



Agency Priority Goal Action Plan

Reduce Surface Transportation-Related Fatalities

Goal Leaders:

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Overview

Goal Statement

Reduce overall surface transportation-related fatalities.

By September 30, 2021, the Department will reduce the rate of motor vehicle fatalities to 1.01 per 100 million vehicle miles traveled (VMT).

Challenges

- **Impact of COVID-19 pandemic:**
 - The COVID-19 pandemic has dramatically reduced transit ridership across the country, with an estimated reduction in ridership in the last months of FY 2020 of 63 percent from pre-pandemic levels. In response to reduced ridership and declines in fare revenue, many transit providers have reduced services. Despite these reductions in transit ridership and transit services, neither the number of transit-related fatalities nor the transit-related fatality rate per 100 million passenger miles traveled decreased during FY 2020. FTA is investigating the underlying causes of rising transit fatalities.
 - In this unprecedented situation, early projections from the first half of 2020 show that motor vehicle-related fatalities decreased slightly by 2 percent compared to 2019, but VMT decreased by 16.6 percent over the same time period. Anecdotal evidence from law enforcement partners indicates that less traffic has led to excessive speeding by some, which could negatively affect the fatality rate. The number of large truck and bus investigations and inspections decreased due to the inability to conduct onsite visits. Fewer violations are being reported. The backlog will be cleared as onsite investigations and inspections resume.
- **Distracted driving:** New forms of consumer communication and entertainment technology within motor vehicles continue to pose distraction risks.

Overview

- **Drug-impaired driving:** As more States relax prohibitions on marijuana use, drug-impaired driving remains an emerging threat.
- **Vulnerable road user fatalities:** Pedestrian and bicyclist fatalities continue to rise.

Opportunities

- New technologies and innovations can improve safety in all modes of surface travel. Automated Driving Systems (ADS) hold especially great promise for reducing crashes, injuries, and fatalities. The Department will provide National leadership on the testing and safe deployment of these emerging driver assistance technologies. This includes research on the potential of vehicle-to-infrastructure technology to provide faster, more efficient emergency medical service (EMS) and other public safety agency responses, and to equip roadway infrastructure for the future of connected safety technologies.
- The New Car Assessment Program (NCAP) can provide additional tools to help consumers make more informed choices on safety performance when purchasing new vehicles, encourage market-based incentives for automakers to continue investing in innovative safety technologies, and provide new technologies tied to the safety of pedestrians and other vulnerable road users such as cyclists.
- [Proven safety countermeasures](#) can be promoted and installed across the country to dramatically reduce severe crashes. For example, in a multi-year study of nearly 300 sites across six States, High Friction Surface Treatments¹ reduced the number of injury and fatal crashes by 48 percent at horizontal curves and 63 percent at interchange ramps. More broadly, over the two-year period from January 2018 to December 2019, the average number of States advancing the most recent FHWA proven safety countermeasures beyond the demonstration stage increased from 13 to 22.

¹ High friction surface treatments (HFST) are pavement treatments that dramatically and immediately reduce crashes, injuries, and fatalities associated with friction demand issues, such as: (1) a reduction in pavement friction during wet conditions, and/or (2) a high friction demand due to vehicle speed and/or roadway geometrics.

Overview

- Data-driven approaches are used to develop and disseminate evidence-based safety countermeasures for effective National safety programs.
- New data sources and more robust analytical tools help the Department to identify problem areas and prioritize safety strategies more quickly.

Leadership & Implementation Team

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DOT Secretary

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James Owens: NHTSA Deputy Administrator
Wiley Deck: FMCSA Deputy Administrator

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FHWA Executive Director

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Agency Partners

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Agency Partners

Motor Carrier Safety Advisory
Committee (MCSAC)
Medical Review Board (MRB)

Goal Structure & Strategies

The FY 2020 and FY 2021 Agency Priority Goals (APGs) align with the Safety strategic goal in the [FY 2018-2022 DOT Strategic Plan](#) and the strategic objective, *Systemic Safety Approach*, under that goal. As illustrated in the figure below, the Department will implement the following key strategies to accomplish this objective:

Key Strategies

- Pursue data driven, evidence-based solutions to improve the safety of all vehicles and road users;
- Improve and enhance data collection and analysis;
- Research and deploy advanced vehicle technology;
- Develop and enforce vehicle safety standards;
- Collaborate with partners to conduct National safety campaigns to promote safe driving practices;
- Work with State, tribal, and local partners to encourage roadway infrastructure improvements and safer roadway design;
- Boost implementation of proven safety countermeasures and address risks that impact vulnerable road users and rural communities; and
- Provide oversight to commercial operators and drivers.



Strategic Objective: Systemic Safety Approach

Mitigate risks and encourage infrastructure and behavior change by using a data-driven systemic safety approach to identify risks, enhance standards and programs, and evaluate effectiveness.

Goal Structure & Strategies

This APG is measured through the following performance goals and indicators:²

Reduce Total Motor Vehicle-Related Fatalities (Overall)

- Indicator: Total Motor Vehicle-Related Fatalities
- Indicator: Motor Vehicle-Related Roadway Fatalities Per 100 Million VMT

Reduce Motor Vehicle-Related Fatalities (by Type)

- Indicator: Passenger Fatalities Per 100 Million VT
- Indicator: Large Truck and Bus Fatalities Per 100 Million VMT
- Indicator: Non-Occupant Fatalities (Pedestrian, Bicycle) Per 100,000 Population
- Indicator: Motorcycle Fatalities Per 100,000 Motorcycle Registrations

Reduce Transit-Related Fatalities

- Indicator: Total Transit Fatalities
- Indicator: Total Transit Fatalities per 100 Million Passenger Miles

Reduce Transit Collisions Involving Persons

- Indicator: Total Transit Collisions with Persons

Reduce Rail-Related Deaths and Injuries

- Indicator: Highway-Rail Grade Crossing Incidents
- Indicator: Rail Right-of-Way Trespass Incidents

Reduce Fatalities Caused by Pipelines and Hazardous Materials

- Indicator: Fatalities Caused by the Release of Hazardous Materials Transported Via Pipeline or Surface Transportation Conveyance

² For more information on these performance goals and indicators, please see <https://www.transportation.gov/mission/budget/fy-2019-performance-report-and-fy-2021-performance-plan-main-document>

