



BICYCLE AND PEDESTRIAN SAFETY REPORT

March 18, 2019

Abstract

This report summarizes crash data for the 2007-2016 period and suggests possible actions to improve safety for bicyclists and pedestrians using the region's state and local road network.

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Bicycle and Pedestrian Safety

Bicycle and pedestrian safety lies at the interaction of human behavior with physical and environmental conditions. When these factors unintentionally result in harm to people or property, we often say there has been an incident, and particularly when the incident occurs while traveling in vehicular traffic, we call it a crash.

Safety through Law Enforcement

Safety in terms of incident and crash prevention begins with enforcement. [Pennsylvania's Motor Vehicle Code](#) addresses the rights and responsibilities of motorists—and bicyclists and pedestrians. It considers bicycles as vehicles and conveys the rights and responsibilities applicable to a motorist to a bicyclist with some exceptions. Understanding the law is fundamental to the safety of all travelers.

PennDOT draws attention to laws pertaining to [bicyclist safety](#) and [pedestrian safety](#) on its website under Travel in PA and provides tips for each traveler type as well as motorists.

What We Know about Law Enforcement in the Region

The 2018 municipal survey for the bicycle and pedestrian plan found:

Enforcement of the 4-foot bicycle passing law is uneven across the region. Greater enforcement was reported in communities where local police services are present and lesser to unknown enforcement in rural municipalities, generally served by state police.

What We Can Do

Raise awareness for the four-foot bicycle passing law among the traveling public. For example, employ VMS equipment to display an advisory message for short durations, e.g. in spring as more people begin to ride.

Encourage enforcement of the 4-foot bicycle passing law by state and local police. Making this practical might entail short-term period of targeted enforcement, e.g. during National Bike to Work week in May.

Request data from police departments on the number of citations for violating the 4-foot bicycle passing law. This demonstrates community-level interest in attention to enforcement of bicycle-related traffic laws.

Crash Data and Analysis

Frequent incidents and crashes discourage people from walking and biking in their communities. In order to prevent or reduce harm and encourage walking and biking, we can examine the contributing factors of past events, determine which behavioral and conditional factors might have led to a different outcome, and work to adjust those factors accordingly.

In Pennsylvania, there is limited data available about bicycle and pedestrian safety. Crash data is collected and reported to PennDOT for crashes that result in personal injury or vehicular damage that requires towing, as well as crashes that involve snowmobiles and school buses. However, less severe crashes and other incidents are not reported to PennDOT or to state or local police authority.

Data that is reported to PennDOT is compiled and made available in the [Pennsylvania Crash Information Tool](#). This tool provides multiple data points about each crash, allowing for analysis of the factors that contribute to crashes. However, notable gaps in bicycle and pedestrian safety data remain, specifically:

- Data on the number of bicyclists and pedestrians (users) by any geographic measure
- Data on incidents and crashes on locally-owned streets and roadways
- Data for incidents that occur off-road (on trails)
- Data for the often more frequent near-miss incidents where no harm occurs

Snapshot of Nationals and State Safety Performance

National

Bicyclist and pedestrian fatalities accounted for about 17 percent of national crash fatalities in 2017.

There has been a 27% increase in the number of pedestrian fatalities in the nation since 2006, and a 6% increase in estimated bicycle fatalities over the same period.

About 75% of national pedestrian fatalities occurred after dark and over 70% occurred in travel lanes away from intersections.

Pennsylvania

Bicyclist and pedestrian crashes accounted for four percent of all crashes and 13 percent of fatalities statewide in 2017. Although these safety metrics are low, they still represent 171 fatalities in 2017 alone.

Bicycle-related crashes averaged 1,383 annually over the past 10 years (2007-2016) and accounted for 1.1% of the total crashes statewide. Bicyclist fatalities in these crashes averaged 16 per year and accounted for 1.2% of all traffic fatalities.

Pedestrian-related crashes averaged 4,337 annually over the past 10 years (2007-2016) and accounted for 3.5 percent of total crashes. Pedestrian fatalities averaged 154 per year and accounted for 11.9% of all traffic crash fatalities.

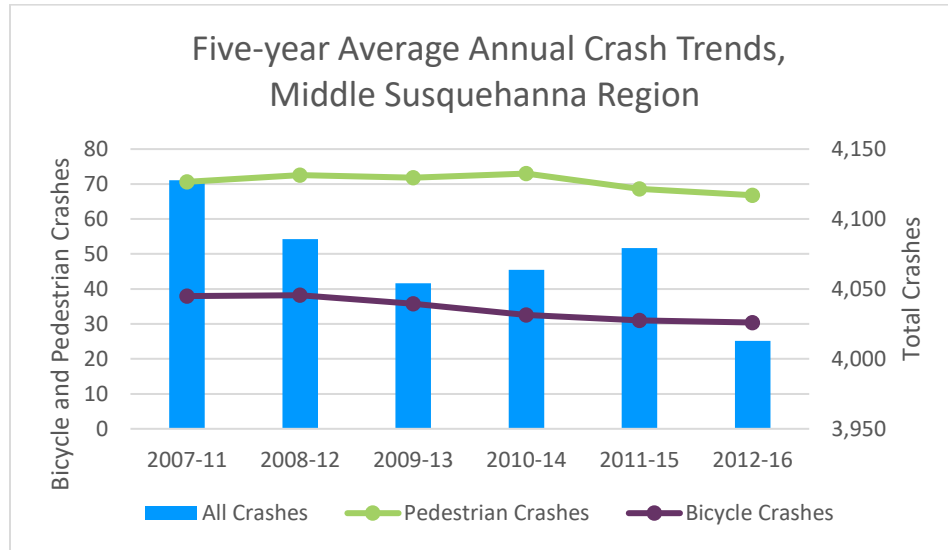
The number of pedestrian crashes in Pennsylvania has trended downward by nearly 10 percent over the last decade. The number of bicycle crashes has trended downward by 13.7 percent over the last decade.

