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Safe Streets for All

A transportation safety update to JPACT and the Metro Council

November 2023

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Metro is the federally mandated metropolitan planning organization designated by the governor to develop an overall transportation plan and to allocate federal funds for the region.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds. JPACT serves as the MPO board for the region in a unique partnership that requires joint action with the Metro Council on all MPO decisions.

Project web site: oregonmetro.gov/safety

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LETTER FROM THE DIRECTOR

Our region is facing growing roadway safety challenges as seen across the United States and in Oregon. These challenges reflect systemic issues impacting communities large and small, but that disproportionately impact lower income and communities of color.

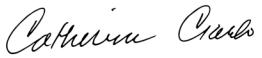
The multifaceted nature of traffic safety challenges may appear daunting, but it is crucial that we tackle them collectively and strategically, with a sense of shared purpose and unwavering commitment to eliminating traffic-related deaths and serious injuries. With federal funding Metro can work with partners to focus more deeply on roadway safety using the Safe System Approach over the next few years.

Our goal is to transform our region into a place where every resident, regardless of their background, income, or zip code, can enjoy the benefits of safe, accessible, and reliable transportation. Together, we will not only make our roadways safer but also work to right the historical and contemporary injustices that have disproportionately impacted our communities for far too long. This will require dedication, collaboration, and innovative thinking, and I have no doubt that we are up to the challenge.

Our safety program staff have prepared this report to kick-off the implementation of the federally funded Safe Streets for All (SS4A) grant, which will fund regional and local safety program activities. This report will be used to frame initial discussions with regional partners as Metro and jurisdictional partners develop work plans. We want to learn what data and information Metro can provide to support local, regional, and state efforts and determine what additional questions we need to be asking to arrive at effective solutions. As the regional government and MPO, Metro serves as the regional convenor and coordinator with the intention of making our collective actions more effective.

Working together in coordination we will realize a future where death and serious injuries are no longer consequences of using our transportation system.

Sincerely,



Catherine Ciarlo, Director
Planning, Research and Development

PURPOSE

This report provides a preliminary overview of traffic-related deaths and life changing injuries in the greater Portland region since 2017 and a summary of actions undertaken in the past few years by regional, state and local partners since 2021, when the last comprehensive update was provided to the Metro Council and Metro's technical and policy committees with the 2-Year Progress Report on the Regional Transportation Safety Strategy.[1]

The data presented in this report represent real people– members of our regional community. The victims of traffic crashes are family members, friends, and coworkers in our region.

This report was developed to support discussions with Metro's technical and policy advisory committees and the Metro Council as Metro begins to coordinate efforts with government and community partners to implement the Safe Streets for All program activities.

Metro, in partnership with Washington County, the City of Tigard and Multnomah County and the cities of East Multnomah County received a federal Safe Streets for All grant for the purpose of developing local safety action plans, updating the regional safety action plan and advancing safety strategies. Using this report as a starting place, Metro is seeking guidance and input from the Metro Council and Metro's technical and policy committees and other partners on what analysis and information will increase understanding of safety challenges and solutions.

Metro will coordinate with government, community, and business partners on the Safe Streets for All project over the next few years on this effort. The final section of the report lists high-level actions that would benefit from coordinated efforts.

[1] Metro Regional Transportation Safety Strategy 2-year progress report, June 2021. https://www.oregonmetro.gov/sites/default/files/2021/08/03/RTSS-progress-report-20210603.pdf.

INTRODUCTION AND THE SAFE SYSTEM APPROACH

In the past ten years, state, regional and local transportation agencies and the communities they serve have adopted and begun implementing transportation safety action plans with goals to eliminate traffic deaths and life-changing injuries using the proven Safe System Approach,[2] recognizing that this approach has been successful in greatly reducing serious crashes in other places. [3]

- 2016 - City of Portland adopts the first Vison Zero Plan in the state, with a goal to eliminate traffic fatalities and serious injuries by 2025.
- 2018 - JPACT and the Metro Council adopt the Regional Transportation Safety Strategy with the goal to eliminate traffic deaths and life changing injuries by 2035.
- 2019 - Clackamas County adopts the updated Drive to Zero safety action plan, with a goal to eliminate fatal and serious injury crashes by 2035. The County developed the first safety plan in the state in 2012.
- 2021 - Oregon Transportation Commission adopts the Transportation Safety Action Plan with a goal to eliminate traffic deaths by 2035.
- 2023 - Metro updates the 2023 Regional Transportation Plan, including regional safety policies embedded in the Safe System approach; the City of Hillsboro begins development of a safety action plan, and the City of Tigard, Multnomah County and the cities of East Multnomah County, and Washington County prepare to develop safety action plans.

The Safe System approach relies on multiple, complementary safety interventions for all people who use our roadways to prevent crashes from occurring in the first place and to reduce harm if a crash occurs.

When the Metro Council and JPACT adopted a regional strategy to eliminate traffic deaths and life changing injuries, it was clear that confronting this challenge would be neither easy nor quickly resolved. People dying on our highways, streets, and roads is an ingrained and persistent problem, one that many in society have come to accept as part of our everyday lives.

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[2] ITF (2022), Road Safety Annual Report 2022, OECD Publishing, Paris.

https://www.itf-oecd.org/sites/default/files/docs/irtad-road-safety-annual-report-2022.pdf

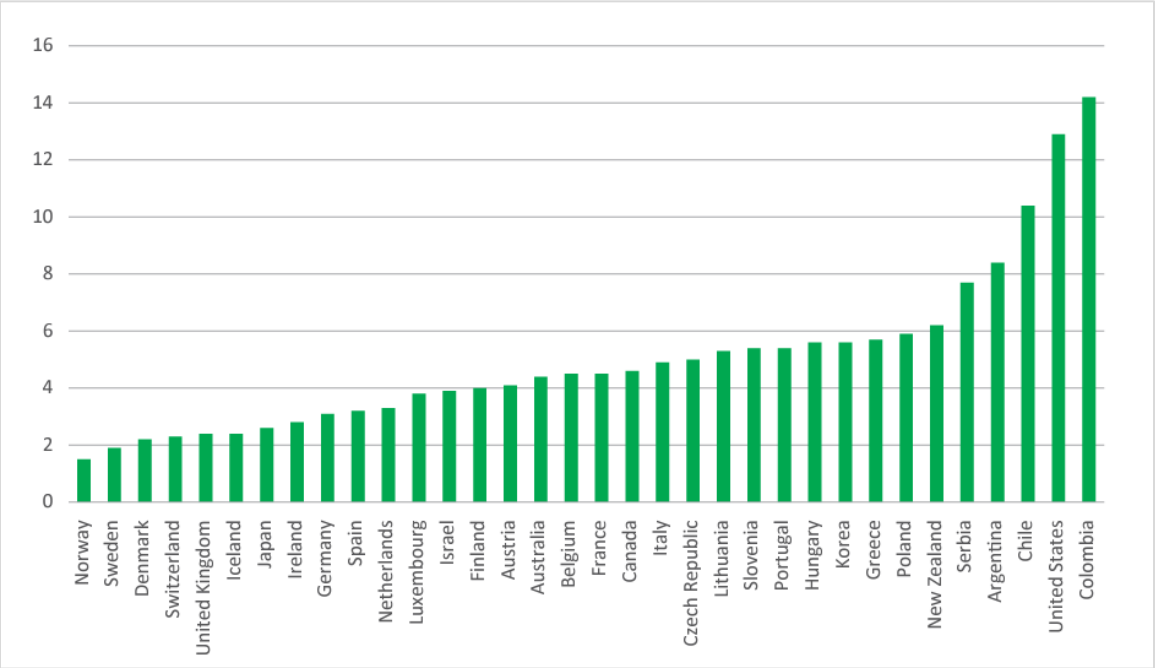
[3] ITF (2022), Road Safety Annual Report 2022, OECD Publishing, Paris.

https://www.itf-oecd.org/sites/default/files/docs/irtad-road-safety-annual-report-2022.pdf

In recognition of the need to substantially change how the region views and addresses roadway safety, the Regional Transportation Safety Strategy commits to the Safe System Approach the region's guiding principle.

