 27 threshold to eliminate the Lycoming Valley Railroad as a controlling obstruction. Currently the airport is nearing completion of this aggressive project that has lowered the approach minimums to 250' and 3/4 of a mile visibility. Final phases of this project include the completion of a milling and overlay of runway 9/27 along with the installation of a new MALSR landing system.

The remaining planned airport capital improvements will be further detailed in Chapter 4.

Economic Impact of Airport

In 2011, the PennDOT Bureau of Aviation completed an Aviation Economic Impact Study. The economic impact findings for the Williamsport Regional Airport are summarized below.

Employment	701 jobs
Payroll	\$22,542,300
Economic Output	\$64,931,800

Jersey Shore Airport

There is a privately-owned, public use general aviation airport situated approximately two miles east of Jersey Shore in Nippenose Township. This airport has a 3,059 foot long by 130 foot wide unpaved sod runway with no published instrument approaches and no air traffic control tower. There are low intensity runway edge lights and runway edge markings. Air traffic activity is limited to general aviation use. Privately owned aircraft are based at the airport. The economic impacts of the airport from the 2011 Bureau of Aviation Economic Impact Study:

Employment	1 jobs
Payroll	\$54,200
Economic Output	\$224,300

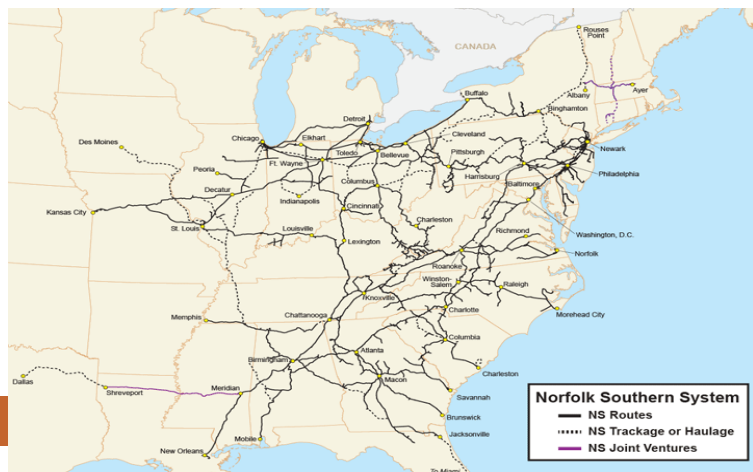
Rail Service



Lycoming County is served by two freight railroads, Norfolk Southern Railways and the Lycoming Valley Railroad. This section of the plan will further discuss both of these railroads which are a critical component of the region's multi-modal transportation system.

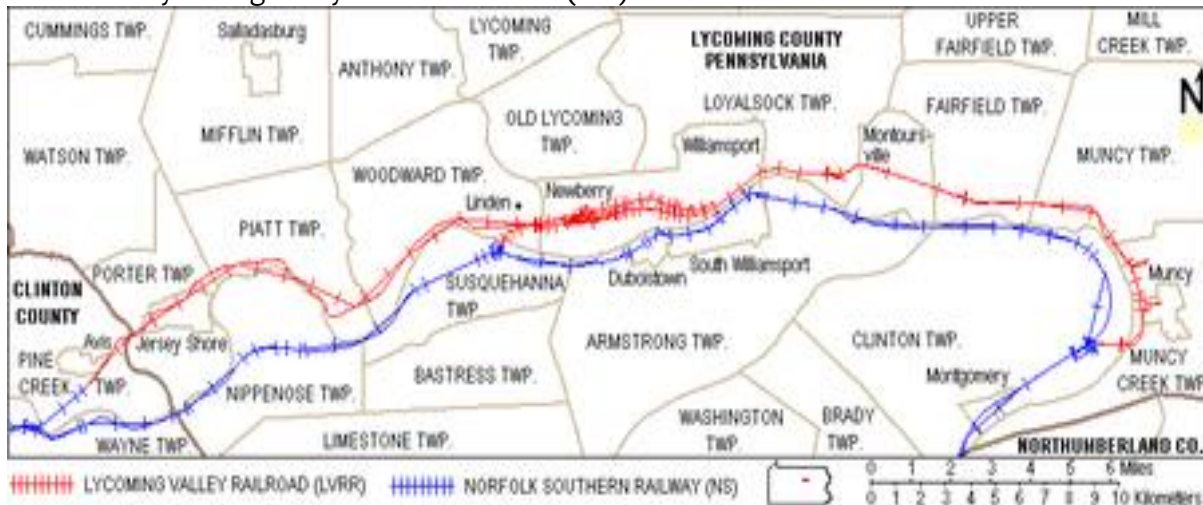
Norfolk Southern Railway

Norfolk Southern Railway is a Class I railroad in the United States, owned by the Norfolk Southern Corporation with headquarters in Norfolk, Virginia. Since 1982, this company owns and operates over 20,000 route miles in 22 eastern states, the District of Columbia and the province of Ontario, Canada. In 1999, the system grew substantially with the acquisition of over half of Conrail. The most common commodity hauled on the railroad is coal from mines in PA and other surrounding states in their service area.



There are three other Class I railroads operating in the Commonwealth, (CSX Transportation, Soo Line Railroad Company, Grand Trunk Corporation), however Norfolk Southern is clearly the largest in terms of route miles operated and ton miles of freight hauled annually. There are seven different main lines operated by Norfolk Southern in Pennsylvania. The only line traversing Lycoming County is the Harrisburg-Buffalo, New York Mainline connecting at the southern end to the Harrisburg (Rutherford) large intermodal rail yard serving Central PA. Service from this facility includes seven-day-per week trains to/from Chicago, Elizabeth (NJ), Kansas City, Los Angeles, Norfolk, San Bernardino, and St. Louis. This facility handles Trailer-On-Flat-Car, (TOFC) and Container-On-Flat-Car, (COFC). In addition, 48 and 53 foot EMP containers are handled at the facility. The Harrisburg-Buffalo mainline can accommodate double stack freight cars and 286,000 pound car loadings.

The next map depicts the 37 mile long Norfolk Southern rail system map within Lycoming County in blue and the Lycoming Valley shoreline rail line (red) to be discussed next.



Lycoming Valley Railroad

The Lycoming Valley Railroad, (LVRR) is one of numerous Class III shortline railroads serving the Commonwealth and is the only shortline railroad located in Lycoming County. This 38 mile long shoreline runs generally west between Avis (Clinton County) and Muncy, PA. The LVRR is part of the North Shore Railroad system with headquarters in Northumberland, PA.