Bicycle and Pedestrian Safety in the Middle Susquehanna Region

During the 2007-2016 period, 1,089 crashes involving bicyclists and pedestrians occurred in the Middle Susquehanna region. Of these, 342 crashes involved bicyclists (bicycle crashes) and 687 crashes involved pedestrians (pedestrian crashes); three crashes involved both. These bicycle and pedestrian crashes represented about 2.5% of the total reported traffic crashes over the ten-year period.

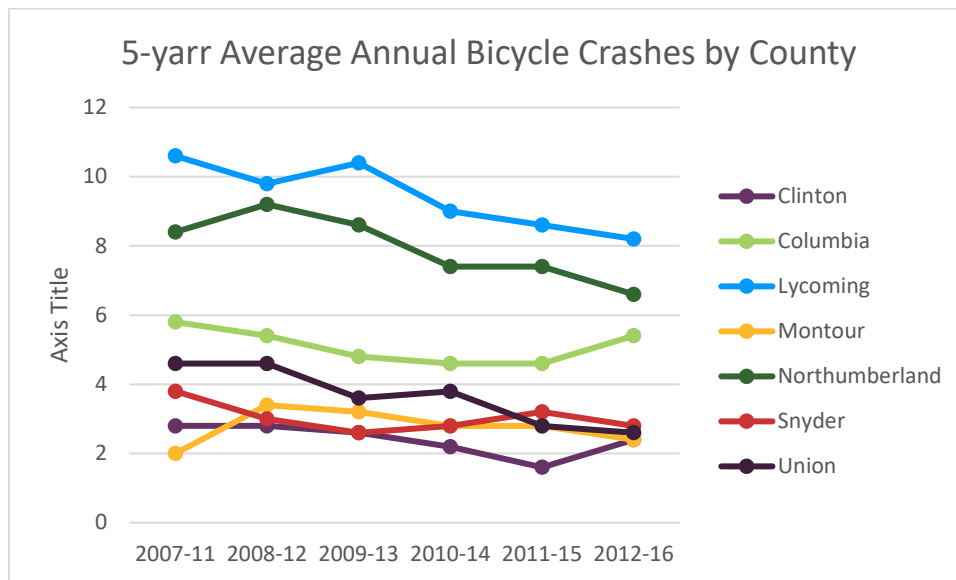
Five-year averages in crash data show a refined trendline that mitigates annual data spikes. Five-year averages in annual crash data show total crashes declining, including bicycle and pedestrian crashes.

Five-year averages for bicycle crashes have declined by 8 percent and five-year averages for pedestrian crashes have declined 4 percent.