The Safe System Approach has been used with great success in a growing number of nations and cities around the world and has now taken hold in the United States. The Safe System Approach has origins in Sweden through its Vision Zero program and with the Sustainable Safety program in the Netherlands. These early adopters experienced impressive decreases in roadway deaths—each with at least a 50% reduction in fatalities between 1994 and 2019. The concept has spread to other countries in Europe and beyond with notable success in Australia and New Zealand. The progress of these counties, compared to the United States, is illustrated in Figure 1.

Figure 1 Road fatalities per 100,000 people in International Traffic Safety Data and Analysis Group (IRTAD) countries, 2021



Source: International Transport Road Safety Annual Report 2022

While Figure 1 shows that there are over 12 traffic fatalities for every 100, 000 people in the United States, the 2017-2021 per capita fatality rate in the greater Portland region is 6 people per 100,000 people, closer to some of the countries that are moving in the right direction. The regional per capita rate is lower than Oregon's (12). Washington County has the lowest fatality rate in the region (4). Clackamas and Multnomah County have fatality rates double that of Washington County (8). Refer to Table 5 for per capita 2017-2021 fatality rates for Oregon, the region, the three counties, and all cities in the region.

Safe System Approach Elements and Principles

There are five elements of the Safe System Approach:

- **Safe People**. Encourage safe, responsible behavior by people who use our roads and create conditions that prioritize their ability to reach their destination unharmed.
- **Safe 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.
- **Safe Vehicles**. Expand the availability of vehicle systems and features that help to prevent crashes and minimize the impact of crashes on both occupants and non-occupants.

- **Safe Speeds**. Promote safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement.
- **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 and preventing secondary crashes through robust traffic incident management practices.

With the Safe System approach, these five elements work together to create a safe, redundant transportation system. In such a system, if one layer fails another layer is in place to prevent serious harm.

Six principles underpin the Safe System approach:

- **Death and serious injuries are unacceptable.** The Safe System approach rejects the idea that these are simply the price of mobility.
- **People make mistakes,** so the transportation system should be designed and operated to avoid death and serious injuries when a crash occurs.
- **Human bodies are vulnerable** and have physical limits for tolerating crash forces before death or serious injury occurs; therefore, it is critical to design and operate a transportation system and vehicles that is human-centric and accommodates physical human vulnerabilities.

- **Responsibility is shared** among those who design, build, and manage streets and vehicles, those who use these streets and vehicles, and those who provide care after crashes.
- **Safety is proactive.** Systemic change is needed to prevent serious crashes.
- **Redundancy is crucial.** If one layer of the system fails, another layer is in place to prevent serious injury.

A cyclist rides their bicycle through a crosswalk at a roundabout along a tree lined street, a pedestrian stands on the corner in Orenco Station, Hillsboro

Source: Metro

INTERSECTION OF TRAFFIC SAFETY AND PUBLIC HEALTH

Preventing fatal and serious traffic injuries is an intersectional issue that is not only about the physical design of roadways but also social, economic, and political power. Solutions for improving road safety and preventing serious crashes are more effective when they are developed with an understanding of contextual factors that impact roadway safety. Including holistic solutions to address upstream public health issues including mental health, discrimination, substance abuse, income inequality, and housing and job insecurity, will make roadways safer for everyone.

"Public health is focused on creating a safe transportation system through street design, but we are acutely aware of the need to also address contextual factors such as housing, mental and behavioral health, substance abuse, and cost of living." Public Health Data Report: Traffic Crash Deaths in Multnomah County, August 2023

Roadways are the meeting places of communities and can reflect the health of communities. Supporting solutions that complement traffic safety countermeasures, such as affordable housing and substance abuse rehabilitation will result in better outcomes.

Figure 2 Upstream Approach to Public Health Issues

Source: BCCDC Foundation for Population and Public Health

Figure 2 illustrates an upstream approach to addressing roadway safety. Core to the concept is promoting healthy environments including roads and streets, preventing injury by creating a transportation system where traffic crashes do not result in serious injury, and addressing social injustice to address the root causes of traffic safety disparities.

NOTABLE SAFETY ACTIONS SINCE 2021

The actions needed to significantly improve safety, protect people from traffic death and injury, and achieve a cultural shift that treats roadway deaths as unacceptable are multi-year endeavors. Although it may take years of sustained effort to realize substantial reductions in lives lost due to traffic crashes, regional partners have been taking actions to target our most significant and urgent problems to improve road traffic safety.

Table 1 provides a summary of notable actions of local, regional, and state governments with the support and championship of communities and advocates. These actions are in addition to ongoing city, county, regional, state, and advocacy led safety programs.

A cyclist exits a separated bikeway in SE Portland.
Source: Metro

Table 1 Notable Safety Actions Since 2021

Safe System Approach element	Notable safety actions since 2021
Safe People	Awarded $1.6 million regional funds to local SRTS programs for education and encouragement activities across the region. Passed the 2023 Bike Bus Bill (House Bill 3014) giving schools more flexibility spending state transportation funds. Instituted modifications to the Safe Routes to School program in the 2023 Omnibus Transportation Bill (House Bill 2099) increasing the radius for eligible schools, and updates to DMV regulations related to safety. Passed the 2021 Driving Under the Influence of Psilocybin bill (House Bill 3140). Added clarifications to laws related to Driving Under the Influence of Intoxicants (Senate Bill 201).
Safe Roads	Approved $613 million for capital projects to improve safety in the FY 21-24 and 24-27 MTIP, including $14 million for SRTS infrastructure projects and $47.4 million in regional funds. Applied the ODOT Blueprint for Urban Design to all urban projects scoped for the 2024/2027 STIP cycle, and several projects in the 2021/2024 STIP. Advanced safety improvements on high injury urban arterials, such as: Outer Division Safety Project, 82nd Avenue; 122nd Avenue SS4A, OR 8 at East Lane (Cornelius) Pedestrian Safety Project, OR 141: SW Hall Boulevard Pedestrian Safety Improvements. Continued planning for safety improvement on high injury urban arterials, including: Tualatin Valley Highway Transit Project, McLoughlin Boulevard Investments Strategy, 82nd Avenue Transit Project. Established the state Jurisdictional Transfer Advisory Committee (House Bill 2793) to recommend highways for jurisdictional transfer. Developed a new regional mobility policy that measures safety in addition to congestion.
Safe Vehicles	Developed research examining the role of vehicle design and speed as a factor in the severity of pedestrian injury in Oregon.
Safe Speeds	Expansion of Portland's use of cameras in traffic enforcement, up to 40 cameras at the end of 2024. Passed legislation to allow all cities in Oregon to install traffic cameras and set designated speeds on certain types of residential streets at up to 10 miles below the statutory speed (provided it's not less than 20 mph) (House Bill 2095). Passed legislation (House Bill 4105) making it easier for jurisdictions to review and issue citations based on photo radar.
Post-Crash Care	No new activities reported.

UPDATE ON THE ROADWAY SAFETY PROBLEM

Traffic violence continues to be one of the major public health crises facing many communities in the greater Portland region. In a trend seen in the region, in Oregon, and across the United States the number of traffic deaths have been on the rise for the past decade.

While cities, counties, the state, and the region make significant investments in proven safety measures, other factors that impact safety have been moving in the wrong direction. These factors include, increasing car size and car weight and increasing driver speed.

