

April 28, 2025 1:00 p.m.

Steering Committee Meeting #3

**SPC
Safety
Action Plan
2025**

*Please sign in with your name,
position & organization in the
chat if you are attending online*

Agenda

- RACI check in
- Review survey results, online strategies
- Review top ten road segments/intersections by county & mode
- Next steps

2025 Safety Action Plan

SCOPE	TASKS	Steering Committee	Stakeholders	SPC	Emergency Medical Svcs	Law Enforcement	Focus Groups	Transit Providers	FHWA & FTA	PROPOSED TIMELINE						
										Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	
Phase 1 Project Kick off & Start Data Collection																
	1.1 Project Assessments	C	I	R	I	I	N/A	I	I		★	★	★			
	1.2 Steering Committee Meeting #1	R	C	A	I	I	N/A	I	I	★						
Phase 2 Existing Conditions, Data Collection, Analyses & Outreach																
	2.1 Identify - Current crash data, safety barriers, & trends	I	C	R	C	C	C	C	I	★	★	★	★			
	2.2 Create branding & public outreach strategies	R	I	A	N/A	N/A	N/A	N/A	I	★	★					
	2.3 Steering Committee Meeting #2	R	C	A	I	I	C	I	I		★					
	2.4 Plan & develop online/social media engagement	A	C	R	I	I	I	I	I	★	★					
Phase 3 Identify Potential Goals, Countermeasures, & Strategies																
	3.1 Workshop/charrettes	A	C	R	C	C	C	C	I		★	★				
	3.2 District specific guidance	I	R	A	C	C	C	C	C				★	★		
Phase 4 Public Engagement																
	4.1 Launch online & social media campaign	A	C	R	I	I	I	I	I		★	★	★			
	4.2 Report out current response activity, best practices	A	I	R	I	I	I	I	I			★	★			
	4.3 Useful insights, takeaways on what worked or didn't	A	C	R	I	I	I	I	I				★			
Phase 5 Debriefings																
	5.1 Refine short list of needs & solutions across region	A	C	R	I	I	I	I	I				★	★		
	5.2 Steering Committee Meeting #3	R	C	A	I	I	C	I	I				★			
	5.3 Resolve comments, edits,	R	C	A	I	I	C	I	I				★			
Phase 6 Final Plan & Adoption																
	6.1 Prepare Draft SAP	C	C	R	N/A	N/A	N/A	N/A	N/A							
	6.2 Steering Committee Review of Draft SAP	R	I	A	I	I	I	I	I							
	6.3 Steering Committee Meeting #4	R	C	A	I	I	C	I	I							
	6.4 Final Plan & Adoption	A	I	R	I	I	I	I	A							

DATA: 2020-2024 updates

1. This plan is using 2024 crash data and dropping off the 2019 crash data with a caveat that this data is not finalized, but changes will be made if anything is incorrect or altered by PennDOT.

2. The High Injury Network (HIN) analysis was using the [Safer Streets Priority Finder Sliding Windows](#) tool. This tool uses a Bayesian statistical framework for a robust estimation of crash risk along a road network. OSM was the road network this analysis is based on.

3. US Census Bureau, changing terms, and qualifiers.

Local feedback and perceptions created the need for more nuanced understanding and evaluation of what “rural” and “urban” actually means outside of Allegheny County. Fun Fact: 60 million Americans live in rural areas (1 out of every 5 people)

To ensure that marginalized communities would be fairly represented, we started with “Areas of Persistent Poverty” census tracts with is a 30-year study tracking a 20% poverty rate. However, that was eliminated in 2019 and the 2020 Decennial Census altered census tract boundaries to some degree.

4. Vulnerable Road User updates:

[My Street](#)

ABATE

High Injury Network processing:

1. This analysis takes the crashes and roads data within a study area and allocates the crashes to roads measured on a ½ mile sliding window segments stepped in 1/10 mile increments along the network.

More severe crashes are weighted more heavily.