Summary of Progress – FY 2020 Q1-Q4

National Highway Traffic Safety Administration (NHTSA)

- NHTSA will advance its efforts on ADS by facilitating additional safety discussions with stakeholders, researching and developing safety performance measures and testing procedures for these technologies, and identifying unintended and unnecessary barriers to safety innovation within existing standards.
- NHTSA will explore ways to use vehicle-to-infrastructure technology through a pilot to provide faster, more efficient EMS and other public safety agency responses, and to equip roadway infrastructure for the future of connected safety technologies. Additionally, the agency plans to update the National EMS Education Standards, a major resource for States to ensure entry-level EMS clinicians are prepared to provide high-quality medical care to injured patients throughout the Nation.
- As new technologies are developed and deployed, it will be important to help consumers make more informed choices on safety performance when purchasing new vehicles. In 2020, the agency will request public comment on its plans to update the NCAP, including an evaluation of newer crash avoidance technologies.
- While advanced vehicle safety technology holds much promise for the future, it is equally important to remain focused on the behavioral factors involved in crashes, as human error is a primary factor in more than 90 percent of all serious crashes. Through its \$600 million State highway safety grant programs, NHTSA partners with State Highway Safety Offices to identify their greatest safety risks and promote the adoption of comprehensive programs that offer proven approaches to achieve State targets and National safety goals.
- Drug-impaired driving prevention continues to be a priority for the agency. NHTSA will continue implementing its Drug Impaired Driving Initiative to raise awareness, educate partners and share best practices (including with partners throughout the criminal justice system) in toxicology and data collection, and motivate State and local partners to focus on drug-impaired driving. NHTSA will also

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conduct drug-impaired and alcohol-impaired driving media campaigns throughout the year and as part of its impaired driving enforcement mobilizations.

COVID-19 Responses

Regulatory & Administrative Relief: NHTSA recognized wide-spread operational challenges that State Highway Safety Offices (SHSOs), EMS, and law enforcement agencies were facing due to COVID-19, and that some SHSOs might be unable to fulfill certain program requirements, certifications, and assurances. Within four business days following passage of the CARES Act on March 27, 2020, NHTSA issued its first set of responses to frequently asked questions, and established a central e-mail box for States to submit questions and concerns. On April 9, 2020, NHTSA issued a notice of waivers and postponements under the CARES Act to help SHSOs administer the behavioral highway safety grant programs during the public health emergency.

- **Stakeholder Engagement & Outreach:** NHTSA held two webinars with SHSOs and other State partners on “Managing Highway Safety Programs During a Public Health Emergency” in April and May. NHTSA’s Office of Emergency Medical Services (OEMS) continues to support HHS’s COVID-19 Health Care Resilience Task Force by leading the Prehospital/EMS Work Group. OEMS has completed and is working on a number of additional projects and documents to support the COVID-19 activities of the EMS and 911 communities. Since March, NHTSA has held 344 calls/webinars on COVID-19 responses issues, involving more than 17,000 external stakeholders.

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Federal Highway Administration (FHWA)

- FHWA administers the \$2.6 billion [Highway Safety Improvement Program \(HSIP\)](#) to States to address their infrastructure safety challenges. The 2018 HSIP National Summary Report estimates a National benefit-to-cost ratio ranging from 4.76 to 8.64. States obligated a total of \$4.6 billion on more than 4,700 highway safety improvement projects in 2018 as part of the HSIP.³ The HSIP provides funds to States to correct safety challenges on all public roads, including rural roads, and provides States the resources to address emerging areas of safety risk. FHWA researches effective roadway safety countermeasures and disseminates them to State and local agencies for deployment.
- FHWA advances a “safe system” approach to roadway safety. This approach integrates the knowledge and efforts of many disciplines to achieve safety progress, and emphasizes partnerships with other sectors to develop a holistic approach to road safety. It aims to ensure that human error is accommodated and does not lead to fatalities or serious injuries.
- FHWA implements the [Focused Approach to Safety initiative](#) that addresses the Nation’s most critical safety challenges in three main areas that are responsible for approximately 90 percent of traffic fatalities in the United States: roadway departure, intersection, and pedestrian/bicycle crashes.
- FHWA encourages widespread implementation of [Proven Safety Countermeasures](#) to increase the use of infrastructure-oriented safety treatments and strategies that significantly reduce crashes and crash severity.
- FHWA promotes two initiatives for safety through [Every Day Counts](#):
 - Safe Transportation for Every Pedestrian: Pedestrians account for an estimated 17 percent of all roadway fatalities, most at non-intersection locations. This innovation helps transportation

³ The total project costs may include highway safety improvement projects funded from other Federal (e.g. Section 154/164 penalty funds) or State funds, including the non-federal share.

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agencies address these crashes by promoting cost-effective countermeasures with known safety benefits.

- FHWA focuses on Reducing Rural Roadway Departure crashes: Roadway departure crashes on the rural road network account for one-third of traffic fatalities. Systemic application of proven roadway departure countermeasures, such as rumble strips, friction treatments, and clear zones, help keep vehicles in their travel lanes, reduce the potential for crashes, and reduces the severity of those crashes that do occur.

Federal Motor Carrier Safety Administration (FMCSA)

- FMCSA administers the Drug and Alcohol Clearinghouse. The final rule established central database requirements for Commercial Driver's License (CDL) holders who have verified positive test results for controlled substances and/or alcohol or who have refused to submit to testing. Implementation of this rule will ensure that CDL holders who have tested positive or who have refused to submit to testing complete the return-to-duty process before operating a commercial motor vehicle. The compliance date was January 6, 2020. As of October 28th, 45,442 violations were reported.
- High-risk carriers are the agency's top investigative priority. Investigative outcomes show that 45 percent of high-risk carrier investigations result in enforcement actions, compared to a 15 percent enforcement rate observed on non-high-risk carriers. The crash rate for the high-risk carrier group is 4 times the National average crash rate. In 2019, 2,456 high-risk carriers were investigated. Beginning in March, the agency was unable to conduct onsite investigations due to COVID-19 restrictions. These changes impacted the timeliness of investigations and inspections. The agency will be focusing on the backlog of investigations.
- FMCSA monitors New Entrants during their initial 18 months of operation and conducts New Entrant Safety Audits. In 2019, FMCSA conducted 39,491 New Entrant Safety Audits. For the first three quarters

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of FY 2020, FMCSA conducted 31,352 audits. The agency expects a decrease in audits for the 4th quarter due to COVID19 restrictions.