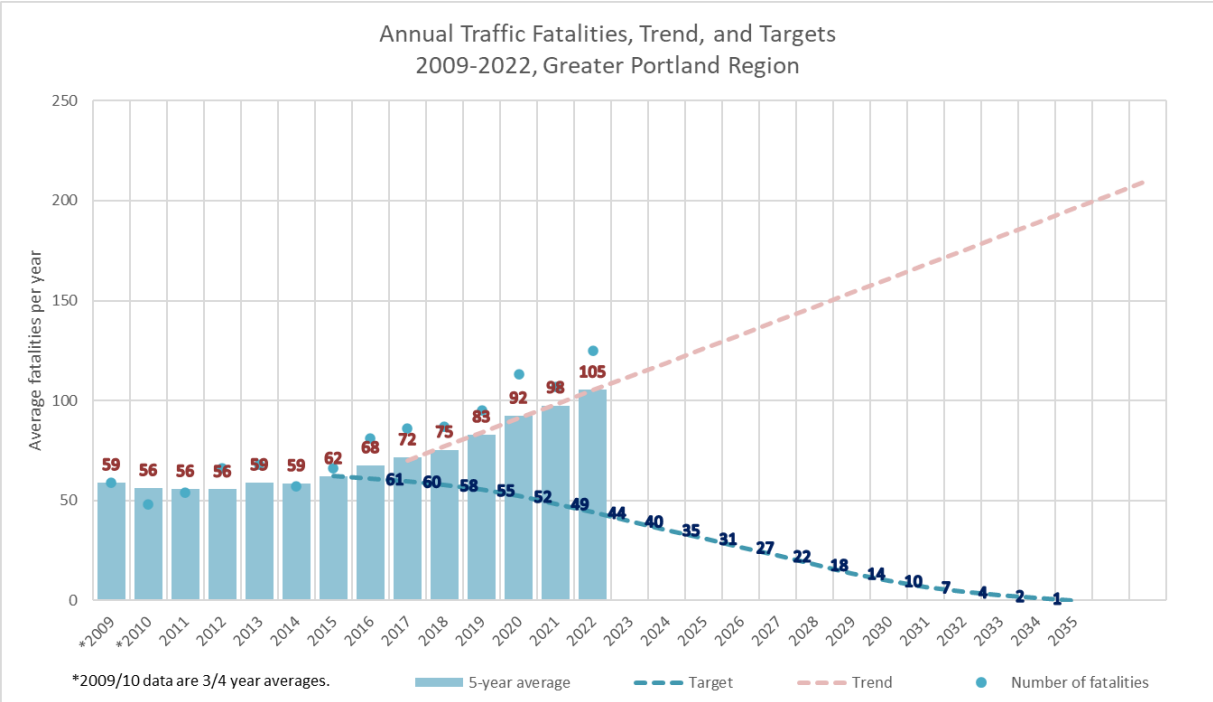
It will likely take years of sustained investments in proactive and systemic safety countermeasures that separate roadway users and calm traffic to realize substantial reductions in lives lost due to traffic crashes.

Analysis of traffic crashes in the greater Portland region since 2017 indicate:

- Traffic deaths are increasing.
- Pedestrian deaths have risen disproportionately over the past decade.
- Black and Native American people are at much higher risk of being killed in a traffic crash whether driving, walking, or bicycling.
- Intoxicated driving is a leading risk factor for deadly crashes.
- High traffic speeds continue to be a risk factor.
- Increasingly heavier, larger vehicles on roadways is a growing risk factor.
- Arterial roadways account for most deadly crashes.

Figure 3 illustrates that the region is not on track towards zero traffic deaths and serious injuries. The blue bars and red numbers show the increase in the annual average traffic deaths each year since 2009. The blue numbers and blue dotted line indicate regional targets. The average number of yearly traffic deaths increased 56% between 2016 and 2022, increasing, on average, by 8% each year.

Figure 3 Annual Traffic Fatalities, Trend, and Targets 2009-2022, Greater Portland Region



Source: ODOT crash data 2007-2021, ODOT preliminary crash data 2022, Metro 2018 RTP targets

Compared to 2021, traffic deaths in the greater Portland region in 2022[4] increased:

- 17% - 125 lives were lost, the highest total number recorded since 2007.
- 29% for people walking - 49 pedestrians were killed, the highest number recorded since 2007, the first year of data that Metro began tracking.
- 80% among motorcyclists, 27 motorcyclists were killed, the highest number recorded since 2007.

2021 Safety Performance Measures

Safety performance measures compare observed number and rate of traffic fatalities and serious injuries to targets set in the 2018 Regional Transportation Plan. The region is not on track to meet its targets. In fact, across all the measures summarized in Table 2, the region's streets have gotten less safe since compared to baseline data established in 2015.

[4] Preliminary 2022 Fatal & Serious Injury data, Oregon Department of Transportation, https://tvc.odot.state.or.us/tvc/

Table 2 Federal Safety Performance Measures, Greater Portland Region, 2017-2021

	5-year rolling averages		
Performance Measure	**2015 Baseline**	**2021 Target**	**2021 Actual**
Number of fatalities	62	49	98
Fatalities per 100 million vehicle miles traveled	0.6	0.4	0.9
Number of serious injuries	458	357	544
Serious injuries per 100 million vehicle miles traveled	4.5	3.3	5.0
Number of non-motorized fatalities and serious injuries	113	95	122

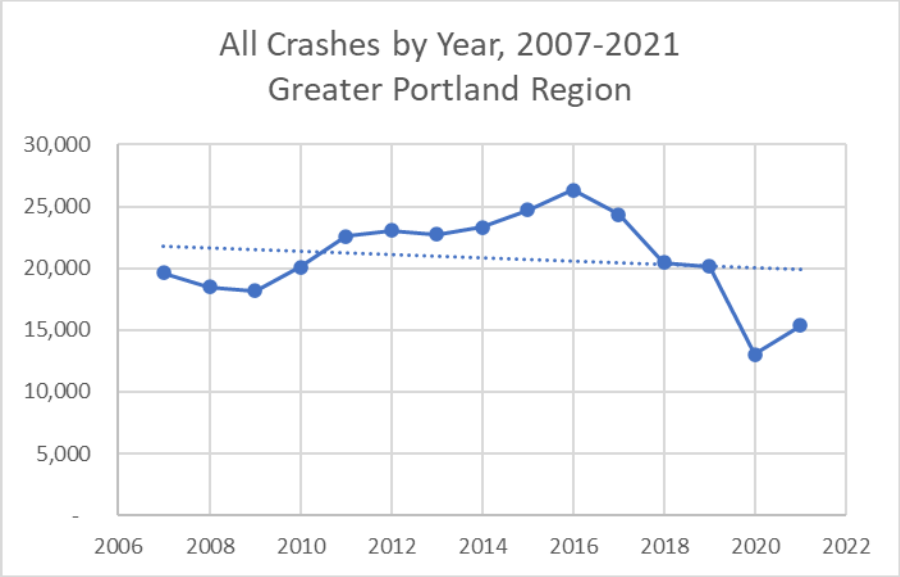
Source: Source: ODOT crash data 2017-2021, analyzed by Metro

Fatality Trends

While the total number of crashes has decreased since 2007, as shown in Figure 4, the number of deadly crashes has increased, especially since 2016, as shown in Figure 5. The increase is due primarily to the increase in pedestrian fatalities. The number of serious injury or life-changing crashes after remaining somewhat constant since 2007 increased 134% from 2020 to 2022, shown in Figure 6.

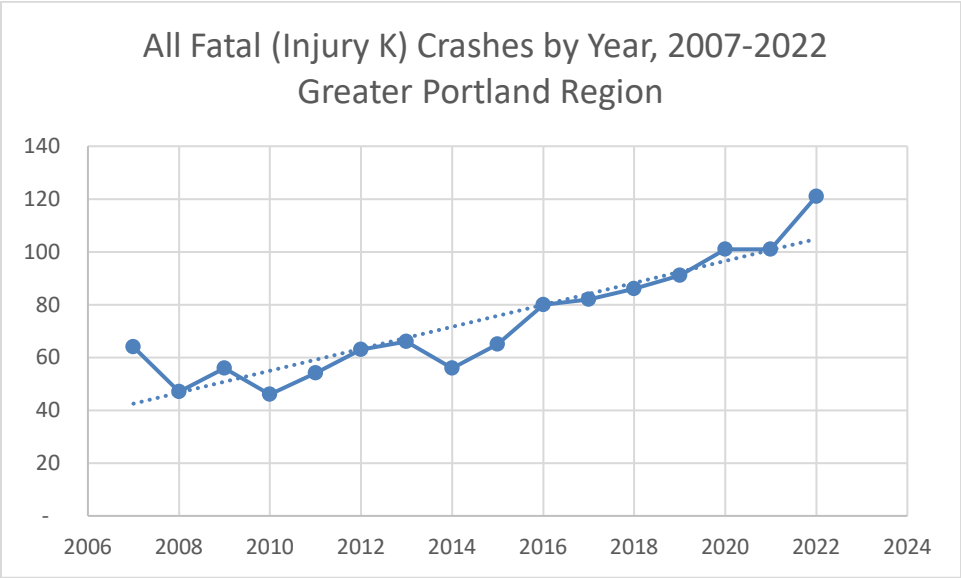
This pattern points to the need to focus on the contributing factors of fatal traffic crashes, namely intoxication, speed, roadway design, pedestrian safety, and heavier vehicles.