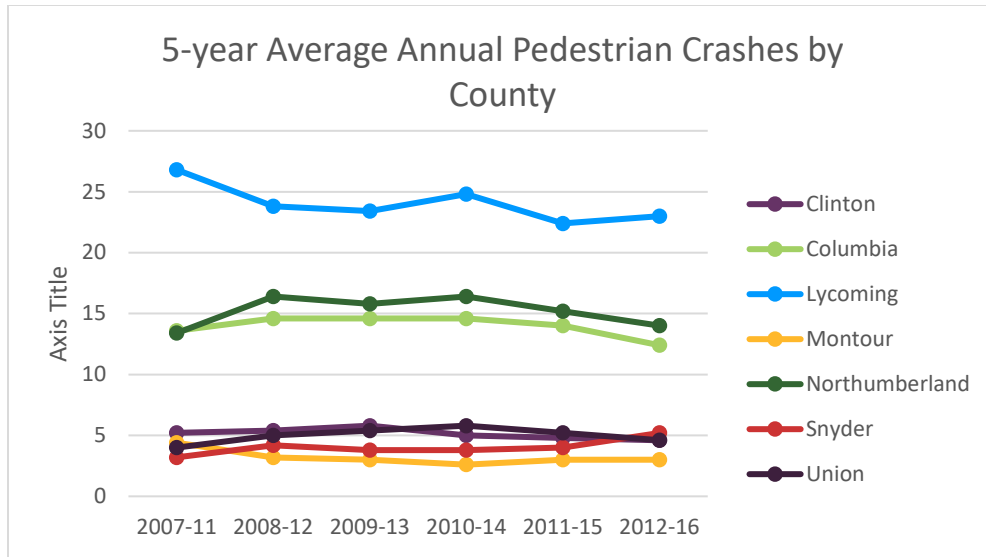


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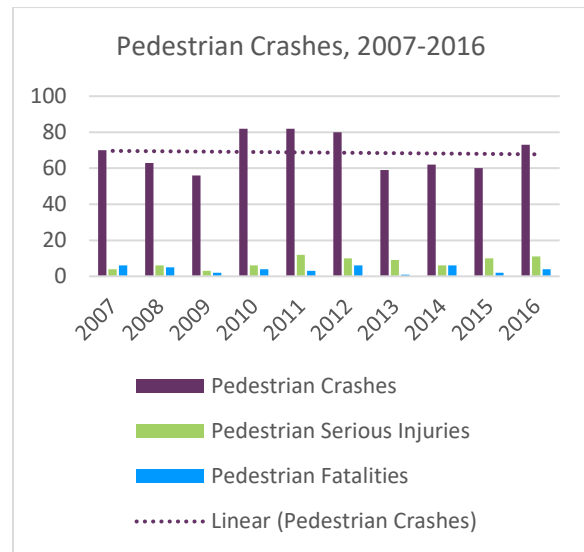
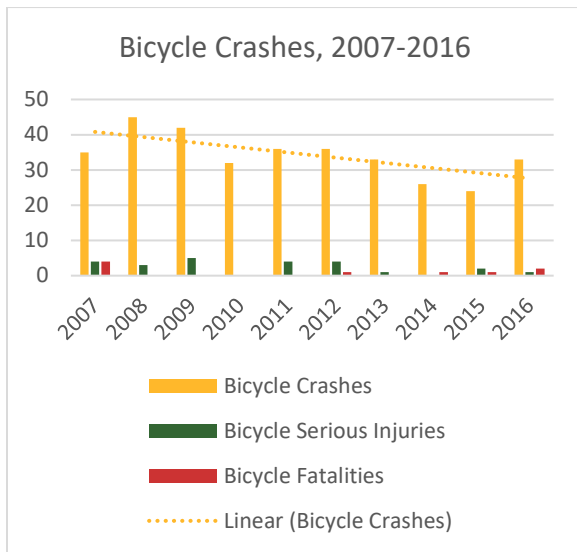
The five-year average annual for bicycle crashes is trending downward in all counties except Montour.



The five-year average annual pedestrian crashes by county shows mixed improvement. Columbia, Lycoming, Montour are trending downward. However, crashes became more common in Northumberland, Snyder Overall the degrees of change are very small.



Bicycle and pedestrian crashes with serious injury or fatality were relatively few during the 2007-2016 period: bicycle crashes with serious injuries ranged from zero to five annually and bicycle fatalities, from zero to four; pedestrian crashes with serious injuries ranged from 3 to 12 annually, trending higher, and pedestrian fatalities ranged from one to six per year with no clear trendline.

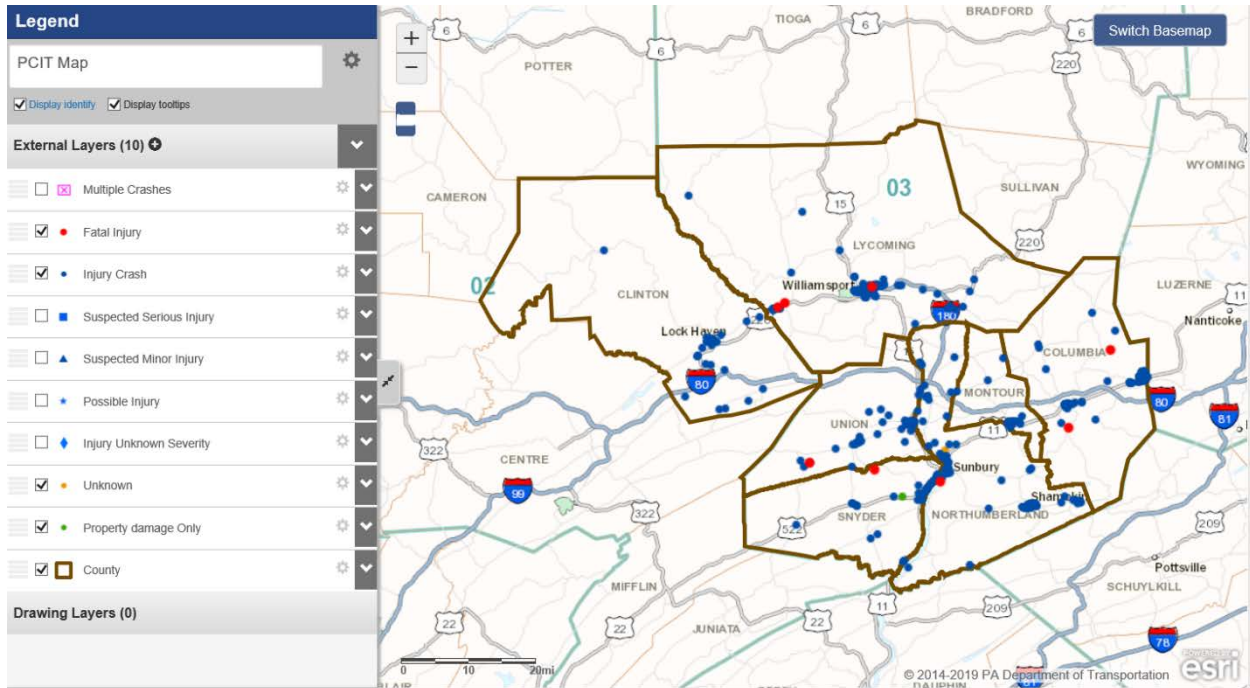


In 2017, bicyclist and pedestrian fatalities accounted for about 17 percent of national crash fatalities, 13 percent of state crash fatalities, and 8 percent of regional crash fatalities in 2017.