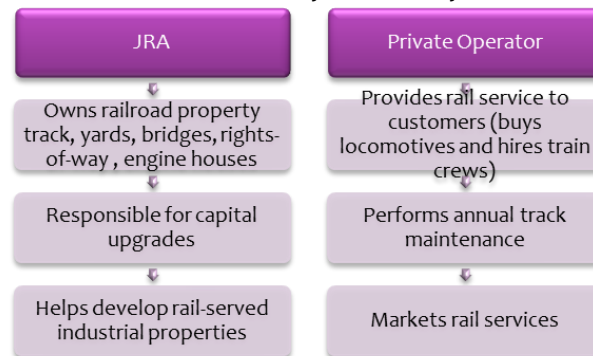
The system has trackage rights via the Norfolk Southern line allowing LVRR to connect to the west with the Nittany and Bald Eagle Railroad at Lock Haven and to the south with the Union County Industrial railroad at Milton, the North Shore Railroad at Northumberland and the Shamokin Valley Railroad at Sunbury.



The SEDA-COG Joint Rail Authority, (JRA) owns the Lycoming Valley trackage as part of an overall regional shortline rail system encompassing six rail lines with nearly 200 miles of track, land, rights-of way, engine houses and various bridges and other railroad related structures traversing through a nine county area consisting of Lycoming, Union, Northumberland, Montour,

Mifflin, Columbia, Clinton, Centre and Blair Counties. The entire JRA system provides rail freight service to approximately 85 shippers supporting over 10,000 good paying industrial jobs. The Lycoming Valley Railroad alone boasts 24 customers and in 2016 handled 9,067 carloads.

The JRA was created in 1983, under the PA Municipal Authorities Act of 1945 with each member County Board of Commissioners appointing two representatives to serve on the 16 member JRA Board. It should be noted that most of the rail-served companies are dependent on quality rail service offered by JRA and if such service were unavailable it is likely that many firms would close their doors or relocate to other areas having a substantial negative impact on the regional economy. In fact, the JRA and North Shore Railroad contract owner / operator arrangement has become widely recognized as a model for successful public-private rail partnerships on both the state-wide and national levels. The current operating agreement expired on June 30, 2017



and a time extension was granted by the JRA. Under this agreement, the JRA provides the North Shore Railroad with the exclusive right to use the railroad facilities owned by JRA in exchange for an operating fee based on 10% of gross freight revenue, 15% of Norfolk Southern track usage rights and 25% of car storage paid to JRA by North Shore Railroad. The operator is responsible for all equipment and facilities necessary to provide safe and adequate rail service. [The JRA issued a Request for Proposals (RFP) in May 2014, five railroads responded. Two proposers, Carload Express and Susquehanna Union Railroad Corporation (North Shore Railroad group), remain. The process is contested and as of October 2017, the matter is before the Pennsylvania Supreme Court.]

In 2012, the JRA completed a Five Year Strategic Plan which provides an excellent asset management tool and working strategy for future delivery of rail freight services to address the growing rail service needs of companies within their large geographic service area. The summary of the JRA strategic plan is illustrated below.

SEDA-COG JRA Strategic Plan Summary

Vision: To provide Central Pennsylvania with a world-class railroad enterprise that affords its customers and partners with the most reliable, efficient, and safest short line system.

Mission: To preserve and foster rail service in Central Pennsylvania and to further economic development through the retention, improvement, and expansion of the infrastructure and the rail service it supports.

Core Values: <ul style="list-style-type: none"> • Excellence • Stewardship • Safety • Integrity • Leadership 	Core Functions: <ul style="list-style-type: none"> • Rail System Preservation and Improvement • Economic Development • Collaboration 	Guiding Principles: <ul style="list-style-type: none"> • Plan and implement regional rail system projects with member county needs, private shipper needs, Rail Service Operator and other stakeholder interests in balance • Conduct open public JRA Board meetings with a public forum agenda item at every meeting • Adhere to state Right-to-Know Laws • Exercise ethical procurement standards and procedures that go beyond that required by the Commonwealth • Commit to a professional Code of Conduct and Ethics Policy for Board Members, Staff and Operator • Maintain a culture of cooperative problem-solving and partnership with our local governments, utilities, shippers, economic development agencies and property owners
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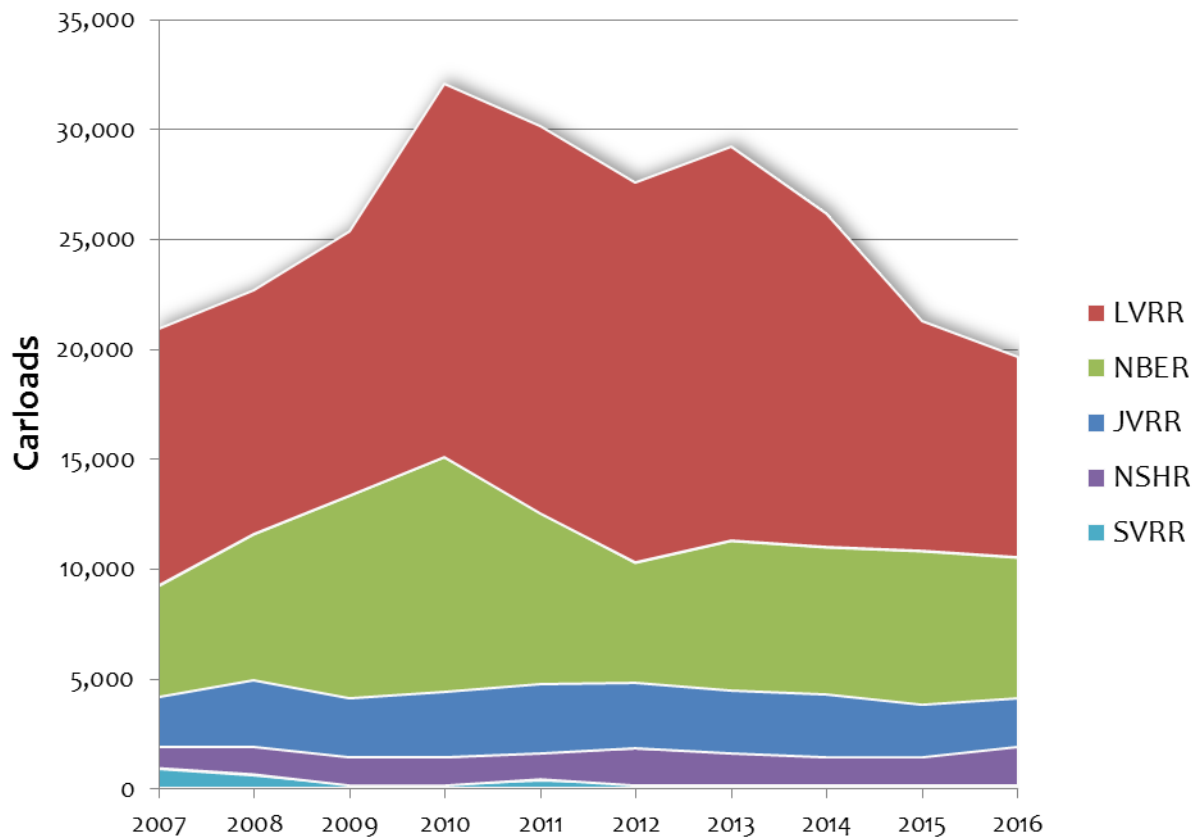
Railcar Traffic Trends