- FMCSA's grants program is awarding more than \$82 million in grants to improve Commercial Motor Vehicle (CMV) Safety. \$45.9 million was awarded from the High Priority (HP) grant program, which consists of HP-Commercial Motor Vehicle (HP-CMV) grants and HP-Innovative Technology Deployment (HP-ITD) grants. HP-CMV grants are designed to provide financial assistance to State commercial vehicle safety efforts, while HP-ITD grants provide financial assistance to advance the technological capability and promote the deployment of intelligent transportation system applications for CMV operations. The CDL Program Implementation grant program is awarding \$33.2 million to States and others to ensure that only safe and qualified commercial drivers receive and retain a CDL. The CMV Operator Safety Training grants program is awarding \$3.3 million to training institutions to train individuals to become commercial operators, with a focus on training for veterans and their families.
- The Large Truck Crash Causal Factors Study (LTCCFS) is planned for FY 2021-2023 and is an evolutionary focus moving from crashworthiness to crash avoidance to provide vital data on the role of pre-crash factors like driving behaviors and novel technologies unavailable through other means. The LTCCFS expands upon the Large Truck Crash Causation Study that was completed in 2003. In the more than 15 years since the original study, there have been many changes in technology, vehicle safety, driver behavior, and roadway design. This new study will provide valuable insights into the factors contributing to the increase in large truck crashes since 2009. FMCSA is looking into merging available data sets (e.g., NHTSA, FHWA, FMCSA) to gain a more complete picture of crashes.
- COVID-19 National Emergency Declaration: On September 11, 2020, FMCSA extended Emergency Declaration No. 2020-002 through December 31, 2020. The declaration provides regulatory relief for CMV operations providing direct assistance in support of emergency relief efforts related to COVID-19 and is limited to transportation of (1) livestock and livestock feed; (2) medical supplies and equipment

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related to the testing, diagnosis and treatment of COVID-19; (3) supplies and equipment necessary for community safety, sanitation, and prevention of community transmission of COVID-19 such as masks, gloves, hand sanitizer, soap and disinfectants; and (4) food, paper products and other groceries for emergency restocking of distribution centers or stores.

- Field Operations: The agency quickly adjusted the way it operates during the pandemic to accomplish our mission. Beginning in March, FMCSA was unable to conduct onsite investigations due to COVID-19 restrictions. These changes impacted the timeliness of investigations and inspections. FMCSA expects the following trends as it continues to work through the backlog of investigations:
 - Increase in off-site investigations;
 - Unable to conduct required motor-coach safety investigations;
 - Fewer unsafe motor carrier complaints reported;
 - Restarted Federal inspections at the Border Crossings;
 - Unable to conduct high-risk carrier investigations, which impacts the discovery of acute/critical violations;
 - Decrease in the timeliness of reporting State inspection and crash records, which affects their Overall State rating; and
 - Nearly all investigations continue remotely.

Key programs to achieve these goals include:

- Highway Safety Improvement Program (HSIP)
- Safe Transportation for Every Pedestrian (STEP)
- Focused Approach to Safety initiative
- Proven Safety Countermeasures Initiative
- Every Day Counts
- Focus on Reducing Rural Roadways Department Fatalities - FoRRRwD

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- Our Roads, Our Safety (Sharing the Road with Large Trucks)
- New Entrant Safety Audits
- High Risk Carrier Investigations
- Drug and Alcohol Clearinghouse
- FMCSA Crash Preventability Determination Program
- FMCSA High Priority Grants Program
- Large Truck Crash Causal Factors Study
- NHTSA's 5-Star Safety Ratings (NCAP)
- Vehicle Recall Lookup Tool
- State Highway Safety Plans and Annual Reports

Federal Transit Administration (FTA)

- Public Transportation Agency Safety Plan (PTASP): FTA published the PTASP final rule on July 19, 2018 requiring FTA grantees to establish Agency Safety Plans using the principles of a safety management systems approach. More than 750 FTA recipients and sub-recipients were required to establish an Agency Safety Plan by July 20, 2020. FTA is delaying enforcement until December 31, 2020 because of the COVID-19 public health emergency. Through September 30, 353 Section 5307 recipients and rail transit agencies have certified compliance with the PTASP regulation (58 percent). These certifications cover 411 of the 704 applicable public transportation providers (58 percent).
 - 39 rail transit agencies (62 percent of 63 ASPs)
 - 39 large bus agencies (53 percent of 73 ASPs)
 - 333 small public transportation providers (59 percent of 568 ASPs)
- FTA continues to support transit agencies and State DOTs to comply with the PTASP regulation. FTA has established a PTASP Technical Assistance Center (TAC), which has:

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- Received 289 help desk queries, including 88 Agency Safety Plan (ASP) review requests;
- Presented 3 webinars and 3 two-day virtual workshops; and
- Published 10 resources:
 - Sample Bus Transit Provider Agency Safety Plan,
 - Guide to Developing the Safety Assurance Component of a Public Transportation Agency Safety Plan,
 - Certifying Compliance with the Public Transportation Agency Safety Plan Regulation,
 - PTASP Bus Workshop Participant Guide v.5,
 - Understanding PTASP Safety Training and Communication Requirements,
 - Safety Performance Targets Fact Sheet,
 - Certification Fact Sheet,
 - Applicability Webinar Q&As,
 - ASP Review, Approval, and Certification Webinar Q&As, and
 - Monitoring Compliance and Sufficiency of Operations and Maintenance Procedures.
- **State Safety Oversight (SSO) Program:** The SSO program is administered by eligible States with rail transit systems in their jurisdiction. FTA provides Federal funds through the SSO Formula Grant Program for eligible States to develop or carry out their SSO programs. For more information, visit: <https://www.transit.dot.gov/state-safety-oversight>.
- In June 2019, FTA initiated its first round of program audits of certified SSO Agencies. FTA has conducted nine audits so far, for the Colorado, Georgia, Maryland, Massachusetts, Ohio, Texas, Utah, Washington State, and District of Columbia SSO Agencies. In order to provide administrative relief to transit agencies during the COVID-19 pandemic, in Q3 of FY 2020 FTA suspended all enforcement activities until FY 2021.