Figure 4 All Crashes by Year, 2007-2021 Greater Portland Region



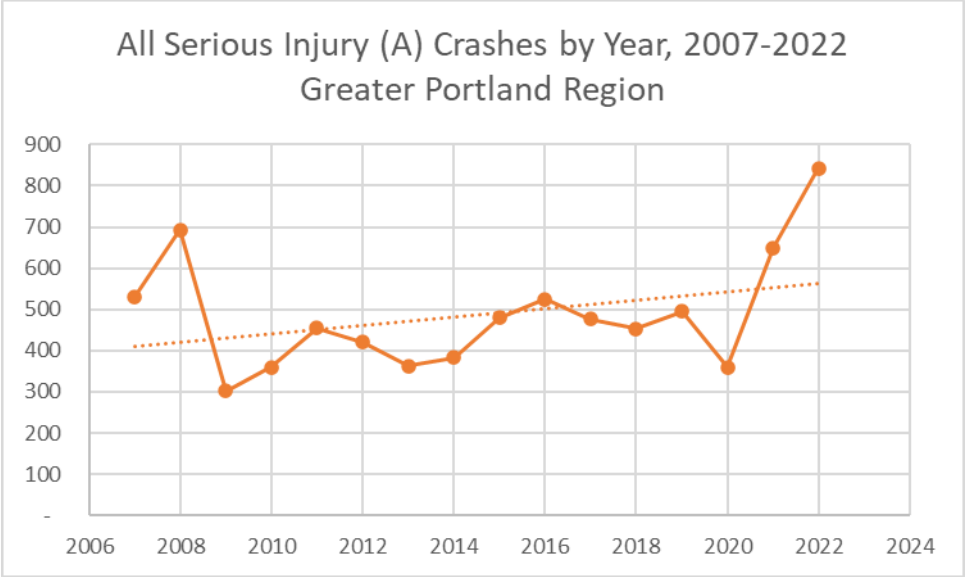
Source: ODOT crash data 2007-2021

Figure 5 All Fatal (Injury K) Crasher by Year, 2007-2022 Greater Portland Region



Source: ODOT crash data 2007-2021, ODOT preliminary crash data 2022

Figure 6 All Serious Injury (A) Crashes by Year, 2007-2022 Greater Portland Region



Source: ODOT crash data 2007-2021, ODOT preliminary crash data 2022

Race and Ethnicity

Within the three counites, Native Americans and Black people are being killed in traffic crashes at higher rates than white people. Analysis from the National Highway Traffic Administration concludes that by several measures, roadway travel is less risky for white people than for most other race-ethnicity groups; this

disparity persists, even accounting for the amount and mode of travel.[5] And, recent analysis from Multnomah County Health Department found that rising traffic fatality rates in the region are largely driven by growing pedestrian fatalities, the impacts of which are disproportionately experienced by Black, Indigenous, and people of color (BIPOC), people with lower incomes, and people likely experiencing houselessness.[6]

For all traffic fatalities 2017-2022 in Clackamas, Multnomah, and Washington counties:

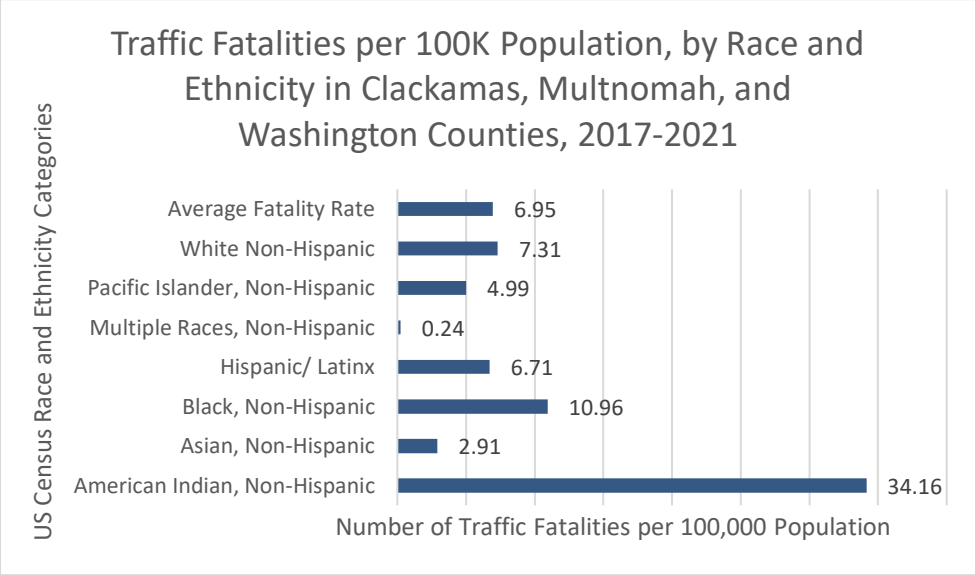
- Black people experience a fatality rate 40% higher than white people, though lower than the national average.
- Native Americans experience a traffic fatality rate that is 129% higher than white people.
- Hispanic/ Latinx people experience a traffic fatality rate that is 18% lower than white people, and Asian people experience a traffic fatality rate that is 186% lower than white people. This is consistent with national rates.[7]
- Black pedestrians are killed at a rate twice as high compared to white pedestrians, and Native American pedestrians experience a traffic fatality rate that is 141% higher than the rate of white pedestrians.
- Three quarters of serious pedestrian and bicycle crashes, and 65% of all serious crashes, occur in areas identified as Equity Focus Areas.

[5]Evaluating Disparities in Traffic Fatalities by Race, Ethnicity, and Income, NHTSA, United States Department of Transportation, January 2022 https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813188

[6] Public Health Data Report: Traffic Crash Deaths in Multnomah County Taking a Safe System approach to address traffic-related fatality trends & contributing factors, Multnomah County, 2020-2021 August 2023 https://multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com/s3fs-public/Revised_Final_MultCo%20traffic%20deaths%202020_2021_0.pdf

[7] Disparities by Race or Ethnic Origin, National Safety Council https://injuryfacts.nsc.org/motor-vehicle/road-users/disparities-by-race-or-ethnic-origin/

Figure 7 Traffic Fatalities per 100k Population, by Race and Ethnicity in Clackamas, Multnomah, and Washington Counties, 2017-2021



Source: Fatality Analysis Reporting System, 2017-2021, Race and Ethnicity Population Estimates 2020 Census, Metro