Since 2007, the SEDA-COG shortline rail system had an overall 4% decrease in carload traffic with the Lycoming Valley Railroad experiencing the largest numerical carload decrease at 2,648 carloads. As of 2016, LVRR handled 9,067 carloads accounting for 46% of total traffic among the five shortline railroads. Much of these increases are due to Marcellus shale gas drilling activity associated with shipments of bituminous stone, sand, pipe and other commodities. The chart below shows carload trends among the five railroads from 2006-2011. Clearly, the LVRR is the backbone of the regional shortline system. Rail traffic related to Marcellus shale gas declined precipitously starting in early 2015. By 2016, Marcellus traffic had fallen to less than 5% of its peak in 2013. In 2017, the LVRR has begun to see a solid recovery of non-Marcellus traffic. In 2018, the gas business may come back in limited amounts but no one in the industry expects to see the traffic levels of 2013, or anywhere close.

SEDA-COG JRA System-wide Carload Trends 2007-2016

Operator	Year										Change	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	#	%
LVRR	11,715	11,048	12,042	16,986	17,569	17,307	17,938	15,176	10,470	9,067	-2,648	-15%
NBER	5,019	6,609	9,130	10,614	7,751	5,432	6,758	6,684	6,962	6,378	1,359	18%
JVRR	2,282	3,022	2,606	3,018	3,104	2,978	2,879	2,782	2,226	2,217	-65	-2%
NSHR	1,030	1,334	1,354	1,226	1,301	1,647	1,485	1,419	1,480	1,764	734	56%
SVRR	885	617	203	206	370	216	150	120	132	175	-710	-192%
TOTALS	20,931	22,630	25,335	32,050	30,095	27,580	29,210	26,181	21,270	19,601	-1,330	-4%

Source: SEDA-GOG JRA



As of 2017, there were 24 rail freight customers in Lycoming County utilizing LVRR services supporting 1,600 well-paying industrial jobs which is the largest number among the nine counties served by the JRA rail system.

JRA Rail System Economic Development Activity By County

County	JRA Mileage Owned/Leased	No. of Rail Freight Customers	Estimated No. of Customer Jobs	Rail Traffic			
				2008	2009	2010	2011
Blair	9.5	4	410	235	325	440	461
Centre	55	7	650	4,918	7,231	8,542	5,662
Clinton	13	12	1,010	3,230	3,275	4,168	4,816
Columbia	20	10	1,455	1,298	1,346	1,226	1,301
Lycoming	35	31	1,600	9,274	10,340	14,450	14,381
Mifflin	13	10	1,147	3,022	2,606	3,018	3,104
Montour	8.5	0	0	0	0	0	0
Northumberland	36	5	275	653	212	206	370
Union	4	0	0	0	0	0	0
Totals	194	79	6,547	22,630	25,335	32,050	30,095

Source: SEDA-COG JRA Strategic Plan

construction to Reach Road Terminal and Palmer Industrial Track and the afore-mentioned Loyalsock Creek railroad bridge replacement. Total JRA capital investments exceed \$43 million, (including TIGER 2) since 2004.

Rail/Highway Grade Crossings

The PA Public Utility Commission, (PUC) is the regulatory body to approve any proposed alterations to railroad/highway grade crossings. The JRA and their operator have collectively upgraded over 53 rail-highway grade crossings system-wide since 1995. The JRA has also participated in Operation Lifesaver, which is a nationwide, nonprofit public information program dedicated to eliminating collisions, injuries and fatalities at rail/highway grade crossings and on railroad rights-of-way. In fact the JRA was selected as one of only three nationwide demonstrations for the FRA's Pilot Emergency Notification System, (ENS) Rail-Highway Grade Crossings. Since 1997, there have been 6 reportable crashes involving a train in Lycoming County, 2 of which were fatal.

Rail Passenger Excursions

Although there are no scheduled commuter rail passenger services available in Lycoming County, the SEDA-COG JRA does successfully offer special rail excursions to the general public in cooperation with sponsoring area tourist promotion agencies, such as the Williamsport- Lycoming County Visitors Bureau. The JRA establishes a set of operational guidelines governing the sponsor's advertising materials, print content on tickets and control of ticket sales in relation to seating capacity in cooperation with the sponsor and the rail operator. In 2017, there were 14 passenger excursion trips made in Lycoming County which represented 25% of all JRA excursions system-wide and the most offered within any county in the JRA service area. These excursions have proven very popular and have good public attendance.