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Federal Railroad Administration (FRA)

For decades, the leading causes of rail-related deaths (including suicides) and injuries have been trespassing on railroad property and collisions at the 202,000 U.S. grade crossings. Trespassing on railroad property and grade crossing incidents represent 97 percent of all rail-related fatalities. Over the past decade, casualties, including injuries and fatalities, related to trespassing have increased from 765 to over 1,100 per year. Over the same period, the number of grade crossing deaths has remained relatively constant, with injuries falling from 1,030 to 850. Human behavior plays an overwhelming role in these tragic incidents, with 93 percent of grade crossing collisions due to the motor vehicle driver's decisions, distraction, fatigue, or drug and alcohol impairment. In addition to the human toll from these incidents, they cause transportation network disruptions and economic losses. FRA's strategies to address this persistent and complex challenge include:

- **Funding:** Through grants, such as Consolidated Rail Infrastructure and Safety Improvement, FRA is supporting safety improvement projects and outreach initiatives to increase public awareness about the dangers and consequences of trespassing and driving around grade crossings.
- **Research and Data Analysis:** To design effective solutions, FRA and stakeholders must first understand the root causes of behaviors and risk factors that increase the likelihood of trespass and grade crossing incidents.
- **Development of New Safety Technologies:** FRA is investing in innovative and potentially life-saving projects, such as using drones to detect and warn about the presence of trespassers.
- **Partnerships, Advocacy, and Technical Assistance:** Because FRA does not directly influence some significant trespass and grade crossing safety risks, it works with States, local governments, and organizations that can complement FRA activities. In addition, FRA is enhancing law enforcement and first responder strategies, strengthening State crossing safety action plans, and updating FRA's [Crossing Handbook](#).

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Pipeline and Hazardous Materials Safety Administration (PHMSA)⁴

- PHMSA assesses all incident data to identify potential contributing causes and acts where necessary and prudent to help protect people and the environment.
- The agency focuses on top safety rulemakings, the safe transportation of energy products, risk-based inspections, and outreach activities.
- PHMSA will continue to urge operators to be vigilant in their operating practices to prevent accidents.
- PHMSA will also continue to engage with regulated industry to encourage the implementation of Safety Management Systems (SMS) that improve safety culture and performance.

Surface Safety

- NHTSA released early estimates for motor vehicle fatalities for the first half of CY 2020 (January – June). See <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813004> for more information. Fatalities decreased by 2 percent compared to the same time period for 2019, from 16,988 to 16,650. The impact of the COVID-19 pandemic quarantines and shelter-in-place orders, which started in mid-March 2020, resulted in an estimated 16.6 percent decrease in VMT for the first six months of 2020, according to preliminary data reported by FHWA⁵. The motor vehicle fatality rate increased to 1.25 fatalities per 100 million VMT compared to 1.06 for the same time period in 2019.⁶ Working with modal partners within the Department, as well as researchers, traffic safety advocates,

⁴ Beginning in FY 2019, PHMSA replaced a key Surface Safety APG indicator with a new one that more closely aligns with the key Surface Safety APG indicators of the Department's other operating administrations. More details on this are provided in the Key Indicators section.

⁵ FHWA June 2020 Traffic Volume Trends for 2019 & 2020 VMT

⁶ NHTSA Early Estimate of Motor Vehicle Traffic Fatalities for the First Quarter of 2020

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State and local transportation officials, and law enforcement, NHTSA hosted a series of workshops in September and October to discuss emerging trends and develop effective countermeasures.

- An estimated 36,120 people died in motor vehicle traffic crashes in 2019.⁷ This represents an estimated decrease of about 1.2 percent as compared to the 36,560 fatalities that were reported in 2018. The fatality rate for 2019 was 1.10 fatalities per 100 million VMT, down from 1.13 fatalities per 100 million VMT in 2018.
- An analysis of estimated changes for specific segments reveals slight decreases in driver (3 percent), passenger (4 percent), motorcyclist (1 percent), pedestrian (2 percent), and bicyclists (3 percent) deaths for the Nation in 2019 as compared to 2018. Fatalities in crashes each involving at least one large truck are projected to increase slightly (1 percent). Older drivers (65+) involved in fatal crashes also saw a slight increase (1 percent).⁸

Increase Adoption of Proven Safety Solutions

- NHTSA and the U.S. Environmental Protection Agency released the final Safer Affordable Fuel-Efficient (SAFE) Vehicles rule setting corporate average fuel economy (CAFE) and CO₂ emissions standards for model year 2021-2026 passenger cars and light trucks by reducing the average price of a new vehicle by about \$1,000, the SAFE Vehicles Rule will make it easier for Americans to afford to buy newer, cleaner, and safer vehicles. About 3,300 fewer crash fatalities and 397,000 fewer injuries are projected over the lifetimes of vehicles built according to these new standards.
- The revised Pavement Markings Rule is expected to help prevent roadway departures, which are the most common type of fatal crashes, accounting for more than half (52 percent) of all roadway fatalities.

⁷ NHTSA Early Estimate of Motor Vehicle Traffic Fatalities in 2019

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- A high-level summit on pedestrian safety involving FHWA, NHTSA, other Departmental modes, State and local governments, academia, private industry, and leading National transportation stakeholder groups originally scheduled for early April was converted to a three-part virtual summit beginning in July; all webinars reached maximum registration capacity of 1,000 participants. Feedback from participants was solicited and served as input into the development of the Department's Pedestrian Safety Action Plan. The Plan, which is currently being finalized, will identify what the Department intends to accomplish for pedestrian safety in the next two years and beyond.
- NHTSA took part in a webinar, *Impaired Driving in a Post-COVID-19 World*, in May 2020. The event was co-hosted by the Governors Highway Safety Association and the NHTSA-funded National Law Enforcement Liaison Program, to provide the traffic safety community with tools they can use to help deter impaired driving. Nearly 600 participants dialed in to learn about this timely topic.
- From June 1 through September 30, NHTSA hosted 23 virtual events with approximately 8,000 attendees. Highlights include seven sessions over four days celebrating NHTSA's 50th anniversary, and a webinar, *Recent Trends in Risky Driving*, providing insight into the unique traffic safety conditions during the COVID-19 pandemic.
- NHTSA conducted three National safety campaigns in FY 20 Q4:
 - Child Vehicular Heatstroke Awareness Campaign, July 1 through the end of August.
 - Drive Sober or Get Pulled Over High Visibility Enforcements Campaign, August 19 through September 7, 2020.
 - Child Passenger Safety Week, September 20-26, 2020.
- FHWA distributed numerous resources on proven safety solutions to address the most common type of pedestrian fatalities. The Safe Transportation for Every Pedestrian (STEP) initiative focuses on proven treatments to make crossing the street safer. FHWA has completed 15 new case studies, two informational videos, a podcast, several webinars, numerous articles, and social media messaging. FHWA commenced the STEP UP pedestrian safety awareness campaign in June, encouraging agencies to get involved, hosted two webinars on the campaign (May 27th and June 4th), and developed the STEP