Fatal and Suspected Serious Injury crashes (K) and (A) by 3 and non-incapacitating crashes by 1. The total number of crashes are aggregated along a corridor.

Possible injury and PDO are not reflected.

2. List of top roadway segments by County (no interstates or expressways included) emailed April 25, 2025

3. Still pulling the cross streets that start/end segments by county and adding municipalities to list.

Comments?

Public Engagement:

By the numbers:

- 5 community meetings in Pittsburgh
- 10 counties reached
- 24 in-person events
- 461 conversations with attendees

Social Medias:

LinkedIn: 2,712 followers, 10 posts, 1,635 impressions, 68 engagements, post clicks 27, engagement rate 4.2%

Facebook: 1,192 followers, 9 posts, 1,018 impressions, 39 engagements, post clicks 8, engagement rate 3.8%

X/Twitter: 464 followers, 10 posts, 531 impressions, 5 engagements, post clicks 2, engagement rate 0.9%

Instagram: 271 followers, 10 posts, 618 impressions, 41 engagements, post clicks 1, engagement rate 6.6%

245 online survey responses (as of 4.25.2025)

Question skipped the most: Request email for the raffle giveaway.

Challenges:

Survey fatigue, particularly with other plans currently in the works

Public understanding of “Vision Zero”

What we heard:

1. Who’s responsible for road improvements and/or maintenance?
2. Universal concern of not feeling comfortable as a pedestrian or bicyclist on local roads
3. General misunderstanding of the term “Vulnerable Road User”
4. How do we get a speed bump installed?
5. If a centerline bisects a boundary of Penn Hills and Pittsburgh who can be contacted to reduce speeding on my road?
6. If Railroad St in the Strip District is partially owned by a railroad, who is responsible for painting crosswalks, installing signage, etc.? Who polices semi-private roads?

Next step: Paid advertising on Social Medias for final survey blast by HIN impacted zip codes

Safe Systems Principles

WHERE ARE YOU ON THE SAFE SYSTEM JOURNEY?

Humans make mistakes.



People will inevitably make mistakes & decisions that can lead or contribute to crashes, but the transportation system can be designed and operated to accommodate certain types and levels of human mistakes, & avoid death & serious injuries when a crash occurs.

Safety is proactive.

Proactive tools should be used to identify & address safety issues in the transportation system, rather than waiting for crashes to occur & reacting afterwards.



Humans are vulnerable.

Human bodies have physical limits for tolerating crash forces before death or serious injury occurs; therefore, it is critical to design & operate a transportation system that is human-centric & accommodates physical human vulnerabilities.



Responsibility is shared.

All stakeholders—including government at all levels, industry, non-profit/advocacy, researchers, & the general public—are vital to preventing fatalities & serious injuries on our roadways.

Redundancy is crucial.

Reducing risks requires that all parts of the transportation system be strengthened, so that if one part fails, the other parts still protect people.

Death & serious injury is unacceptable

A Safe System Approach prioritizes the elimination of crashes that result in death & serious injuries



Safe Systems Elements

A SAFE SYSTEM IS HOW WE GET TO ZERO!

Safer People

Encourage safe, responsible driving & behavior by people who use our roads & create conditions that prioritize their ability to reach their destination unharmed.



Safer Vehicles

Expand the availability of vehicle systems & features that help to prevent crashes & minimize the impact of crashes on both occupants & non-occupants.



Safer Speeds

Promote safer speeds in all roadway environments through a combination of thoughtful, fair, context-appropriate roadway design, appropriate speed-limit setting, targeted education, outreach campaigns, & enforcement.

Safer Roads

Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.



Post Crash Care

Enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders & preventing secondary crashes through robust traffic incident management practices.



Vehicle Blind Zones

What is not often seen from behind the wheel.

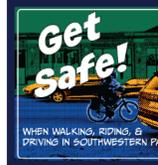


Approximately 8 feet from the bumper to line of sight

Large vehicles are more likely to be involved in fatal or serious injury crashes at or near intersections. Additionally, larger vehicles tend to have larger side & rear blindspots which also reduces pedestrian & bicycle visibility at the left & right front corner of the driver's field of vision.