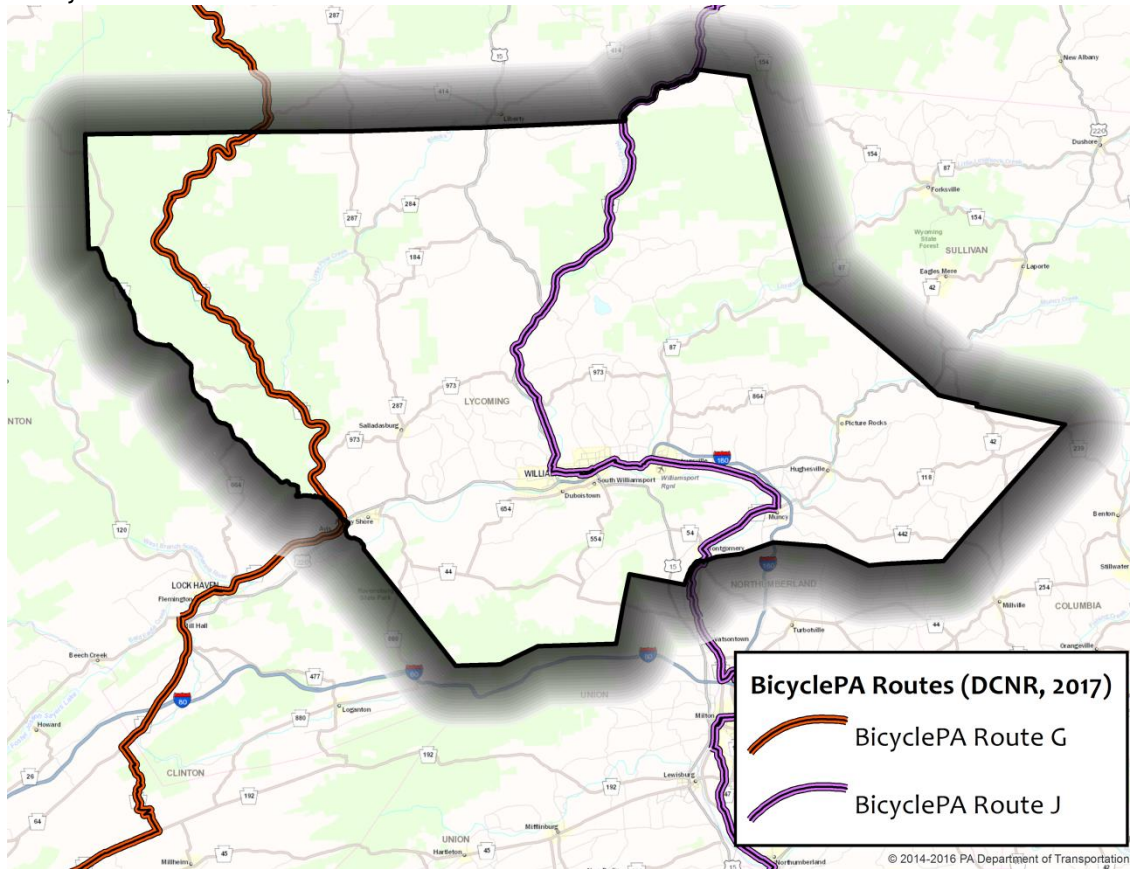
Active Transportation

Lycoming County has an outstanding system of multiuse urban and rural trails that are both regionally connected and provide access to key local recreational resources. There are plans underway to further expand upon this network, focused especially on completing "gaps" in the network. In addition, pedestrian facility enhancements have also been accomplished within many downtown areas throughout the county to improve safety and accessibility with more initiatives in the planning stages. This section of the plan describes existing major bicycle and pedestrian facilities and details efforts to expand the network in an effort to promote public safety, accessibility, healthy lifestyles, tourism and overall quality of life.

Bicycle PA Routes

PennDOT in consultation with a statewide Bicycle/Pedestrian Advisory Committee has placed signage on nine Bicycle PA Routes throughout the Commonwealth. These routes were identified by experienced bicyclists to provide the public with information who wish to traverse the state with a guide to some of the Commonwealth's highways and rail trails. Despite this effort, very few of these

routes were provided with bike lanes or other facilities designed for bicyclists and therefore have little utility for most users.

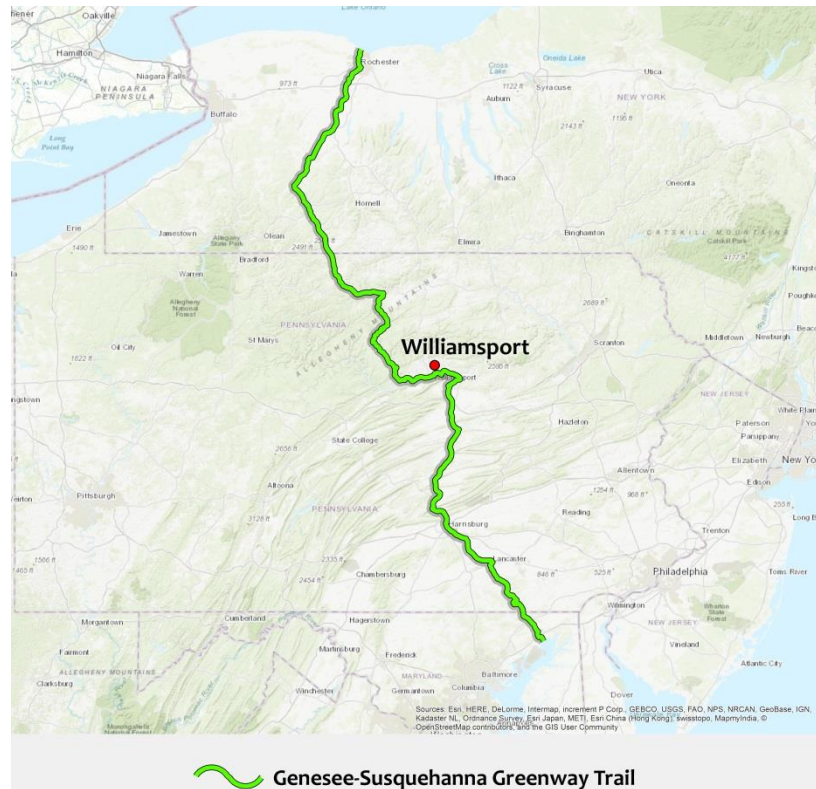


Multiuse Trails

The primary function of multiuse trails is to provide for safe, comfortable, and convenient non-motorized mobility between communities. Urban multiuse trails are usually paved and rural multiuse trails are usually compacted fine gravel. All multiuse trails also accommodate recreational uses along with transportation use which makes them a vital resource for communities. Lycoming County has several extensive multiuse trails already in place as well as plans to connect, extend, and improve access to these trails.

Regional multiuse trail strategy

Lycoming County is working closely with the Genesee River Wilds organization, the Susquehanna Greenway Partnership, the Middle Susquehanna Bicycle and Pedestrian Advisory Committee, SEDA-COG, and other organizations to advance a major trail system linking Rochester NY with the Chesapeake Bay in Maryland with Williamsport being roughly the midpoint. The Susquehanna-Genesee Greenway Trail System will eventually connect to the Pine Creek Rail Trail and the Susquehanna River Walk. Major multiuse trail projects in Lycoming County are primarily evaluated by how they provide linkages or access to this overall envisioned trail system.



Existing Multiuse Trails

Pine Creek Rail Trail



This is the longest and most significant regional trail found in Lycoming County and the entire 12 county [PA Wilds Region](#). The 62 mile long rail trail traverses Lycoming and Union Counties between Jersey Shore and Wellsboro, Jct. offering outstanding scenic views of the Pine Creek Valley. USA Today proclaimed this trail as one of the 10 best trails in the world. The trail surface is 12 foot wide with a compacted limestone fines surface and is relatively flat grade not exceeding a 2% slope as this corridor was once part of the former Corning Secondary Rail Line owned and operated by Conrail until it was railbanked in 1990. PA DCNR now holds the lease for the entire trail property and maintains the trail. There are only non-motorized trail uses with no nighttime use or lighting. There are 12 public parking lots and 9 comfort stations along the trail. Given the significance of the trail, the PA General Assembly created a Pine Creek Rail Trail Advisory Committee involving state, county and local officials to oversee the 15 year project development process and to further develop and ensure proper trail maintenance and operations. The last section of the trail was opened for public use in 2006. The trail system with parking cost \$9 million to construct using PA Growing Greener, PA Oil and Gas Key 93 and Transportation Enhancement funds. Annual trail maintenance costs are approximately \$500,000 per year. A trail location map is provided below.