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Studio – a pedestrian safety toolbox. The STEP Program conducted a virtual RSA for New Mexico to identify risks and provide recommendations, compiled best practices for State and local agency countermeasure guidance, provided two STEP webinars on Road Diet evaluation and regional safety planning, provided a virtual STEP workshop with Colorado, Hawaii and Nebraska DOTs, and delivered four State STEP Q&A Sessions with 200+ attending.

- The Every Day Counts (EDC) 5's Reducing Rural Roadway Departures (FoRRRwD) program has hosted monthly webinars based on the four FoRRRwD pillars (considering all public roads; implementing proven countermeasures; applying a systemic approach; and developing safety action plans). The webinars began in April 2020 and will conclude in November 2020. The program also delivered one virtual and three in-person peer exchanges, in-person and virtual training to States, local agencies, and tribes, and has assisted several agencies in developing Roadway Departure safety action plans. A new [website](#) has provided stakeholders access to data and resources such as videos, brochures, tools and noteworthy practices.

Improve and Implement HSIP

- FHWA notified States, the District of Columbia, and Puerto Rico of the results of their 2018 safety performance target determinations. This is the first-time safety assessments have been made under the requirements of 23 USC 150(d). A total of 26 States and Puerto Rico met or made significant progress toward their 2018 safety performance targets.
- FHWA continues to offer HSIP Implementation Plan technical assistance to the 24 States and the District of Columbia not meeting or making significant progress toward their 2018 State safety targets. The Implementation Plans are designed to chart a course for States to become successful in meeting future safety targets. All HSIP Implementation Plans were received by FHWA.

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Build Capacity for Innovation in Safety Analysis and Action

- FHWA and NHTSA completed a mapping project of each State’s roadway inventory database to determine if each State currently has the capability to accept safety elements into their database. FHWA is working with each State on the results and helping to identify strategies to make further improvements.
- FHWA has long used virtual outreach in its work with State and local agencies and quickly shifted to an entirely virtual approach during coronavirus restrictions. For example, in June, FHWA led a virtual Transportation Safety Planning workshop with Indiana. The workshop brought together planners and safety specialists from State and regional agencies to discuss strategies and identify opportunities to integrate safety in the transportation planning process. A Multilane Roundabouts panel became a virtual meeting on March 24th to discuss progress. Another event, the rollout of our new Quadrant Roadway Intersections Information Guide, drew participation from 400 professionals. In addition, FHWA hosted webinars to build the capacity of safety professionals including webinars on HSIP implementation plans, marketing Strategic Highway Safety Plans, implementing local road safety plans, and innovative technologies in rail crossing safety (jointly with FRA).
- FHWA has selected two offers for Phase I awards in response to a Small Business Innovation and Research (SBIR) solicitation for developing a “physical intervention system” to prevent wrong-way driving (WWD) crashes.

Promote a Safe System Approach

- In December 2019, FHWA hosted a meeting with members of the Motorcyclist Advisory Council (MAC) to discuss a list of recommendations on infrastructure issues of concern to motorcyclists. In May 2020, FHWA started the process of conducting research and developing a synthesis for implementing MAC recommendations. In October 2020, FHWA kicked off a project that will address MAC recommendations in the areas of roadside safety hardware (barrier design), roadway geometrics,

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maintenance practices, pavement design, and V2I/ACV technologies/policies concerning motorcyclist safety. The MAC sunsets when the MAC Charter expires in October 2020.

- FHWA has advanced the Safe System approach through work with jurisdictions and States that have committed to zero deaths goals. Since April, FHWA continued its work with Daly City, CA and Macon-Bibb County, GA to develop Vision Zero Action Plans. Based on previous work with States and Vision Zero communities, FHWA is also developing a report presenting strategies that strengthen State and local coordination to advance the shared goal of zero traffic deaths. The materials include a completed flyer, and a video and presentation that will be finalized in 2021.
- NHTSA introduced a new crash test dummy, “Q3s,” in September 2020 representing a 3-year-old child. It was specifically designed for testing child seats in side impact crash tests. This advanced dummy will provide more realistic data about the effects side impact crashes have on children.

Advanced Driver Assistance Systems (ADAS)

- In addition to three virtual events held in June 2020 to launch the Automated Vehicle Transparency and Engagement for Safe Testing (AV TEST), NHTSA conducted seven additional virtual events in July and September to further inform and provide outreach on the initiative. AV TEST is a voluntary initiative involving the Department, States, local governments, and private-sector stakeholders that is designed to provide an online, public-facing platform for sharing ADS testing activities and safety, technical, and other pertinent information between participants and with the public, that improves public visibility and awareness of ADS developments and testing activities. Ten companies and nine States have already signed on as participants in the voluntary web pilot. Currently, the tool has data on on-road testing activities in 17 cities across the country.
- NHTSA issued a notice of proposed rulemaking (NPRM) to modernize numerous Federal Motor Vehicle Safety Standards and clarify ambiguities in current occupant protection standards for vehicles equipped with ADS that are designed without traditional manual controls. This NPRM is an historic first step for the Department in its efforts to remove unnecessary and unintended barriers to

Summary of Progress – FY 2020 Q1-Q4

innovative vehicle designs. This proposal is one of a series of regulatory actions that NHTSA is considering to further modernize vehicle standards for new technologies.