Pedestrians

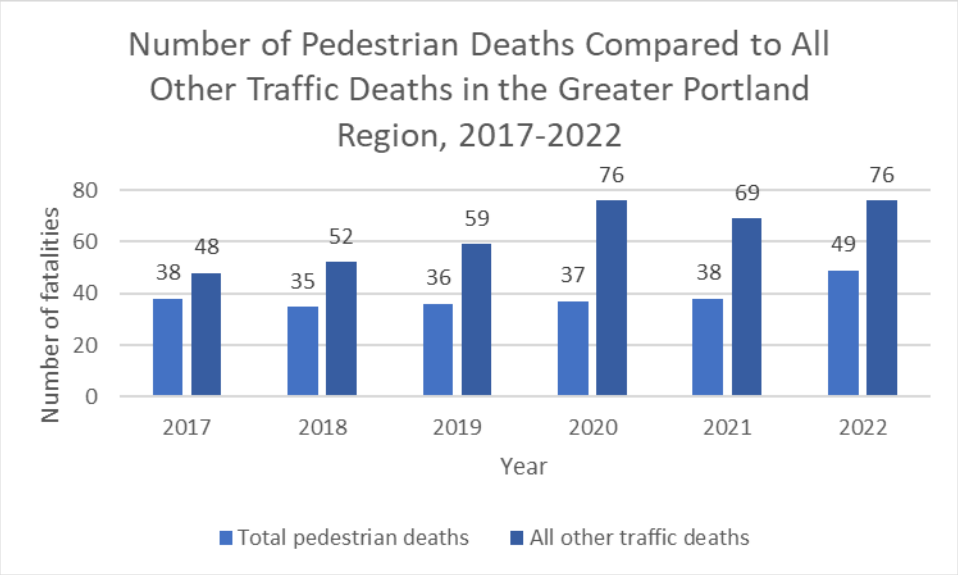
Fatal pedestrian traffic deaths in the region, in Oregon, and across the United States continue to rise; the 2022 Dangerous by Design report[8] identified Oregon in the top 20 states that are most dangerous for pedestrians based on pedestrian fatalities between 2016 and 2020.

- People walking are more likely to die in traffic crashes than people traveling by other modes of transportation. While pedestrians are involved in only 2.5% of all crashes, they represent 38% of all traffic fatalities.
- Preliminary crash data for 2022 suggests that it will likely to be the highest count of pedestrian deaths since Metro began tracking crashes, with 49 people were killed in a traffic crash while walking, a 29% increase from 2021.
- Dark or dim light conditions are a contributing factor in fatal pedestrian crashes - 75% of pedestrian deaths in the region occur when it is dark or dim out, while 57% of motor vehicle occupant deaths, 50% of bicycle deaths, and 44% of motorcycle deaths occur in dark/dim lighting conditions.[9]

[8] 2022 Dangerous by Design, Smart Growth America, https://smartgrowthamerica.org/dangerous-by-design/

[9] Dim/dark lighting conditions are darkness-no streetlights, darkness-with street lights, dawn (twilight), dusk (twilight).

Figure 8 Number of Pedestrian Deaths Compared to All Other Traffic Deaths in the Greater Portland Region, 2017-2022

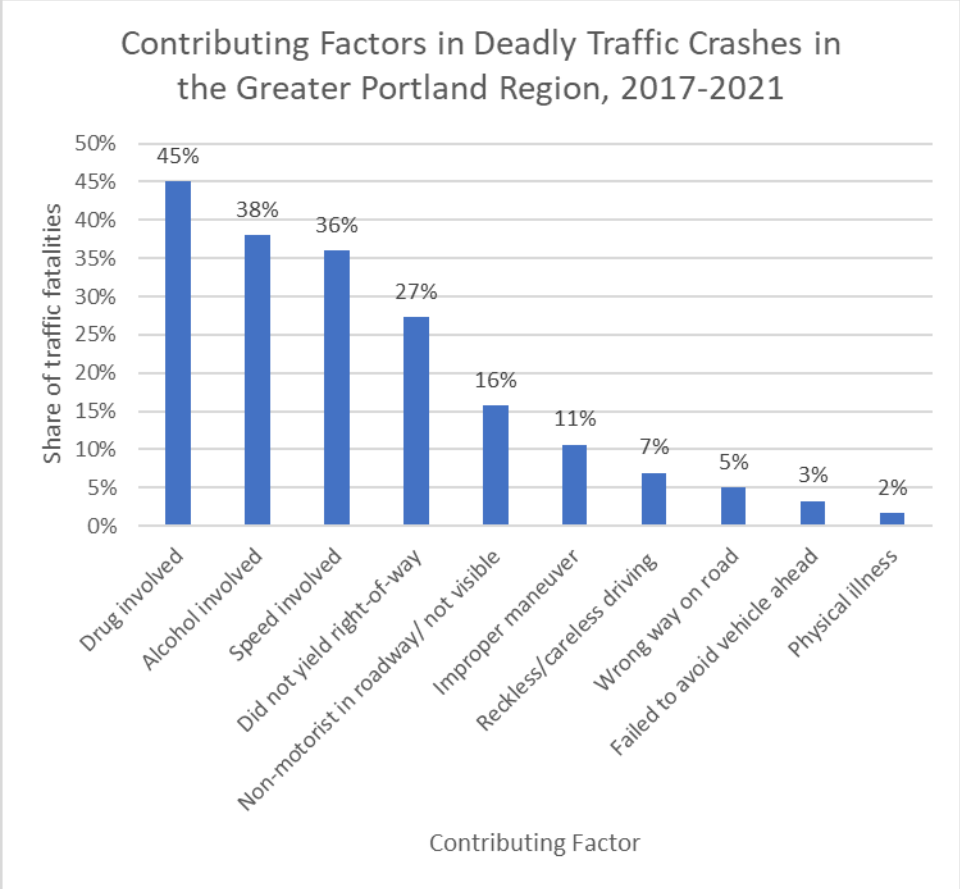


Source: ODOT crash data 2007-2021, ODOT preliminary crash data 2022

Speed and Intoxication

While there are many factors that contribute to the likelihood of a crash occurring, higher speeds and drugs and alcohol are among the top contributing factors to deadly crashes in the region.

Figure 9 Contributing Factors in Deadly Traffic Crashes, Greater Portland Region, 2017-2021

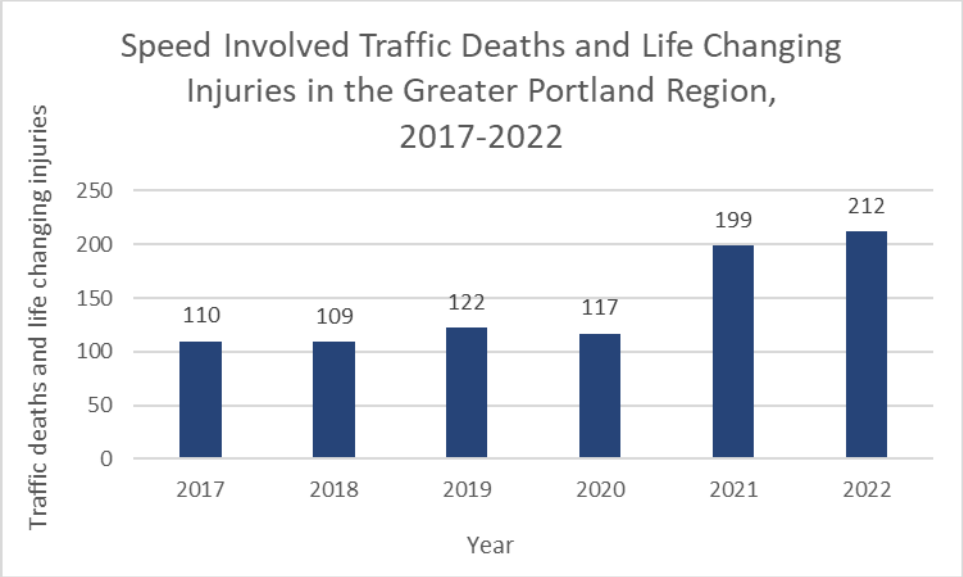


Source: ODOT crash data 2007-2021
Crash causes, speed involved flag, drug and alcohol involved flag

- Speed involved crashes tend to be deadlier: 36% of all traffic deaths involve speeding, while only 7% of all crashes involve speeding.
- Speed involved traffic fatalities and life changing injuries in the region have doubled since 2017 and increased 81% from 2020 to 2022 reflecting a national trend. In 2020 there were 117 traffic deaths involving speed, in 2022 there were 212.
- 51% of fatalities in motor-vehicle-only crashes (crashes not involving pedestrians, motorcyclists or bicyclists) involved speeding (average of 2017-2021 crash data).
- 15% of pedestrian fatalities involve speed, and18% of all motorcycle crashes and 45% of fatal motorcycle crashes involve speed
- 38% of all traffic deaths involve alcohol: 41% of motor vehicle occupant deaths, 36% of pedestrian deaths, 28% of motorcyclist deaths, and 19% of bicyclist deaths involve alcohol.