In 2012, the Borough of Jersey Shore completed construction of a 1.5 mile extension of the Pine Creek Rail Trail which connected the main Pine Creek Trail southern trail head along Railroad Street with the Jersey Shore Town Center and residential areas to provide a safer connection. This paved rail with trail parallels the Lycoming Valley Railroad with protected fencing and ties into Seminary Street in the Borough. PennDOT, PA DCNR and First Communities Foundation of PA provided funding for this approximately \$800,000 project which won a 10,000 Friends of PA Transportation Excellence Award. Jersey Shore Borough is designated by the Susquehanna Greenway Partnership as a “River Town” and the trail improvement is a key component.



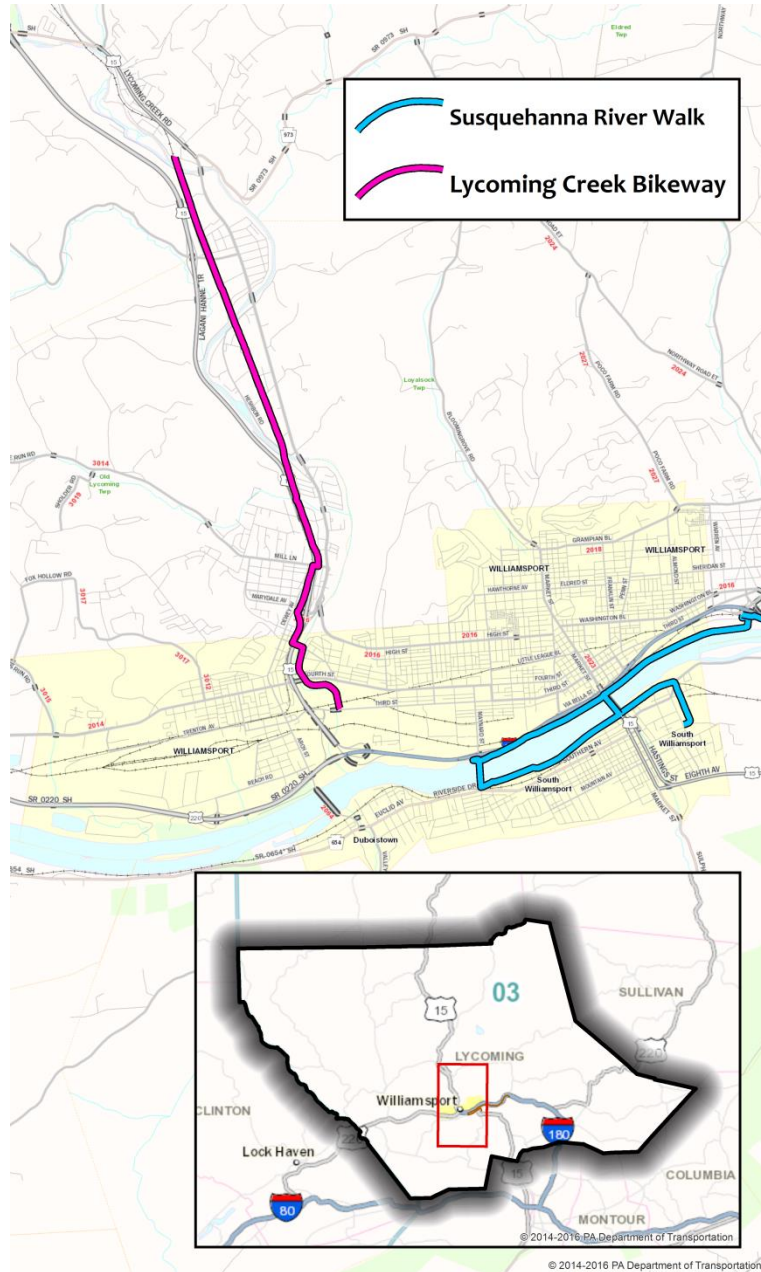
Pine Creek Trail Connector



Trail Dedication Ceremony

Lycoming Creek Bikeway

Another significant trail facility is the Lycoming Creek Bikeway constructed in 1991. This 5 mile long paved bikeway is owned and maintained by five different municipalities that the trail system traverses between Williamsport and Hepburnville. These municipalities are Hepburn Township, Lycoming Township, Loyalsock Township, Old Lycoming Township and the City of Williamsport. The bikeway connects to numerous public recreation facilities and attractions such as the Old Lycoming Township Recreation Park, Heshbon Park and historic Bowman Field Minor League Baseball Park. Portions of the bikeway are shared road facilities with the remaining sections built as separate use trail.