- Tech-Celerate Now Project - Accelerating the Adoption of Advanced Driver Assistance Systems (ADAS): FMCSA's Technology Division, in partnership with the Department's ITS Joint Program Office, initiated a project with a team that includes Noblis, a not-for-profit technical organization, the American Trucking Associations, Owner-Operator Independent Drivers Association, and Virginia Tech Transportation Institute to: 1) Educate and promote the safety benefits of driver assistance technologies such as automatic emergency braking for trucking fleets; and 2) Measure the impact of the outreach campaign in terms of ADAS adoption rates and truck crash reduction. Since the project kicked off in early October 2019, the team has provided information in various formats (e.g., meetings, presentations, webinars, E-mailings) and participated in two broadcasts of the Dave Nemo satellite radio show and a segment on Sirius XM radio, bringing the total communications to 2.5M persons. The project team has compiled the results of a baseline survey of motor carrier companies and drivers to assess current levels of ADAS awareness. In general, fleets and company drivers are more aware of ADAS than independent/owner-operator drivers, and awareness is correlated positively. Outreach materials are planned for completion by November 2020, with the outreach and educational campaign kicking off in January 2021.

CDL Drug and Alcohol Clearinghouse

- The Drug and Alcohol Clearinghouse final rule established requirements for a central database of CDL holders with verified-positive controlled substance and alcohol test results. Records on CDL holders who refused to submit to testing are also contained in the database. Implementation of this rule will ensure that CDL holders who have tested positive or have refused to submit to testing complete the return-to-duty process before operating a commercial motor vehicle. The compliance date was January 6, 2020. As of October 28th, 45,442 violations were reported.

Partnerships (Grants)

Summary of Progress – FY 2020 Q1-Q4

- FMCSA accomplishes its mission through strong State partnerships. In FY 2020, more than \$391 million in annual grant dollars funded the States' motor carrier investigations, roadside driver and vehicle safety inspections, and the identification and apprehension of traffic violators. FMCSA also provides competitive grant funding that spurs innovative ideas and supports technological advancements through high-priority safety initiatives, CDL program improvements, and driver training facilities.
- The agency's State partners conduct approximately 3.5 million inspections, more than 35,000 new entrant safety audits, and more than 6,000 carrier investigations annually.
- In FY 2020, NHTSA awarded \$562 million in grants for highway safety programs to Offices of Highway Safety in all 50 States, the District of Columbia, United States territories, and the U.S. Department of the Interior's Bureau of Indian Affairs. These highway safety grants will help save lives by addressing impaired driving, promoting seat belt use, improving pedestrian and bicyclist safety, and funding other important traffic safety efforts.
- NHTSA announced a new State demonstration grant program to help drivers learn about and repair open safety recalls on their vehicles in May 2020. This builds on a successful two-year pilot program facilitated by the Maryland Department of Transportation Motor Vehicle Administration between 2018 and 2020, which resulted in resolution of more than 376,000 vehicle safety recalls in Maryland, making those vehicles safer for the operators and making roadways safer for everyone. The new grant program will provide \$1.5 million for as many as six States to notify consumers of open recalls during vehicle registration. The States will notify owners of vehicles with open recalls along with registration notices. The States will also provide a brief description of the defect, the nature of the recall, and information on getting it fixed immediately at an authorized dealer. The States will implement the program for a two-year period and evaluate the results.
- NHTSA also launched a redesigned version of its SaferCar app in August, which allows consumers to look up recall information on their vehicles, car seats, equipment, or tires in a virtual garage on their

Summary of Progress – FY 2020 Q1-Q4

smartphone. The launch generated more than 900 million media impressions, and the app has been downloaded by more than 21,000 unique users so far. On average, NHTSA.gov has maintained more than 1 million monthly VIN lookups this past quarter.

Research

- NHTSA released a number of vehicle safety research reports, including:
 - [Pre-Crash Scenario Characteristics of Motorcycle Crashes for Crash Avoidance Research](#)
 - [Occupant Safety in Vehicles Equipped with ADS: Biofidelity Evaluation of GHBMCM50-OS Against Laboratory Sled Tests](#)
 - [Occupant Safety in Vehicles Equipped with ADS: Initial Evaluation of Usability, Stability, and Injury Prediction Capabilities](#)
 - [Baseline Analysis of Driver Performance at Intersections for the Left-Turn Assist and Intersection Movement Assist Applications](#)
 - Assessment of Hood Designs for Pedestrian Head Protection: Active Hood Systems
- FMCSA's Crash Preventability Demonstration Program concluded September 30, 2019. On July 31, 2019, FMCSA announced the start of a follow-up program, Crash Preventability Determination, and posted a Federal Register Notice (FRN) to the agency's website which explains the proposed long term program and requests comments. The FRN proposes 15 crash types and also proposes removing Not Preventable crashes from a motor carrier's Safety Measurement System (SMS) Crash Indicator BASIC. The FRN also proposes noting Not Preventable determinations in the Pre-Employment Screening Program. When implemented, the new Crash Preventability Determination Program will accept crashes of the eligible crash types that occurred on or after August 1, 2019, so that there is no gap in program coverage. Of the determinations made, 93 percent of the crashes submitted were non-preventable.

Transit Safety

Summary of Progress – FY 2020 Q1-Q4

- To implement its SMS approach to enhancing transit safety, FTA established a Safety Assessment Team (SAT). The SAT analyzes risk and recommends actions to an Executive Safety Review Board (ESRB), which then advises the FTA Administrator. The SAT began with four safety issues:
 1. Inward and outward facing cameras for rail transit vehicles: At the direction of the ESRB, the SAT is conducting further analysis of this item. The SAT anticipates presenting its analysis to the ESRB in Q2 of FY 2021.
 2. Roadway worker protection: the SAT is actively renewing this item and made recommendations to the policy council at the end of Q2 of FY 2020.
 3. Transmission-based train control.
 4. Stop signal overruns: The SAT combined two topics – Transmission-Based Train Control and Stop Signal Overruns – into one topic, Signal System Safety. The SAT has completed its initial assessment and anticipates presenting its analysis to the ESRB in Q2 of FY 2021.