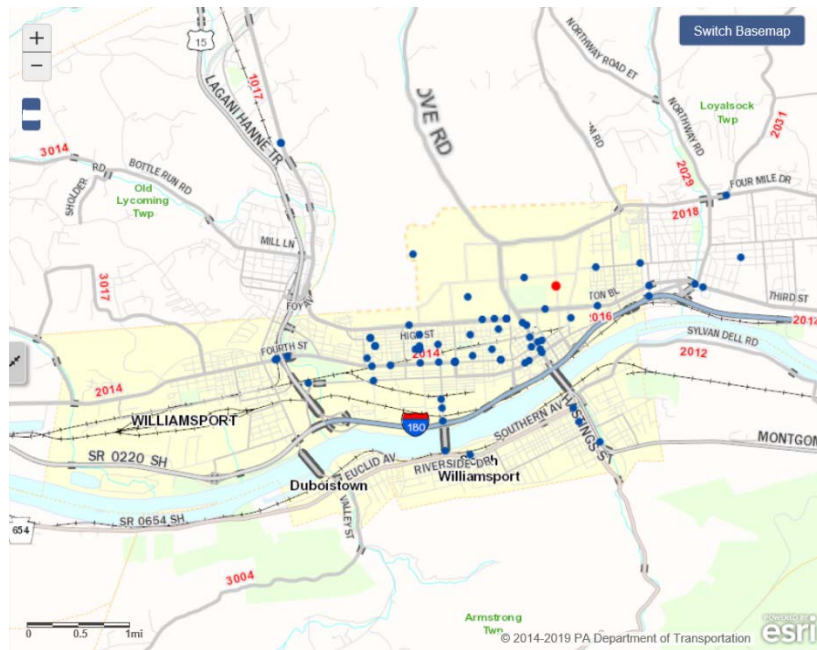
Bicycle and Pedestrian Crash Locations

The maps on the following page show crashes involving at least one bicycle across the region and in the Williamsport area for the 2007-2016 period a queried from the [Pennsylvania Crash Information Tool](#). Similar maps for crashes involving pedestrians are shown on page 6. From these maps, one can see that bicycle and pedestrian crashes are concentrated in urban areas but very few have occurred repeatedly in a single location.

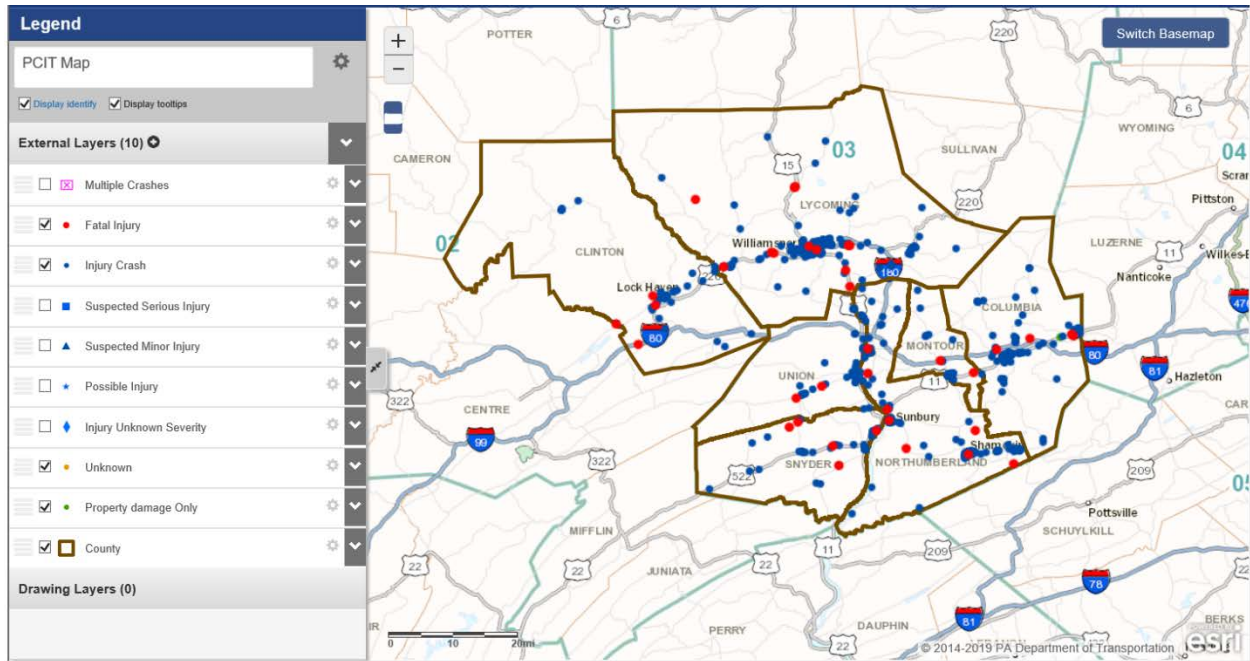
Crashes Involving A Bicycle, Middle Susquehanna Region, 2007-2016