Susquehanna River Walk

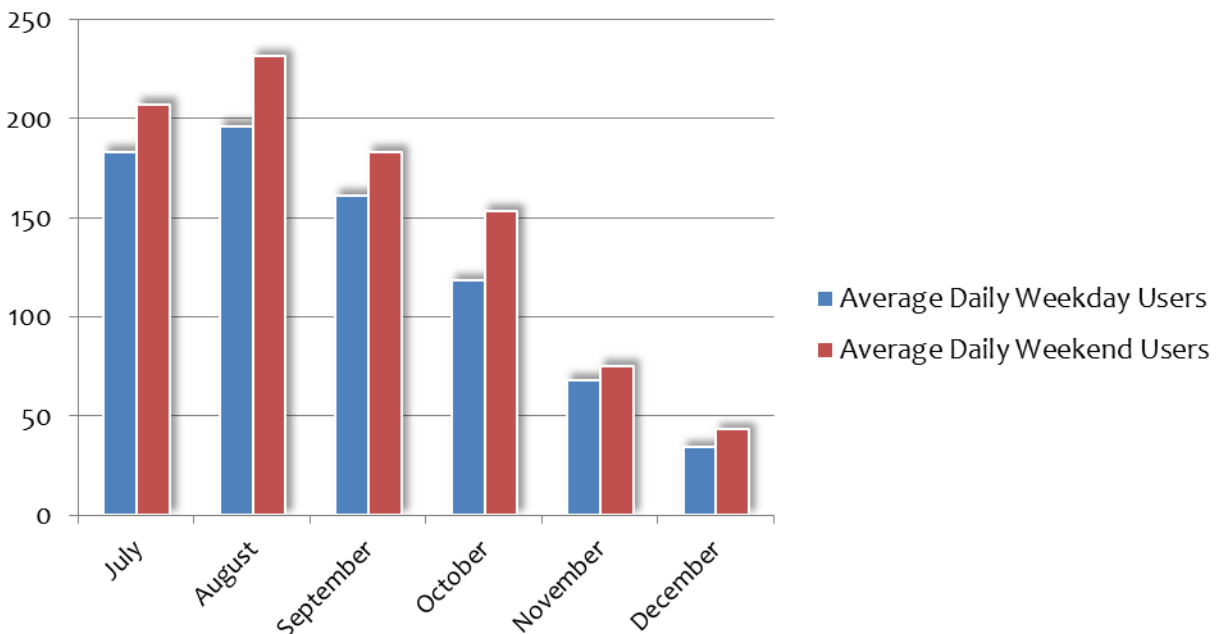
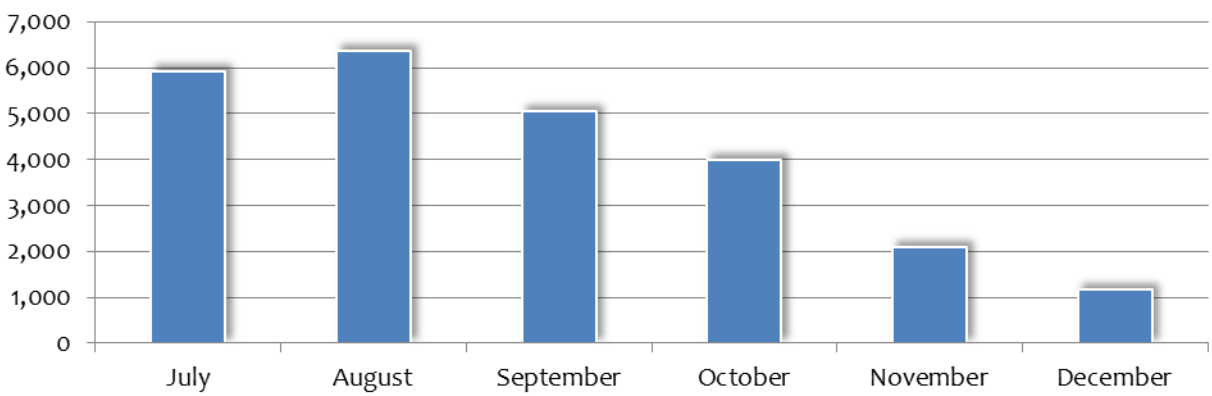
The Susquehanna River Walk is a 6 mile paved bikeway and walkway situated on top of the Williamsport Area Levee System located in the City of Williamsport, Borough of South Williamsport and Loyalsock Township. This project was a key component of the Downtown Williamsport Revitalization Vision developed by the Lead Partners involving Lycoming County, City of Williamsport, Williamsport-Lycoming Chamber of Commerce, Our Towns 2010 and other organizations with initial planning begun in 2000 in conjunction with PennDOT's Market Street Bridge Replacement Project. Public outreach surveys at the time demonstrated strong support for the project as 97% of respondents wanted a reconnection between the downtown and the river. The County

constructed 4.5 miles of the Riverwalk that opened for public use in 2010 while South Williamsport Borough completed the remaining 1.5 miles between the South Williamsport Recreation Complex and Market Street Bridge in 2011 which is under Borough ownership and maintenance responsibility. The \$3 million project was financed using Federal transportation earmark appropriations, Transportation Enhancement Funds and PA DCNR funding with a small County match. The county has entered into a Maintenance Agreement with the City and South Williamsport Borough to provide

basic River Walk maintenance on the County-owned portion. The Riverwalk is also a venue for public art displays and educational kiosks depicting the region's heritage associated with lumbering has been financed and installed through the Lumber Heritage Region. Currently, the Riverwalk receives heavy public use in non-winter months as winter maintenance is not provided. The River Walk connects to the Loyalsock and Montoursville Bikeways providing a continuous trail link between Maynard Street Bridge in the city and PA Rt. 87 park-n-ride near Walmart in Montoursville.

In 2017, the Rails to Trails Conservancy placed a counter on the River Walk and has shared counter statistics with the Lycoming County Planning Department. The second half of 2017 saw 24,500 total counted users on the River Walk with peak daily average use in August of 205 counted users per day.

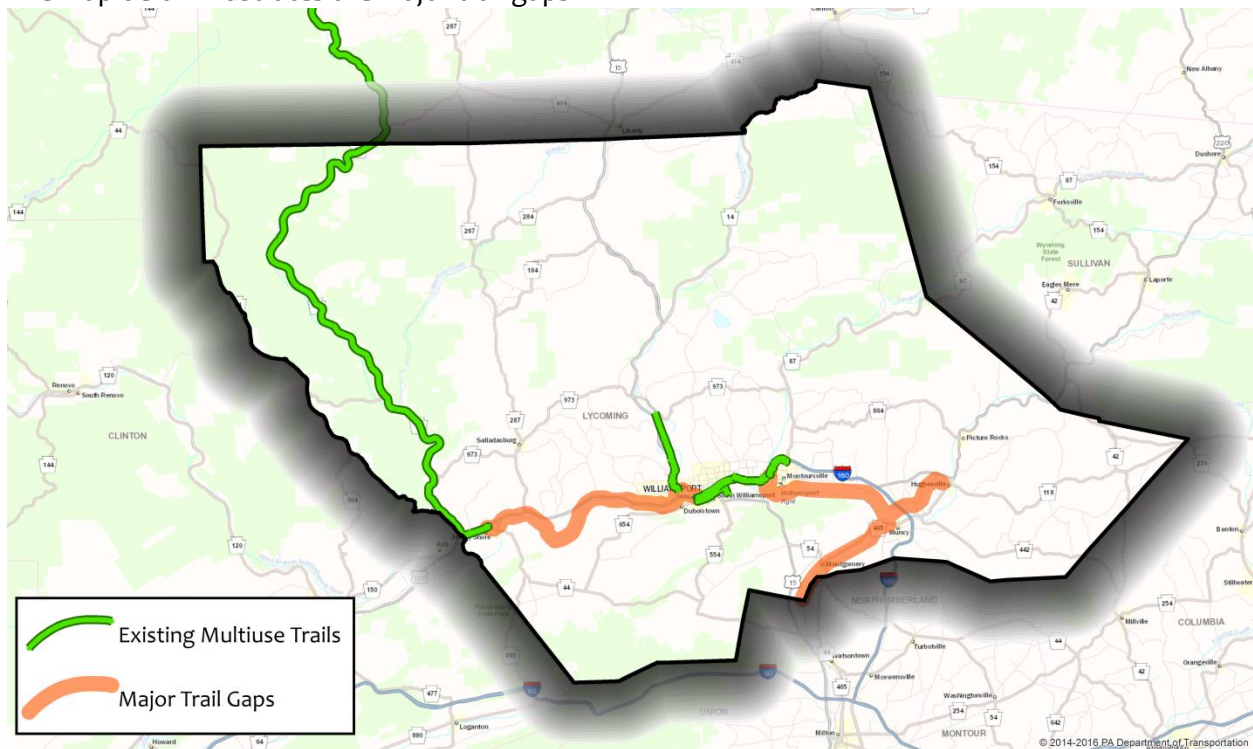
Total Monthly River Walk Users



Multiuse Trail Gaps

The existing major multiuse trails in Lycoming County are missing major linkages to allow full non-motorized travel through the urban core of the county. In 2009, the Lycoming County Planning Commission used consultant Larson Design Group to undertake a feasibility study of providing trail connections between Jersey Shore and Williamsport to connect the Pine Creek Trail with the River Walk as part of the overall Genesee-Susquehanna Greenway Trail System and to further connect the River Walk to communities east of Williamsport including Muncy and Montgomery as part of the Susquehanna Greenway Partnerships vision to extend the trail system throughout the remainder of the Susquehanna River Corridor to the Chesapeake Bay in Maryland. The feasibility study showed that the trail was then only feasible to construct as a combination shared road and separate use trail system. Considering different potential alignments and multiple potential phases, phases given the \$23 million estimated cost to complete the remaining trail sections in Lycoming County.