Rail Safety

- In FY 2020, FRA planned to host two-day summits to raise awareness about the dangers and impacts of rail trespassing, seek low-cost solutions to local trespassing issues, and discuss practicable ideas for technological improvements at grade crossings. Due to the COVID-19 pandemic, the summits were postponed. FRA is exploring alternatives to face to face meetings, including remote or hybrid sessions.
- In FY 2020, FRA began awarding targeted grants to assist local efforts to prevent trespassing and to support mental health organizations' campaigns to reduce rail-related suicides. In July, FRA [announced than \\$530,000](#) for 11 projects in six States (California, Florida, Massachusetts, Montana, North Carolina and New Jersey) to deter people from taking unnecessary risks around railroad tracks, while focusing on specific populations at higher risks around railroad tracks.

Summary of Progress – FY 2020 Q1-Q4

Pipeline and Hazardous Materials Safety

- PHMSA continues to assess incident data, advance safety through rulemakings, and work closely with stakeholders to promote safe operations. In FY 2020, PHMSA's performance goal is to reduce fatalities resulting from the transport of hazardous materials by all modes, including pipeline, to less than 24. In Q1 through Q4, there have been a total of sixteen fatalities, including ten for pipeline systems and six for the transport of hazardous materials by other surface transportation modes. The overall goal is on target for this metric.

Key Milestones

NHTSA, FHWA, and FMCSA conduct a range of research, program development and dissemination, evaluation, education, and outreach activities to reduce motor vehicle crash fatalities and injuries.

Milestone Summary					
Milestone	Deadline	Status	Change from Previous Quarter	Owner	Notes
NHTSA: Stakeholder Public Meeting on agency research priorities	FY 2020 Q1	Completed	Not Applicable	NHTSA	Closed on 2/20/20 for comments.
NHTSA: Auto Industry Stakeholder Meeting and Cybersecurity Roundtable	FY 2020 Q2	Completed	Not Applicable	NHTSA	Supports ongoing dialogue with auto industry on vehicle safety research.
NHTSA: Early Estimates of Motor Vehicle Traffic Fatalities released	FY 2020 Q3	Completed	Data released in May 2020	NHTSA	Comprehensive overview of number of fatalities, trends and rates in 2019.
NHTSA “Drive Sober or Get Pulled Over” National Mobilization	FY 2020 Q4	Completed	Not Applicable	NHTSA	An impaired driving enforcement effort in partnership with law enforcement agencies nationwide.
NHTSA: Major updates to the National EMS Educational Standards released	FY 2021 Q1	In Progress	Not Applicable	NHTSA	Education and training framework for EMS professionals.

Key Milestones

<p>FHWA: Update and publish the Crash Modification Factors (CMF) Clearinghouse</p>	<p>FY 2020 Q4</p>	<p>In Progress</p>	<p>FHWA added 83 new Crash Modification Factors to the Clearinghouse and updated the website to include CMF-related safety analysis videos and updated the list of States with CMFs. Efforts continued on transitioning to a new CMF rating criteria.</p> <p>Q4: FHWA added 73 new CMFs to the Clearinghouse.</p>	<p>FHWA</p>	<p>Repository of the CMFs for transportation professionals to use as they are selecting safety countermeasures.</p>
<p>FHWA: Deliver the EDC-5 FoRRRwD Implementation Plan</p>	<p>FY 2020 Q4</p>	<p>In Progress</p>	<p>Published Spanish version of trading cards, developed new web pages, hosted three webinars each attended over 300 individuals and drafted two technical feature articles to be published in the Autumn and Winter editions of Public Roads.</p> <p>Q4: Delivered 3 webinars and 4 State virtual peer exchanges; posted 2 videos on placing curve signs; launched and updated new website; presented and moderated the Rural Road Safety Summit and NADO conference; provided input for NYSDOT Rwd statewide plan; kicked-off LRSP pilot for the San Juan National Forest.</p>	<p>FHWA</p>	<p>Providing technical assistance and products needed by States and locals to achieve their EDC goal.</p>
<p>FHWA: Deliver the EDC-5 STEP Implementation Plan</p>	<p>FY 2020 Q4</p>	<p>In Progress</p>	<p>FHWA developed STEP Studio - a pedestrian safety toolbox that connects to the many resources developed through STEP</p>	<p>FHWA</p>	<p>Providing technical assistance and products needed by</p>

Key Milestones

			Q4: Developed two videos that highlight pedestrian safety and feature FHWA Administrator Nicole Nason and her commitment to pedestrian safety.		States and locals to achieve their EDC goal.
FHWA: Provide technical assistance to Vision Zero communities	FY 2020 Q4	In Progress	<p>Provided technical assistance to support the creation of 2 additional Vision Zero Action plans. A report on strategies to strengthen State and local coordination is underway.</p> <p>Q4: Provided technical assistance to support the creation of one Vision Zero Action plan. A report on strategies to strengthen State and local coordination is being finalized. A series of 12 zero deaths success stories and a Safe System Approach flyer were completed and disseminated. A Safe System presentation and video are underway.</p>	FHWA	To implement activities that support zero deaths goals at the local level.
FMCSA: Transportation Research Board Annual Meeting	FY 2020 Q2	Completed	Not Applicable	FMCSA	Presenting FMCSA's 2020 Analysis, Research and Technology initiatives.
FMCSA: Motor Carrier Safety Advisory Committee meetings	FY 2020 Q3	Completed (7/13-7/14,20)	Not Applicable	FMCSA	Provides advice and recommendations to the FMCSA Administrator on motor carrier safety programs

Key Milestones

					and motor carrier safety regulations.
FMCSA 2020 Trucking Safety Summit	FY 2020 Q3	Completed (8/5/20)	Not Applicable	FMCSA	The purpose of the summit was to solicit information on improving safe operation of property-carrying commercial motor vehicles on our Nation's roadways.
FMCSA Broker Listening Session	FY 2020 Q4	Completed (10/28/20)	Not Applicable	FMCSA	To hear directly from truckers, brokers, and motor carrier stakeholders regarding the important issue of broker transparency.