Hu W & Cicchino JB. Journal of Safety Research 82:392-401 (2022) Relationship of pedestrian crash types & passenger vehicle types.

Only the direct line of sight between a driver eyes & other road users provides non-verbal communication outside the vehicle. Motorists cannot avoid what they cannot see. According to a direct vision study by the Massachusetts DOT & the USDOT Volpe Center, driver of many recent models of light trucks, even when appropriately stopped at the limit line before an intersection, would not be able to see an elementary school-aged child in front of them in a marked crosswalk. Direct vision is still the quickest means to respond to seeing a pedestrian versus on-board cameras or mirrors, doubling the driver response times to take appropriate measures to avoid a crash.



PROVEN SAFETY COUNTERMEASURES



	Remove Severe Conflicts	Reduce Vehicle Speeds	Manage Time Conflicts	Increase Awareness	Cost Factor
Appropriate speed limits		✓			💰
Speed safety cameras		✓			💰💰
Bike lanes		✓		✓	💰
Crosswalk enhancements				✓	💰
Leading Pedestrian Intervals			✓	✓	💰
Median & refuge island	✓	✓		✓	💰💰
RRFB		✓		✓	💰💰💰
Road Buffet	✓	✓		✓	💰💰💰
Walkways	✓				💰
Enhanced horizontal curves		✓		✓	💰
Rumble strips & stripes		✓			💰
Median barriers	✓	✓			💰
Curve design improvements	✓				💰
Safety Edge SM				✓	💰
Wider edge lines				✓	💰
Reflective backplate				✓	💰
Access management	✓				💰💰💰
Dedicated turn lanes at intersections	✓				💰💰💰
Roundabouts	✓	✓		✓	💰💰💰
Multiple intersection improvements				✓	💰💰
Yellow change intervals			✓	✓	💰💰
Lighting				✓	💰💰
Local Road Safety Plan	✓	✓	✓	✓	💰💰
Pavement friction	✓	✓			💰
Road Safety Audit	✓	✓	✓	✓	💰💰

Vehicle Pairs

The effects of height & weight incompatibility

The incompatibility between vehicles, due to height & weight, create an uneven distribution of risk in fatal & suspected serious injury crashes between two vehicles. For example a vehicle under 5,000 lbs is 1.2 times as likely to kill those involved. When involved in a crash, vehicles over 5,000 lbs are 1.9 times as likely to end in fatality. Vehicles with structures that mirror each other & are of similar weight share risk evenly: a crash between two passenger cars should produce similar fatality risks for each driver.

According to the National Bureau of Economic Research, being hit by a vehicle that is 1,000 lbs heavier results in a 47% increase in the probability of being killed in a crash. The fatality risk is even higher if the striking vehicle is a SUV, light truck or minivan. Traffic crashes are the leading cause of death for people under the age of 40 & are a major source of life-years lost.

Below are vehicle pairs by height & weight.

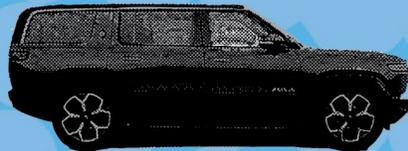
(<https://www.nber.org/digest/nov11/vehicle-weight-and-automotive-fatalities>)



Sedan: 4.5' high
3,500 lbs



SUV: 5.5' high
6,000 lbs



SUV EV: 5.5' high
7,000 lbs



Light Duty Truck: 6.5' high
5,500 lbs



Light Duty Truck EV: 6.5' high
6,893 lbs



Sedan EV: 4.5' high
5,000 lbs

Pedestrian Safety

THE EFFECTS OF VEHICLE HEIGHT & WEIGHT

Vehicle mass & size directly impact survival rates of pedestrians involved in a crash. From 2012 to 2022 the number of pedestrian deaths involving SUVs, pickup trucks & vans rose 77%.