The map below illustrates the major trail gaps



The Pennsylvania Department of Conservation and Natural Resources recognized the trail gap between the Lycoming Creek Bikeway and the Susquehanna River Walk in the city of Williamsport as one of the [top 10 trail gaps](#) as outlined in the [2014-2019 Statewide Comprehensive Outdoor Recreation Plan](#). In 2016, the Lycoming County Department of Planning and Community Development applied for and received a DCNR grant for design and engineering of a Susquehanna River Walk extension that will be a 2.4-mile, 10-ft wide, paved multi-purpose trail between the existing 4.5-mile River Walk at Maynard Street and the 20-acre riverfront Susquehanna State Park. The River Walk extension will also link directly to the Lycoming Creek Bikeway and provide for multiple new access points to the existing River Walk.

Multiuse Trail Access Improvements

Miller's Run

There is a multiphase project underway to establish a greenway and trail along Millers Run in Loyalsock Township to connect the Susquehanna River Walk with the township's schools and recreation center. The Millers Run Greenway will be a multi-use trail that connects the Susquehanna River Walk to multiple recreation assets in Loyalsock Township, including Bruce Henry Park, the Loyalsock Community Center, James Short Park, and the township's community swimming pool. The trail would be multi-functional and utilized for both transportation and recreational purposes. This trail would serve multiple users, including pedestrians, joggers, bicyclists, and others. Connectivity with residential developments, schools, recreation areas, and business districts also represent important functionalities of this trail.

Funding has been secured for two sections of Phase 1 through PennDOT's TAP Grant. This includes the connection from the Loyalsock Community Center to James Short Park/Pool Complex and the connection from Bruce Henry Park to Northway Road. Funding for Phase 2 was applied for in 2017.

Basin Street Access

Currently, there are limited access points to the Susquehanna River Walk from the downtown of the city of Williamsport. The existing access points involve navigating either the busy US-15/I-180/Market St or Maynard St/I-180 interchanges or exiting I-180 East at the Hepburn St. exit. Therefore, a two phased project is being developed to add a new access ramp at the southern terminus of Basin Street with Phase 1 being funded by a \$180,000 PA DCED Greenway and Trails Program Grant.

Newberry River Walk Connection

When the extension to the Susquehanna River Walk system is completed, there will be an opportunity to build a spur from the main River Walk trail into the Williamsport neighborhood of Newberry. An existing rail right-of-way exists that would make this extension feasible. This spur trail would provide a direct access



point to the River Walk system from a major commercial and residential area of the city.

South Reach Road River Walk Connection

The Susquehanna River Walk extension project is currently planned on extending to the eastern boundary of Susquehanna State Park. A further extension of the trail through the park and then to South Reach Road would provide another necessary link in the future connection of Williamsport west to the Pine Creek Rail Trail in Jersey Shore while also opening up a new access point to and from the River Walk system from the major employment center of the Reach Road industrial area.

Downtown Streetscape Improvements

While multiuse trails primarily provide non-motorized mobility between communities, downtown areas can implement various streetscape improvements to facilitate non-motorized travelers within the community. These improvements are typically grouped together under the umbrella of “Complete Streets.” According to the National Complete Streets Coalition, the definition of a complete street is a street designed and operated to enable safe access for all users.” This means that all modes of transportation should be accommodated in a way that is safe and convenient for all modes. Both PennDOT and FHWA have produced guidance documents for implementation of complete streets within communities.

Montoursville Streetscape

A several block area of downtown Montoursville along Broad Street also received major streetscape improvements involving new sidewalks, curbing, street trees, lighting, and pedestrian crossing enhancements including “Yield to Pedestrians” signage.



Hughesville Streetscape

A several block area of downtown Hughesville along PA 405 (Main Street) was the focus of a streetscape project involving new sidewalk installation, curbing, street trees and lighting.

City of Williamsport

As part of a comprehensive streetscape improvement program tied to the downtown revitalization vision, the City of Williamsport completed a multi-block area in the core of the Central Business

District including new sidewalks, curbing, decorative historic period lighting, street trees and brick cross-walks. Streetscape improvements were recently completed connecting the new Church Street Transportation Center area with the William Street Development Area with landscaping, brick pavers, lighting, hardscaping, sidewalk improvements and other site amenities. Also incorporated were informational kiosks and related signage. Further streetscape improvements have tied into the completion of the RVT Trade and Transit II development linking into the public square.



Pathway to Health

In support of the \$250 million expansion of the Susquehanna Health Regional Medical Center, two phases of a four phase streetscape and traffic improvement project have been completed along Walnut Street to accommodate the new gateway to the hospital. Streetscape again included new sidewalks, street trees, curbing, lighting and crosswalks with traffic signal upgrades to enhance vehicular and pedestrian flows and reduce emergency response times between the hospital and Interstate 180. Additional streetscape improvement are planned along Campbell, Third and Maynard Streets which will eventually connect to the Susquehanna Riverwalk and Penn College of Technology Campus existing streetscape improvements along Maynard Street. The Pathway to Health project also recently won a 10,000 Friends of PA Transportation Excellence Award. Phase 3 is under construction and Phase 4 is in design.