Crashes Involving A Bicycle, Williamsport Area, 2007-2016



Crashes Involving A Pedestrian, Middle Susquehanna Region, 2007-2016



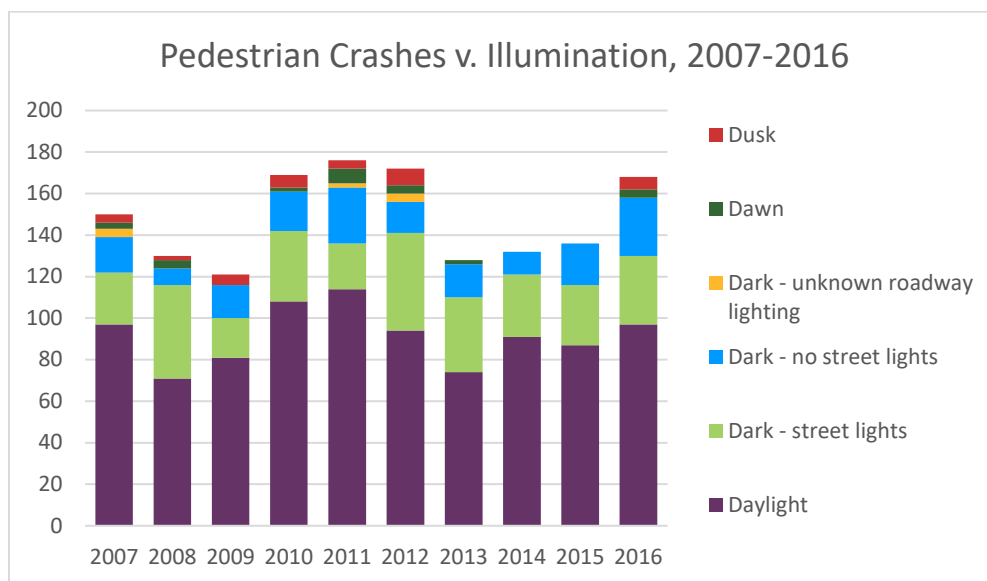
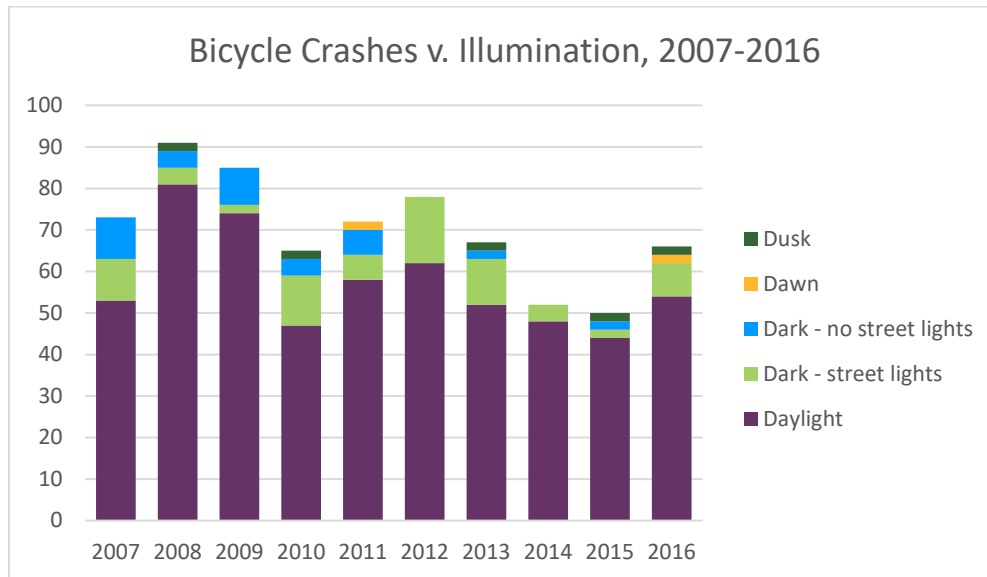
Crashes Involving A Pedestrian, Williamsport Area, 2007-2016