A child under the age of 18 struck by an SUV was 8 times more likely to die than a child struck by a passenger car.



SUVs were the striking vehicle in more than 40% of childhood fatalities, even though they just were involved in 16.9% of childhood cases.

Across all age groups in the data, SUVs were involved in just under 15% of crashes with pedestrians & bicyclists, yet accounted for 25% of fatalities.



Adults hit by pickup trucks were 4 times more likely to die than adults struck by passenger cars. When controlling for crash factors, Tyndall (2024) found that a pedestrian is 70 times more likely to die if the involved vehicle is a pickup truck than a sedan.



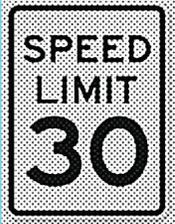
Speeding Factors

SURVIVING FATAL & SERIOUS INJURIES AS A PEDESTRIAN

A study from the US Department of Transportation (2000) found that the faster a vehicle is traveling, the higher likelihood that a crash with a pedestrian will end fatally.



9 OUT OF 10 PEDESTRIANS MIGHT SURVIVE



5 OUT OF 10 PEDESTRIANS MIGHT SURVIVE



ONLY 1 OUT OF 10 PEDESTRIANS MIGHT SURVIVE

Since 2000 vehicle body design, size, height, and weight has had an increased effect on VRU death and serious injuries. sports utility vehicles, light duty trucks and electric vehicles are over-represented in fatalities relative to the proportion of their involvement in all crashes. <https://doi.org/10.1016/j.jsr.2022.06.005>



Greene County

Home to the Annual "Rainy Day" Festival

Learn more here: <https://greencountypa.gov>



PennDOT District: 12

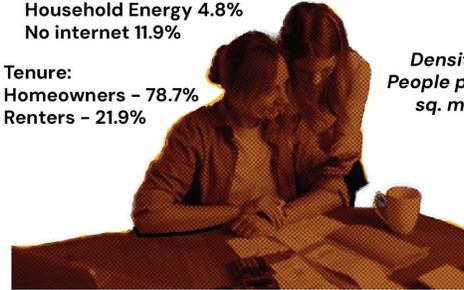
Kitchen Table Economics

% of income spent on:
 Housing 19.0%
 Transportation 25.0%
 Household Energy 4.8%
 No internet 11.9%