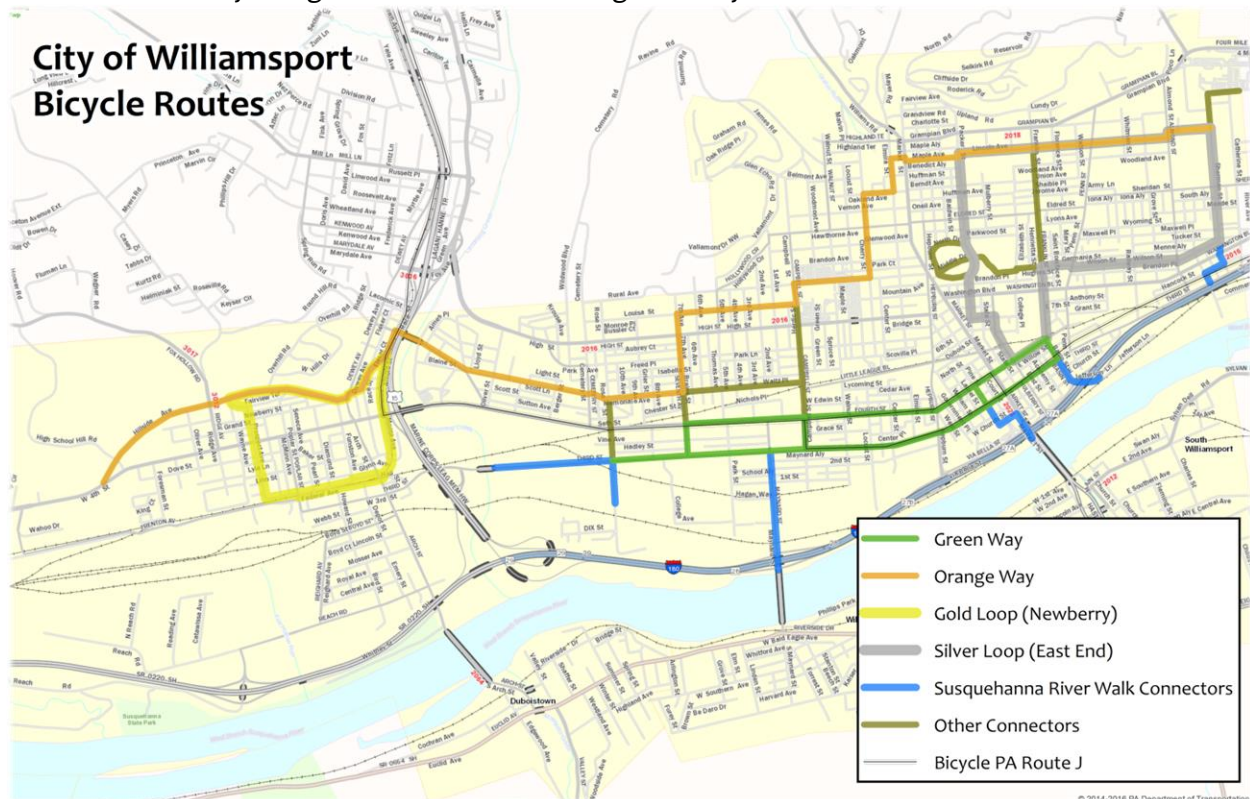


Basin/Willow Street

Lycoming College and the city of Williamsport are currently undertaking a major streetscape improvement of Basin Street. Basin Street is directly accessible from I-180 and would serve as the new gateway corridor to the college. These streetscape improvements would also link to the planned Basin St. River Walk access ramp and to an additional conversion of Willow Street to a multiuse “green alley” with new lighting, signage, and permeable paving. This project will provide important walkable connections between Lycoming College, the Williamsport Central Business District, and the Susquehanna River Walk while also improving motor vehicle access to the eastern end of the central business district and the college from I-180.

Bicycle Pedestrian Advisory Committee

In 2015, the City of Williamsport formed a Bicycle/Pedestrian Advisory Committee to explore how the city could apply for “Bicycle Friendly Community” status from the League of American Bicyclists. This effort resulted in the creation and adoption by city council of an official map of routes recommended for priority in any future efforts to expand bicycle infrastructure in the city. At the same time, council adopted a suite of ordinance amendments recommended by the committee to make city planning, zoning, and streets ordinances align with Complete Streets principals. For example, “streets” are now defined in city ordinances as needing to be “designed, built, and operated to enable safe access for all users, in that pedestrians, bicyclists, and public transportation users of all ages and abilities are able to move safely along and across the street right of way.”



Hughesville/Muncy Walkable Communities Plans

In 2010, the Lycoming County Planning Commission participated in the development of a SEDA-COG [Walkable Communities Plan](#) for the communities of Hughesville and Muncy Boroughs. A Master Plan concept with recommended bicycle and pedestrian enhancements was formulated with extensive community involvement.

Jersey Shore Walkability Study and Active Transportation Plan

In 2017, the Borough of Jersey Shore successfully applied for grants to conduct a series of walkability audits and draft a Borough Active Transportation Plan. WATS MPO staff have been included in the committee planning process of the project. The intent is to identify corridors within the borough in need of complete streets improvements, to increase the safety of non-motorized travelers, and to enhance access to the Pine Creek Rail Trail which enters the borough.

Other Modes

Amish

Lycoming County has a sizeable Amish population centered in the municipalities of Limestone Township, Washington Township and Brady Township. During the multimunicipal comprehensive planning efforts in this part of the county through 2015 and 2016, a consensus was reached that an improved forum is needed for reaching out to the Amish community on various topics. The primary concern identified during this discussion was road safety issues that arise between motorized vehicles and Amish buggies along with the need to better communicate with the Amish community to identify and implement safety improvements. A recent vehicle collision with a horse drawn buggy in Washington Township has illuminated this concern. Additional safety issues were also discussed, including pedestrian and bicycle safety concerns and the need for road widening and pedestrian and bicycle lanes – where realistic solutions exist. Of particular concern are circumstances in which school-aged Amish children travel to school along local roadways, which lack the enhanced pedestrian facilities of a traditional urban setting. Opportunities for road design measures to address some of these concerns were discussed such as wider road shoulders that may make corridors with high traffic volumes safer for all users.

To address these concerns, there will be efforts locally to establish an improved communication framework between local government and the Amish community. This process will include outreach to current leaders within the Amish community to discuss appropriate protocols such as permissible or desirable options, locations, and frequency of communication. This project will also include building a deeper understanding of the Amish community, including organizational structure, values and traditions, concerns of the community, and opportunities for improvement. Initial outreach will be made to the church leaders of the Amish community to begin establishing improved communication methods. This process will lead to the creation of a series of communication methods that are acceptable by both the Amish community and the local governments. Once established, this communication process will be used to improve local decision making, respect cultural differences, and identify transportation safety improvements among other community projects.

School Districts

School districts maintain and operate one of the largest transportation systems in Lycoming County, yet there has been little coordinated effort to include school districts in the transportation planning process other than through the Safe Routes to School Program. Therefore, little is known at the MPO level of what the general needs of school districts might be regarding the transportation system. From Pennsylvania Department of Education data on school district finances, it is apparent that the 11 school districts located wholly or partially within Lycoming County have spent an average of \$10.8 million each year for the past 10 years on student transportation services. For reference, this is roughly double RVT's total annual operating budget. There has been a 25% increase in student transportation costs for Lycoming County school districts from 2006 to 2016. In Lycoming County, school districts have been invited to participate in comprehensive planning efforts and carrying forward also in PennDOT Connects meetings.