Contributing Factors to Bicycle and Pedestrian Crashes

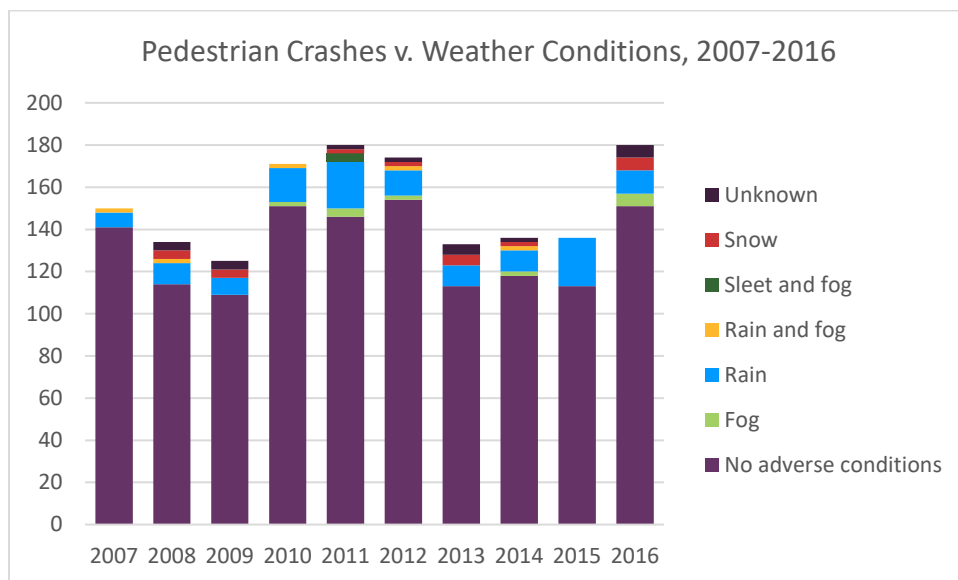
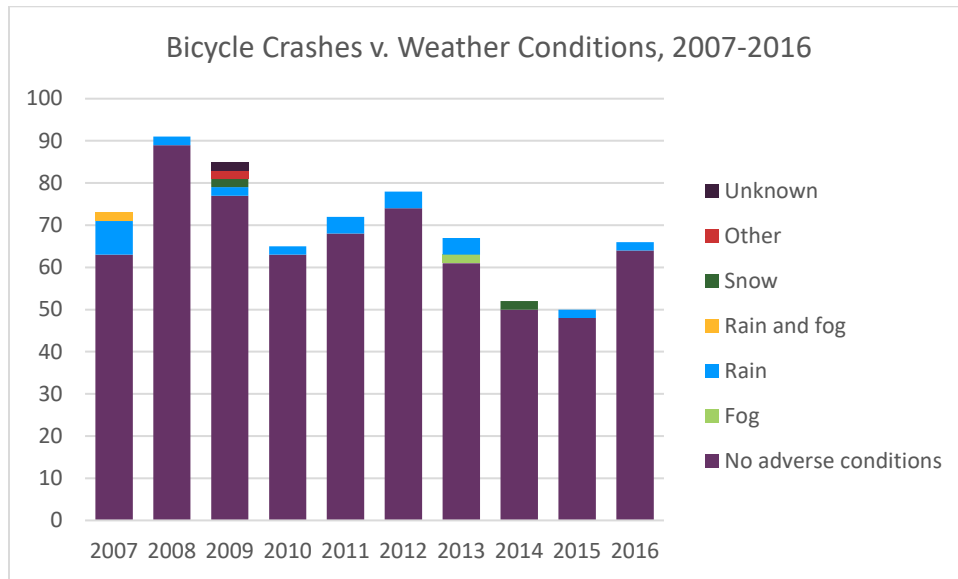
Light and Lighting Conditions

Although a significant number of crashes (2007-2016) occurred in the dark or under street light conditions, the majority of both pedestrian and bicycle crashes occurred during the day with no adverse lighting conditions.



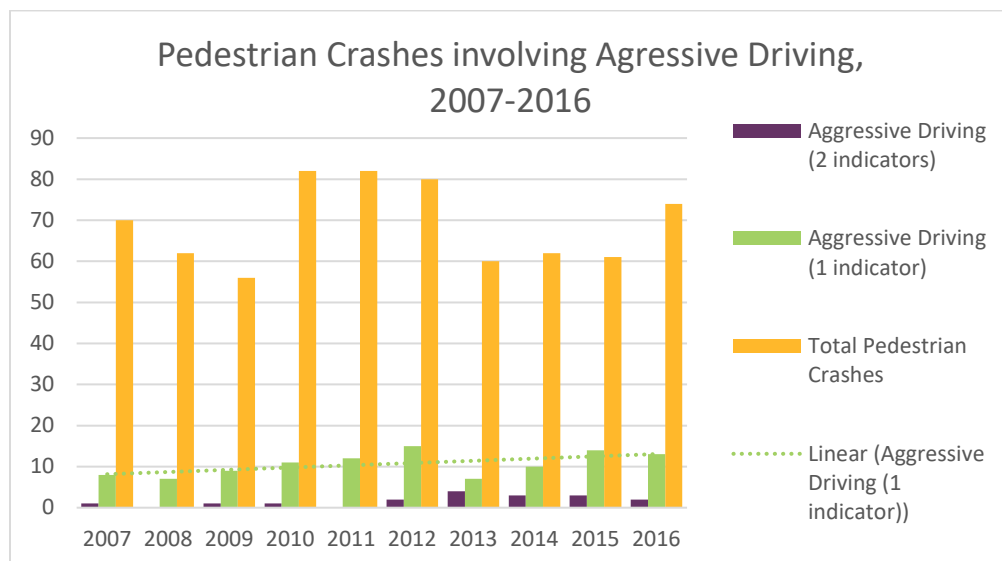
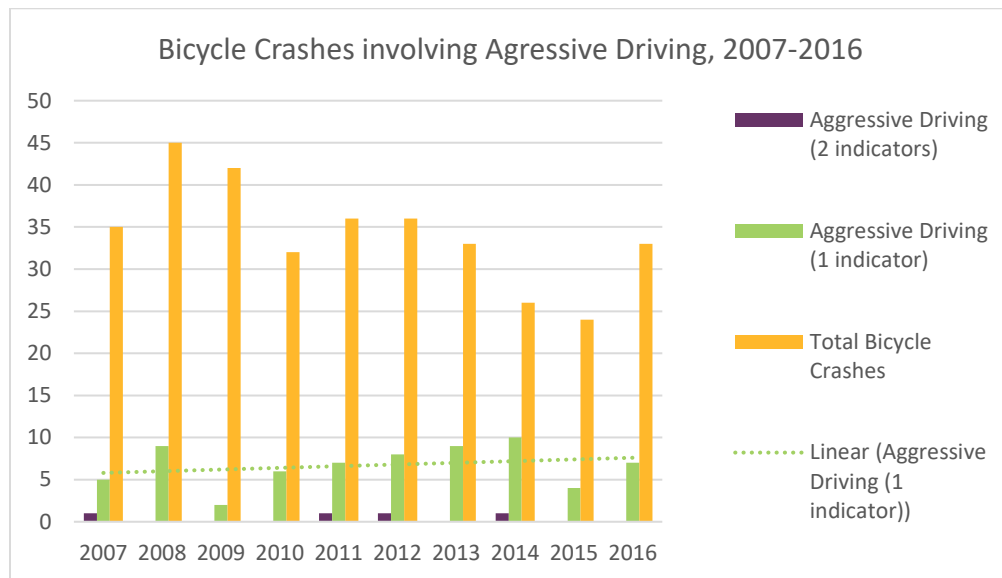
Weather Conditions