% in poverty: 12.5%

Tenure:
 Homeowners - 78.7%
 Renters - 21.9%

Density:
 People per sq. mile 61



Commuting to Work



Mobility



SINGLE OCCUPANCY DRIVING: 90.6%



WALKING: 1.98%

Work from Home: 5.98%



TRANSIT RIDING: 0.19%

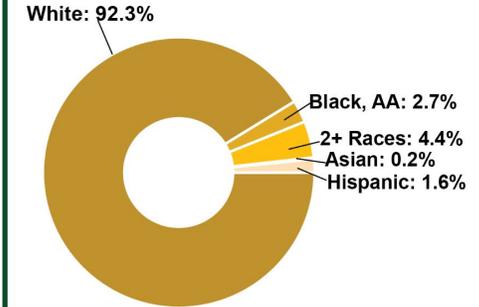


BICYCLING: 0.01%

Households

Total Population: 35,265 Total Households: 14,126

RACE & ETHNICITY



Age 18 & Under 19.1% Over 65 years 20.0%
 Median Age 43 years

Top Worker Industries



HEALTH CARE - 18.7%



EDUCATION - 8.7%



HOSPITALITY - 7.2%



RETAIL - 11.7%

Data sources: ACS 5 yr survey 2019-2023, LODS 2022, SPCGIS LULC2023



Greene County Crash Factor Summary



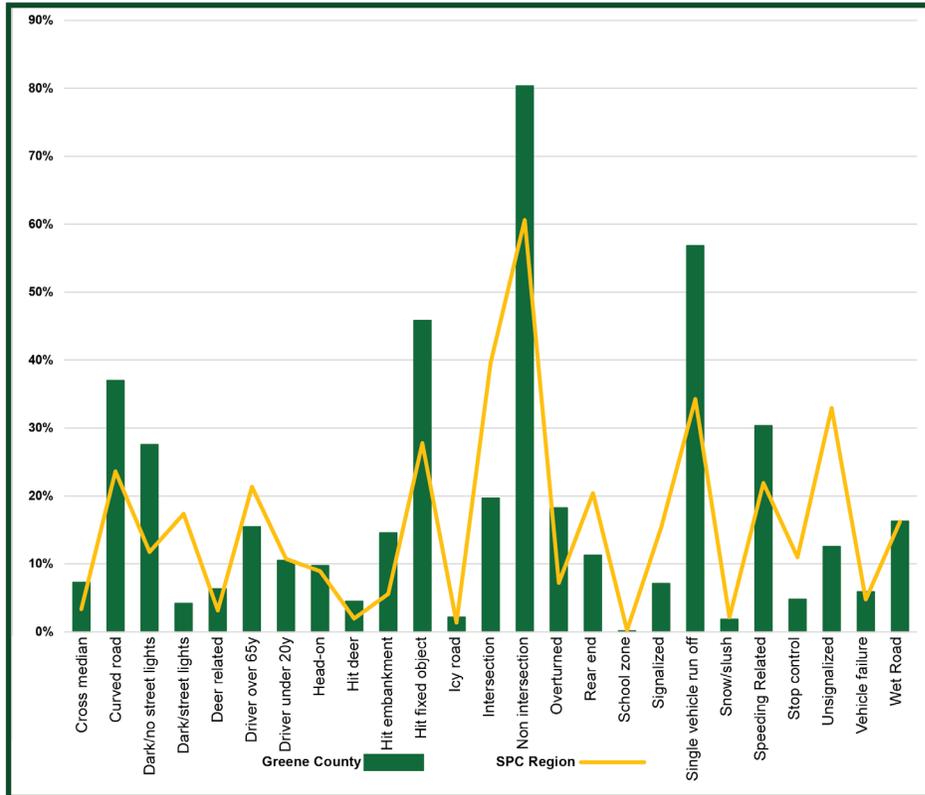
FROM 2020 TO 2024 GREENE COUNTY HAD 551 CRASHES WITH 9 ENDING IN DEATH & 60 RESULTING IN SUSPECTED SERIOUS INJURY.



There are 30+ factors that law enforcement could identify when responding to and reporting on a crash. Many factors overlap such as “deer related” and “cross median”. “Wet Road” can be linked to one factor such as “Stop Control” but could also flag multiple conditions.

The following information compares Greene County data (the green bar) and Regional data (the gold line).

When adjusted for population, any factor in Greene County over 2.6% is higher than the region & should be prioritized.



Source: PennDOT 2020-2024 Crash data, downloaded 03.31.2025 <https://crashinfo.penndot.pa.gov/PCIT/welcome.html>