- 49% of all traffic deaths involve drugs: 49% of motor vehicle occupant deaths, 49% of pedestrian deaths, 43% of motorcyclist deaths, and 44% of bicyclist deaths involve drugs.

Figure 10 Speed Involved Traffic Deaths and Life Changing Injuries in the Greater Portland Region, 2017-2022



Source: ODOT crash data 2007-2021, ODOT preliminary 2022 fatal and serious injury data

Vehicle Design

Heavier vehicles are contributing to more deadly crashes. The share of larger and heavier vehicles in the United States and Oregon has been steadily rising over the past ten years, as shown in Figure 11 and Figure 12.

Figure 11 Percentage Change of New Vehicle Sales by Body Type, 1990-2022

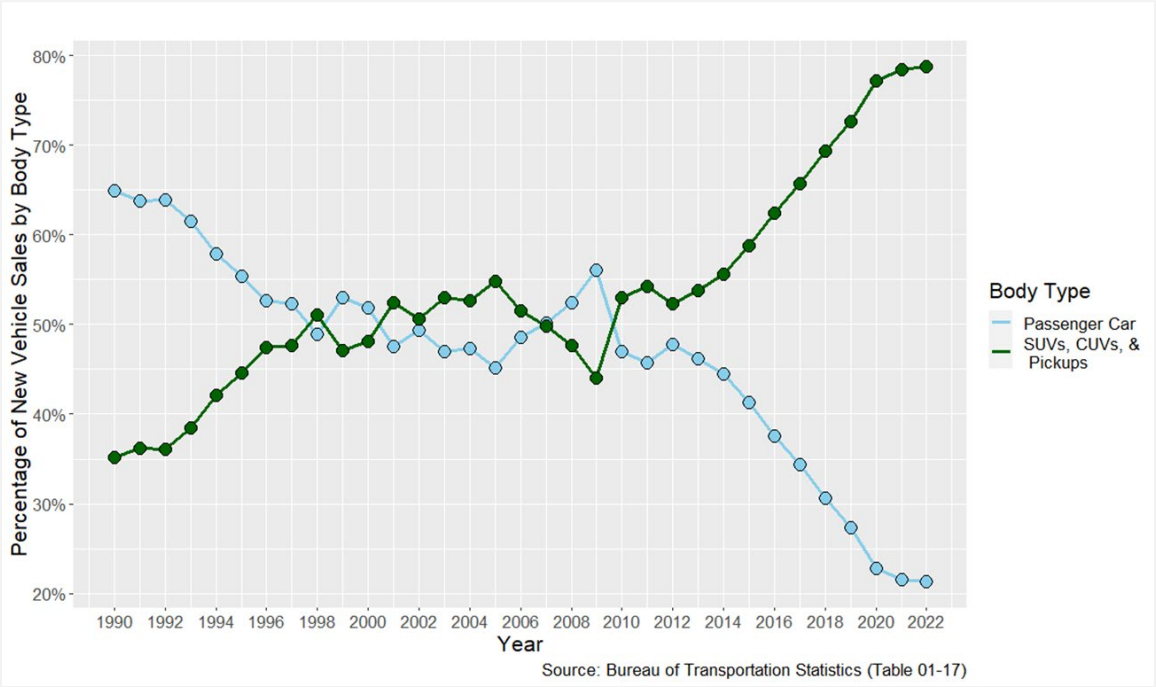
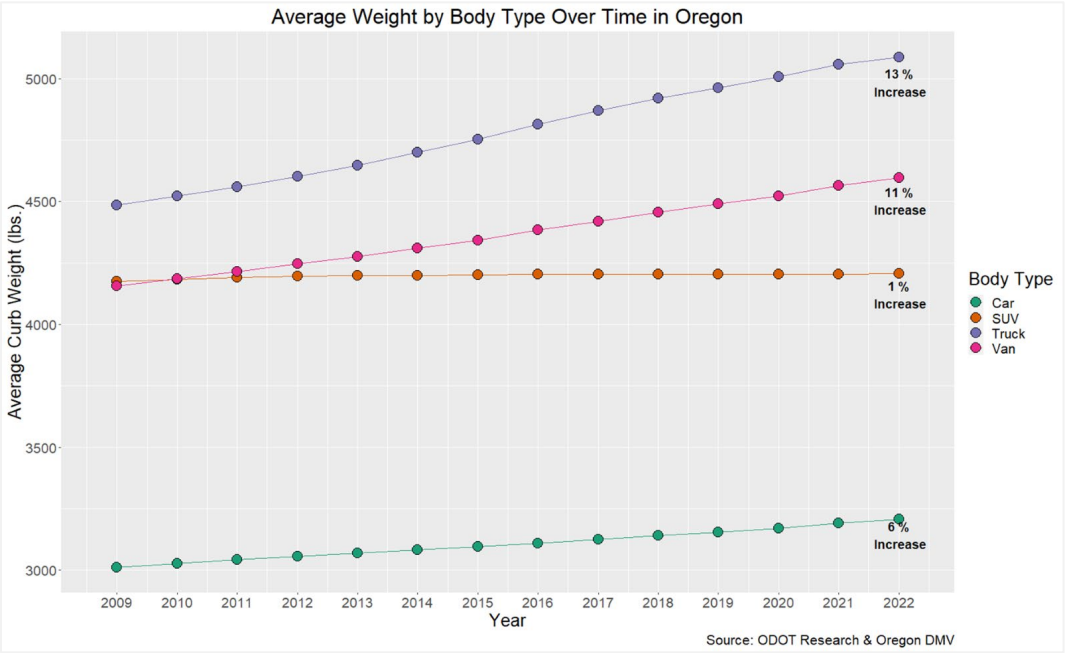


Figure 12 Average Vehicle Weight by Body Type Over Time in Oregon, 2009-2022



The growing share of heavier vehicles correlates to the increase in deadlier crashes and pedestrian fatalities. Research indicates that larger vehicles including pickups, SUVs, CUVs, and vans significantly increase the odds of a pedestrian being seriously or fatally injured in the event of a crash, even at lower speeds.[10], [11]

Source: Consumer Reports[12]

As vehicles get larger the impact of speed may be even more pronounced. Many people are familiar by now with the graphics showing the impact of speed on survivability for people walking, such as shown in Figure 13 from the National Traffic Safety Board and Smart Growth America. An article by Smart Growth America points out that "One important bit of fine print is that the data behind this graphic (and almost all the other versions you see all over the internet) are sourced from a 1995 European study that predates the significant shift of the vehicle fleet (and increase in size) of the last two decades. This means that, today, it could be that the likelihood of surviving crashes with an "average" vehicle in the US—at all speed levels—could be even worse than the graphic shows, because the "average" vehicle is so much larger today—and getting bigger."[13]