Likewise, while rain was the most common contributing weather factor, the majority of both pedestrian and bicycle crashes occurred under no adverse weather conditions.



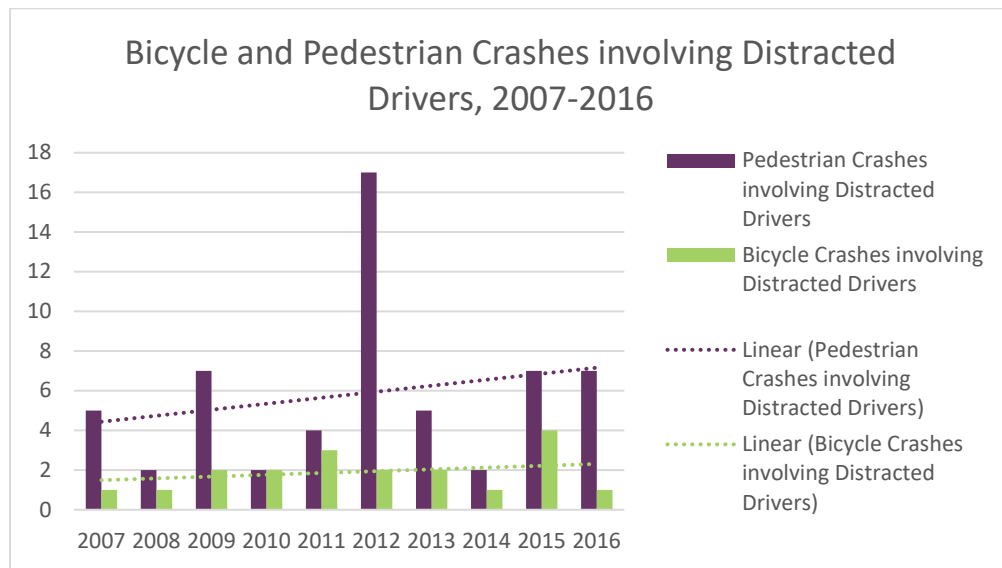
Aggressive Driving

While bicycle and pedestrian crashes have declined per the five-year average annual rates, crashes with indications of aggressive driving behavior have become more common.