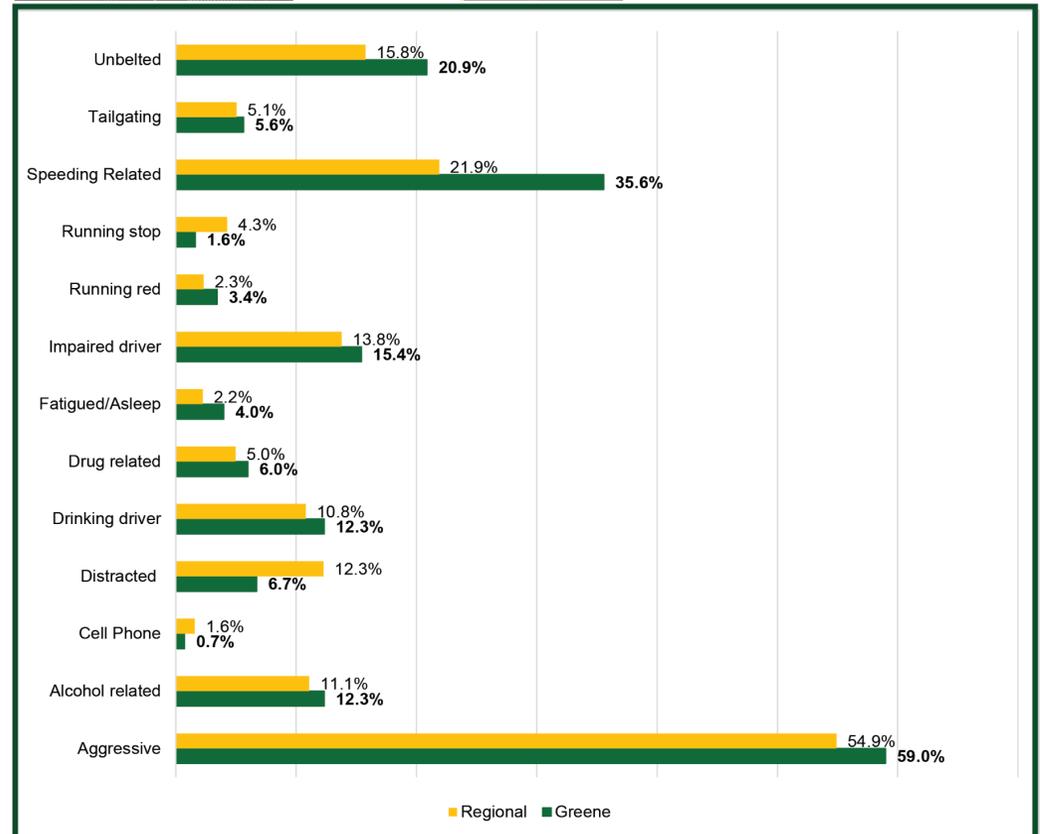


Greene County Behavior Profiles



There are many characteristics that law enforcement will identify when responding to & reporting on a crash.

Many behaviors i.e. “distracted” & “cell phone” will overlap. They can also be a unique factor in reporting. Another sample behavior is “Aggressive Driving” which could be linked to one action such as speeding but can also flag multiple driver responses.



Source: PennDOT 2020-2024 Crash data, downloaded 03.31.2025 <https://crashinfo.penndot.pa.gov/PCIT/welcome.html>