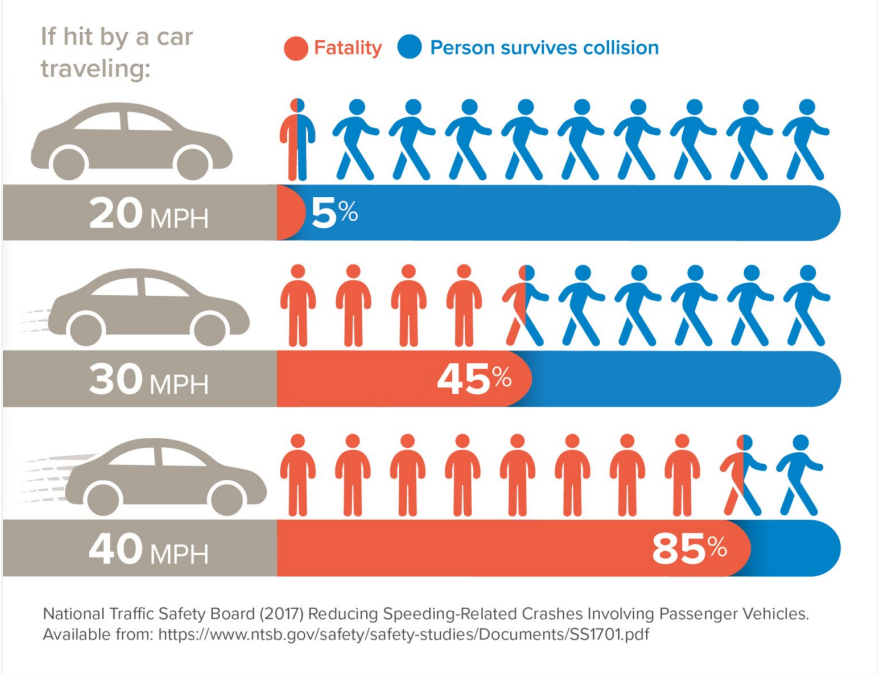
[10] Vehicle Design and Speed: Factors Associated with Pedestrian Injury Severity in the 1 Pacific Northwest, Josh F. Roll, Oregon Department of Transportation, Submitted for presentation and publication at the 103rd Annual Meeting of the Transportation Research Board, Submitted 8/1/2023

[11] SUVs Responsible for More Pedestrian Deaths, December 22, 2003 https://today.rowan.edu/news/2003/12/suvs-responsible-more-pedestrian-deaths.html

[12]The Hidden Danger of Big Trucks: Pickup trucks are getting larger and becoming a hazard to pedestrians and drivers of smaller vehicles, Consumer Reports, Keith Barry, June 08, 2021 https://www.consumerreports.org/car-safety/the-hidden-dangers-of-big-trucks/

[13] "Bigger vehicles are directly resulting in more deaths of people walking" Steve Davis, April 12, 2021, Smart Growth America, https://smartgrowthamerica.org/bigger-vehicles-are-directly-resulting-in-more-deaths-of-people-walking/

Figure 13 Probability of Survival Based on Speed of Vehicle Impact



Urban Arterials

Urban arterials are critical transport corridors. They are transit and freight routes, and important routes for trips made by car, walking and bicycling. They typically have speeds of at least 35 mph with four or more travel lanes and they carry tens of thousands of vehicles per day. Without systemic safety interventions, these roads are more dangerous due to a combination of high traffic speeds and volumes, more lanes, a mix of travel modes and auto-oriented design and land uses. These safety issues are exacerbated for pedestrians and bicyclists. Most regional high injury corridors are urban arterials. Most speed involved, and drug and alcohol involved serious crashes occur on urban arterials. [14]

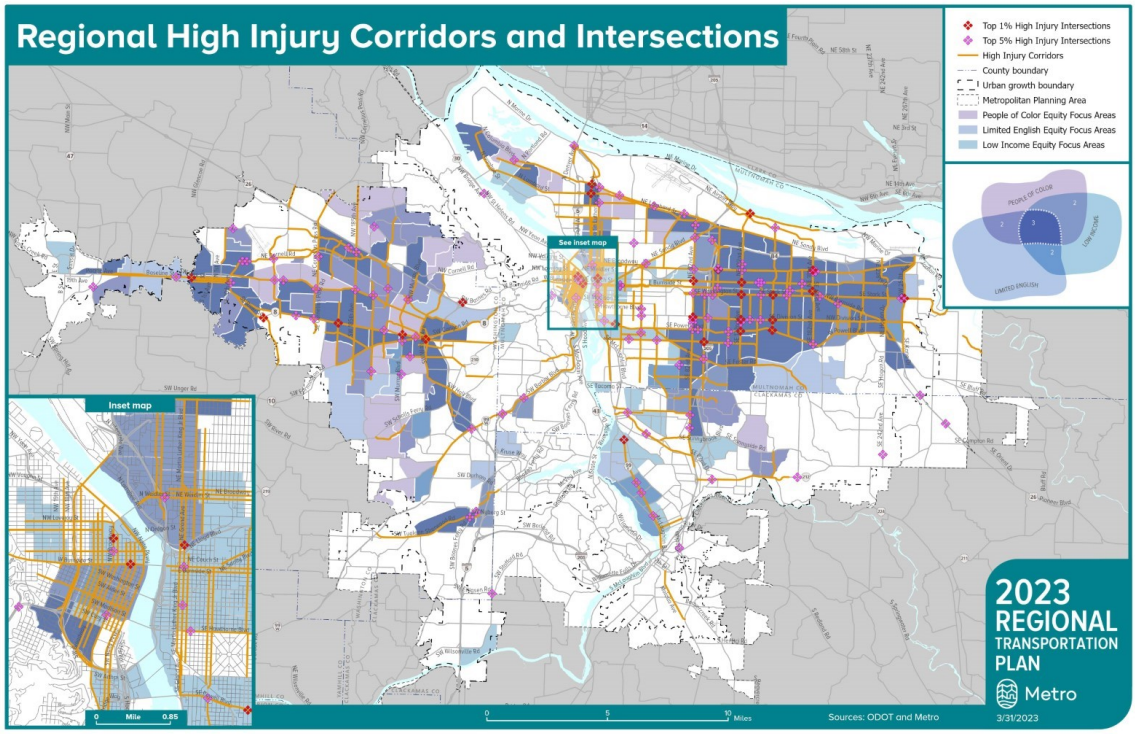
- 68% of traffic deaths and serious injuries occur on urban arterials, and 41% of traffic deaths and serious injuries occur on major arterials, which make up only 5% of the roadway miles in the region.
- There is more than one fatal crash every year on every mile of the deadliest high injury corridors in the region.

[14] Metro 2016-2020 High Injury Corridors Dashboard, 2022 https://experience.arcgis.com/experience/6b5ae16aad814e6e81546bcc4ffdf964

- 54% of high injury corridors and 71% high injury intersections are in equity focus areas, disproportionately impacting people of color and people with lower incomes.
- 59% of all alcohol involved crashes, 62% of all drug involved crashes, and 55% of all speed involved crashes occur on arterials.

Figure 14 shows regional high injury corridors, intersections, and equity focus areas (census tracts that above regional average populations of people of color, people with limited English proficiency and people with low incomes) identified in the Regional Transportation Plan. Sixty percent of all fatal and serious crashes and all pedestrian and bicycle crashes in the region are on these corridors, which account for about 6% of all roadway miles.

Figure 14 Regional High Injury Corridors, Intersections and Equity Focus Areas[15]



Source: 2023 Regional Transportation Plan

[15] Regional High Injury Corridors and Intersections Dashboard (2016-2020 crashes), https://experience.arcgis.com/experience/6b5ae16aad814e6e81546bcc4ffdf964

TAKING ACTION – NEW SAFETY STRATEGIES

The actions needed to significantly improve safety are multi-year endeavors. Although it may take years of sustained effort to realize substantial reductions in lives lost due to traffic crashes, regional partners continue to implement short and long-term strategies and actions to target our most significant and urgent problems to improve road traffic safety.

The Safe System Approach requires a culture that places safety and equity first and foremost in road system investment decisions. Systemic interventions that focus on creating a safe transportation system are needed to address the safety trends highlighted in this report.

Table 3 provides proposed strategies and actions that local, regional, and state governments, communities and advocates could focus on in the coming years, in addition to ongoing city, county, regional, state, and advocacy led safety programs.