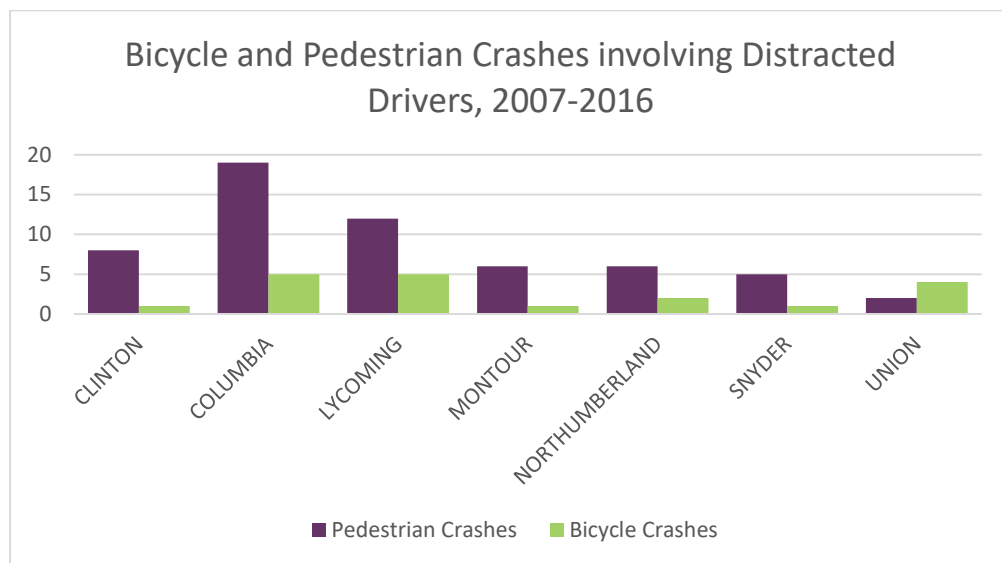
Distracted Driving

While crashes overall are decreasing, bicycle and pedestrian crashes involving distracted drivers are increasing. Distracted driving is any activity or behavior that diverts a driver’s attention from driving.



This is not unexpected as total crashes involving distracted drivers in the region increased 30.1 percent from 395 in 2007 to 514 in 2016.

While the numbers of bicycle and pedestrian crashes involving distracted drivers are small – less than 10 crashes for each county, they represent 16.2 percent of all pedestrian crashes in Columbia County and 11.1 percent of bicycle crashes in Union County.



With the increasing use of mobile devices, bicyclists and pedestrians as well as motorists can be distracted by the use smart phones and other devices while traveling. This behavior can result in inattentiveness to the immediate surroundings and to people, objects or vehicles in the travel path. Currently, there are no state or regional statistics available that attribute distraction to bicyclists and pedestrians.

Severity of Bicycle and Pedestrian Crashes by County

Lycoming County had the most bicycle and most pedestrian crashes of each type and Montour County has the fewest. This finding aligns with county population size. Lycoming County is home to Williamsport, the principal urban area of Lycoming County and the largest urban area in the region by population. Montour County is home to Danville, one of the smallest urban areas of the region.

Bicycle Crashes by County, 2007-2016

Counties	Bicycle Crashes	% of Total Crashes	Severity of Bicyclist Crashes		
			<Serious Injury	Serious Injuries	Fatalities
Clinton	26	0.61%	25	1	0
Columbia	56	0.74%	49	4	3
Lycoming	94	0.78%	82	9	3
Montour	22	1.01%	21	1	0
Northumberland	75	1.07%	66	8	1
Snyder	33	0.84%	22	10	1
Union	36	0.97%	29	6	1
Region Total	342	0.84%	294	39	9

Following Lycoming County's 94 bicycle crashes, Northumberland County, home to the City of Sunbury, and Columbia County, home to Bloomsburg, had high numbers of bicycle crashes compared to less than 40 bike crashes for each of the other counties. However, bicycle crashes with serious injury were more common in Snyder County (10 of 33 crashes or 30.3 percent) and in Union County (6 of 36 crashes or 16.7 percent) than in other counties. Columbia and Lycoming counties each had 3 fatalities over the 2007-2016 period.

Pedestrian Crashes by County, 2007-2016

Counties	Pedestrian Crashes	% of Total Crashes	Severity of Pedestrian Crashes		
			<Serious Injury	Serious Injuries	Fatalities
Clinton	49	1.14%	42	2	5
Columbia	130	1.72%	116	10	4
Lycoming	249	2.06%	214	22	13
Montour	37	1.71%	33	2	2
Northumberland	137	1.96%	105	24	8
Snyder	42	1.07%	37	0	5
Union	43	1.16%	34	7	2
Region Total	687	1.69%	581	67	39

Following Lycoming County’s 249 pedestrian crashes, Northumberland County and Columbia County had 137 and 130 pedestrian crashes, respectively, compared to less than 50 pedestrian crashes for each of the other counties. However, pedestrian crashes with serious injury were more common in Northumberland County (24 of 137 crashes or 17.5 percent) and Union County (7 of 43 crashes or 16.3 percent) than in other counties. Lycoming County had the highest number of pedestrian fatalities, 13, followed by Northumberland County, 8.

What We Can Do

Raise awareness for bicycle- and pedestrian-related traffic laws among the traveling public – motorists and non-motorists. This could include advisories regarding distracted driving, as well as distracted bicycling and walking. As noted above, one example is to display an advisory message for short durations, e.g. in spring as more people begin to ride and walk more frequently, using PennDOT VMS equipment along state highways and digital signs used, in part, for community information owned by public or private sector organizations.

Promote the use of clothing and gear that make bicyclists and pedestrians more visible, especially after dusk. This could be done as “tip” added to traffic law information.

Request data from police departments on the number of citations and crashes involving bicyclists and pedestrians and related traffic laws. This demonstrates community-level interest in enforcement of related traffic laws and acquires data faster than it is available in the [Pennsylvania Crash Information Tool](#).

Review the [Pennsylvania Crash Information Tool](#) for bicycle and pedestrian crash history along the state and local road corridors, particularly in urban areas. Together with the local municipality, determine if the data indicates a pattern that should be addressed with a physical improvement. Conduct this analysis in-house or municipalities can request PennDOT Connects Technical Assistance. Pursue Highway Safety, Multimodal Transportation Funds, or integration with highway projects via PennDOT Connects, as applicable.