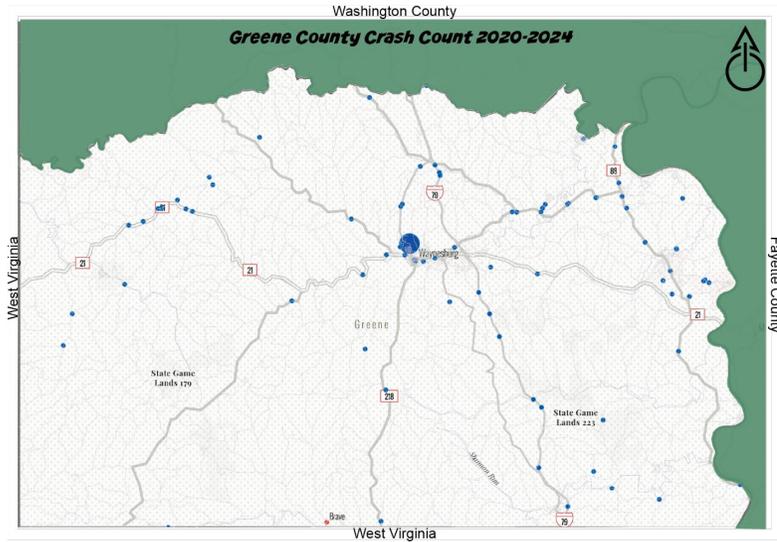
HIGH INJURY NETWORK

FATAL & SUSPECTED SERIOUS INJURY PROPORTIONAL SYMBOL MAP



HIGH INJURY NETWORK

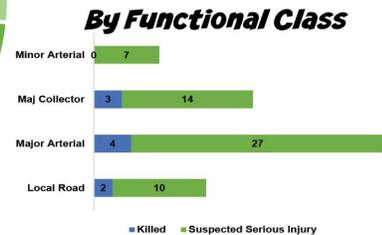
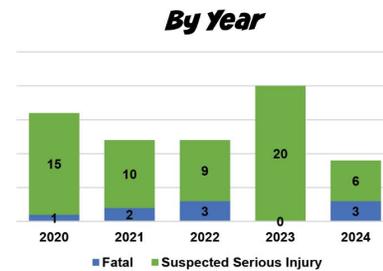
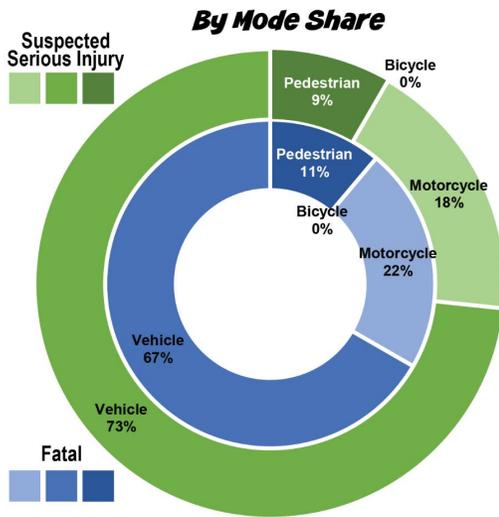
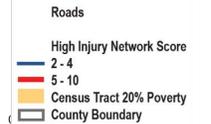
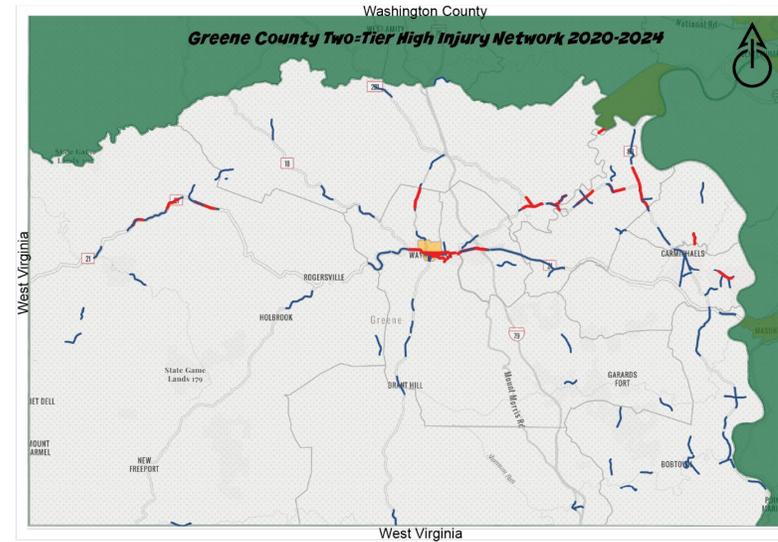
SLIDING WINDOW ANALYSES & AREAS OF PERSISTENT POVERTY



Of the 551 injury crashes that occurred on Greene County roadways, excluding expressways, from 2020-2024, 9 ended in death & 60 in life-altering serious injury.

Broken down by mode, there were 3 by bicycle, 11 with a pedestrian, 50 by motorcycle & 487 by vehicle across the analysis period.

Another 857 crashes only entailed property damage. This brings the total number of crashes to 1,408.





Next Steps

- ▶ Quality Control: Draft to Steering Committee May 12th-16th
- ▶ Editing Draft: May 16th- 22nd
- ▶ Mid-May publish Draft Regional Safety Action Plan for public comment May 23rd
- ▶ June 23, 2025 SPC: Plan Commission Meeting for Adoption 4:00 p.m.





Thank You

 42 21st St Suite 101,
Pittsburgh, PA 15222

 www.spcregion.org

 @spcregion

 (412) 391-5590