Two adults and a child walk on a sidewalk along Tualatin Valley Highway in Cornelius.
Source: Metro

Table 3 Planned and proposed safety strategies

Safe System Approach element	Planned and proposed safety strategies for the next two years
Safe People	Continue investments in stable housing, harm prevention, and behavioral health. Support legislation to lower legal limits for blood alcohol content (BAC) to 0.05 or lower. Countries with lower BAC levels have lower fatality rates. Develop in-depth pedestrian traffic crash analysis with corresponding countermeasures and strategies. Develop in-depth crash victim analysis (age, seat belt use, BAC level, etc.) Support strategies to reduce intoxicated driving, including enforcing Oregon law to not serve people who are visibly intoxicated.
Safe Roads	Form a regional work group and convene interagency partners for coordination. Develop strategies for additional funding (including SS4A) and prioritize HSIP and other funding for systemic, corridor wide safety interventions on the urban arterials where most deadly crashes occur, with a focus on pedestrian safety and speed reduction. Pilot ODOT Vulnerable User Crash Response team. Hold workshops on street design, such as "Improving Pedestrian Safety on Urban Arterials: Learning from Australasia. Implement findings from the Oregon Vulnerable Road User Assessment Safety Assessment. Develop regional high injury corridor profiles. Develop in-depth assessment of primary causes and contributing factors of serious crashes for each county and city in the region.
Safe Vehicles	Identify and focus on interventions and incentives to reduce the impact of heavier vehicles. Support legislation that prioritizes people when considering the safety of new cars. Gather data to understand kinetic energy involved in crashes. Advocate for state-level policies adopting intelligent speed technology systems and alcohol detection systems in new vehicles.
Safe Speeds	Focus on reducing speeds on high injury urban arterials through automated enforcement, roadway design and lowering posted speeds to a maximum of 30mph. Increase the number of fixed speed and red-light cameras in the region. Develop SS4A safety camera toolkit to support implementation. Hold workshop on speed setting and speed management.
Post-Crash Care	Complete a scan of best practices for EMS response times to crash sites and assessment of needs. Review state and national (NRSS) strategies on post-crash care to identify strategies that could be supported at the regional level. Use planned data exchange to link EMS response activities and hospital outcomes.

DATA AND METHODS

Data and Geography

Unless otherwise specified, all analysis uses the Metropolitan Planning Area (MPA) boundary. Other boundaries used include county and city boundaries.

- ODOT crash data 2007-2021, summarized by Metro and available at RLIS Discovery.[16] Also see ODOT Crash Statistics and Reports.[17]
- Preliminary 2022 Fatal & Serious Injury data, Oregon Department of Transportation[18]
- Fatal Analysis Reporting System (FARS)[19]
- Metro streets data available at RLIS Discovery
- Race and Ethnicity Population Estimates 2020 Census, Metro
- American Community Survey, 1-Year and 5-Year

Data Tables

- Between 2017 and 2021 in the greater Portland region, there were 93,322 crashes documented in ODOT crash data. 232,435 people were involved in crashes, and 184, 279 vehicles (including bicycles and motorcycles).
- Between 2007 and 2021, there were 312,422 crashes documented in the ODOT crash data.

[16] Metro RLIS https://rlisdiscovery.oregonmetro.gov/search?q=crash

[17] ODOT Crash Statistics and Reports https://www.oregon.gov/odot/data/pages/crash.aspx

[18] TDS Crash Reports https://tvc.odot.state.or.us/tvc/

[19] https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars

Table 4 Crashes in the Greater Portland Area, 2007-2021

Year	Fatal Injury Crash (K)	Serious Injury Crash (A)	Minor Injury Crash (B)	Possible Injury Crash (C)	No Apparent Injury/PDO (O)	Total
2007	64	531	2,132	4,837	12,073	19,637
2008	47	693	1,936	5,029	10,755	18,460
2009	56	302	1,873	6,042	9,921	18,194
2010	46	359	2,310	7,117	10,267	20,099
2011	54	455	2,489	8,404	11,191	22,593
2012	63	421	2,653	8,556	11,371	23,064
2013	66	363	2,429	7,666	12,213	22,737
2014	56	383	2,512	8,219	12,123	23,293
2015	65	480	2,655	9,881	11,635	24,716
2016	80	525	2,701	10,099	12,902	26,307
2017	82	477	2,581	9,019	12,174	24,333
2018	86	453	2,502	8,537	8,858	20,436
2019	91	495	2,281	8,326	8,970	20,163
2020	101	360	1,647	4,851	6,051	13,010
2021	101	649	3,276	4,514	6,840	15,380
Total All Years	1,058	6,946	35,977	111,097	157,344	312,422

Table 5 2021 Traffic Fatality Rates per 100,000 People

Geography	Population Estimate	Total fatalities 2017-2021	Fatality rate per 100,000 people
State of Oregon	4,246,155	2541	12
Region (MPA)	1,740,845	488	6
Clackamas County	422,537	174	8
Multnomah County	803,377	337	8
Washington County	600,811	123	4
City of Beaverton	98,204	18	4
City of Cornelius	12,893	3	5
City of Durham	2,073	0	0
City of Fairview	10,439	6	11
City of Forest Grove	25,767	3	2
City of Gladstone	12,017	2	3
City of Gresham	113,106	54	10
City of Happy Valley	23,442	8	7
City of Hillsboro	106,651	25	5
City of Johnson City	451	0	0
City of King City	4,992	0	0
City of Lake Oswego	40,390	4	2
City of Maywood Park	1,054	0	0
City of Milwaukie	21,108	1	1
City of Oregon City	37,160	10	5
City of Portland	642,218	248	8
City of Rivergrove	545	0	0
City of Sherwood	20,281	1	1
City of Tigard	54,750	6	2
City of Troutdale	16,353	8	10
City of Tualatin	27,821	2	1
City of West Linn	27,173	3	2
City of Wilsonville	25,887	2	2
City of Wood Village	4,435	3	14

Source: ODOT 2021 crash data, American Community Survey, 1-year and 5-Year population estimates. Notes: 1) Portland Metropolitan Planning Area geographically defined as Oregon Census tracts that intersect Metropolitan Planning Area boundary. 2) 1-year estimates only available for geographies with 65,000 persons or more.

RESOURCES

The following resources support efforts of communities to apply the Safe System approach and make streets safer for all.

Reports, Plans and Strategies

- 2023 Progress Report on the National Roadway Safety Strategy, United States Department of Transportation, February 2023
- Public Health Data Report: Traffic Crash Deaths in Multnomah County Taking a Safe System approach to address traffic-related fatality trends & contributing factors, Multnomah County, 2020-2021, August 2023
- Vision Zero Portland 2022 Deadly Traffic Crash Report, City of Portland, 2022
- Oregon FFY 2023 Highway Safety Plan, Oregon Department of Transportation
- Regional Transportation Safety Strategy, 2018, Metro

Data and Tools

- Fatality and Injury Reporting System Tool (FIRST) This query tool allows a user to construct customized queries from the Fatality Analysis Reporting System (FARS) and from the Crash Report Sampling System (CRSS).
- Oregon Health Authority, Oregon Transportation Safety Dashboard
- Metro 2016-2020 High Injury Corridors Dashboard

Race and Ethnicity

- Disparities by Race or Ethnic Origin, National Safety Council
- Evaluating Disparities in Traffic Fatalities by Race, Ethnicity, and Income, NHTSA, United States Department of Transportation, January 2022
- Race and income disparities in pedestrian injuries: Factors influencing pedestrian safety inequity, Josh Roll, Nathan McNeil, Transportation Research Part D: Transport and Environment, Volume 107, 2022

Pedestrian Safety, Speed, and Urban Arterials

- Global Benchmarking Program: Reducing Pedestrian Fatalities and Serious Injuries on Urban Signalized Arterials, United States Department of Transportation, September 2022
- Safe and Healthy Urban Arterials, Policy Brief, Metro RTP, 2023
- Speeding Away from Zero: Rethinking a Forgotten Traffic Safety Challenge, Governors Highway Safety Association, January 2019
- Speed Safety Camera Program Planning and Operations Guide, United States Department of Transportation, 2023

If you picnic at Blue Lake or take your kids to the Oregon Zoo, enjoy symphonies at the Schnitz or auto shows at the convention center, put out your trash or drive your car – we've already crossed paths.

So, hello. We're Metro – nice to meet you.

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