Key Indicators

Surface Safety

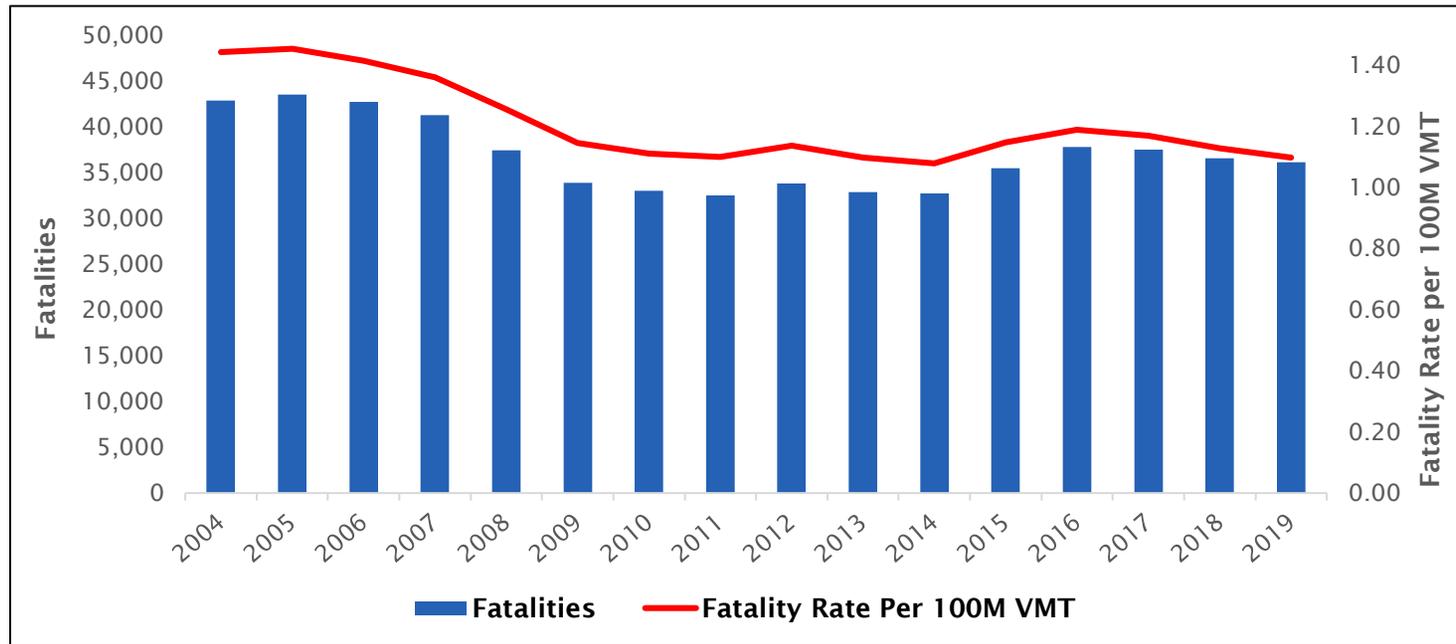


Figure 1: Total Fatalities and Fatality Rate per 100 Million Vehicle Miles Traveled

The Nation has made progress in reducing overall transportation-related fatalities and injuries, even as the U.S. population and travel rates increased significantly. Over the past 16 calendar years (2004 to 2019), the number of fatalities on the Nation's roadways has dropped by 16 percent, from 42,884 to 36,120.

Key Indicators

Reduce Motor Vehicle-Related Fatalities (Overall)								
Motor Vehicle-Related Roadway Fatalities Per 100 Million Vehicle Miles Traveled		CY 2016	CY 2017	CY 2018	CY 2019	CY 2020**	CY 2021	
	Targets		1.02	1.02	1.02	1.02	1.01	1.01
	Actuals		1.19	1.16	1.11	1.10*	N/A	N/A

*Statistical projection for 2019. Final CY 2019 data will be available in late CY 2020.

**CY 2020 data will be available by May 2021.

The fatality rate declined 7.6 percent from 2016 to 2019, and the Department continued to make progress in reducing the motor vehicle fatality rate in FY 2019. While it did not meet the goal for that period, the decline reflects the impact that ongoing safety efforts have had.

Key Indicators

Reduce Motor Vehicle-Related Fatalities by Type (FHWA, NHTSA, FMCSA)							
		CY 2016	CY 2017	CY 2018	CY 2019*	CY 2020**	CY 2021
Passenger Fatalities Per 100 Million VMT	Targets	0.75	0.75	0.75	0.74	0.74	0.74
	Actuals	0.75	0.74	0.70	N/A	N/A	N/A
Large Truck and Bus Fatalities Per 100 Million Vehicle Miles Traveled	Targets	0.114	0.114	0.114	0.114	0.114	0.114
	Actuals⁹	0.155	0.160	0.160	N/A	N/A	N/A
Non- Occupant Fatalities (Pedestrian, Bicycle) Per 100,000 Population	Targets	2.19	2.15	2.15	2.10	2.10	2.10
	Actuals	2.19	2.15	2.25	N/A	N/A	N/A
Motorcycle Fatalities Per 100,000 Motorcycle Registrations	Targets	62	62	62	62	61	61
	Actuals	60.9	59.34	57.5	N/A	N/A	N/A

*CY 2019 data should be available in Spring 2021. **CY 2020 data will be available in 2022.

⁹ Beginning with data for 2016, NHTSA implemented changes to revise vehicle classification based on gross vehicle weight rating (GVWR), which reclassified 329 light pickup trucks as large trucks. Due to this methodology change, comparisons of the 2016 (and later) Fatality Analysis Reporting System (FARS) large truck data with prior years should be performed with caution.

Key Indicators

Transit Safety

Reduce Transit-Related Fatalities (FTA)							
		FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Total Transit Fatalities ¹	Targets	---	278	278	260	255	255
	Actuals	259	259	245	255	245 ^{2,3}	N/A
Total Transit Fatalities per 100 Million Passenger Miles ¹	Targets	---	0.607	0.607	0.601	0.596	N/A ⁴
	Actuals	.594	.613	.586	.626 ⁵	1.02 ^{2,6}	N/A

N/A not available.

¹ Targets for these indicators were changed in FY 2018.

² Q4 data include preliminary data for July and August 2020 only. September 2020 data are expected to be available in early November 2020.

³ The total number of fatalities for FY 2020 is expected to exceed the 2020 target after September fatalities data are added. Transit fatalities are surprisingly high in 2020, especially considering there has been a substantial decrease in transit service operated (currently down about -20%). FTA is investigating the underlying causes of rising transit fatalities.

⁴ FTA will be replacing this performance measure in FY 2021. The new performance measure will scale transit fatalities to vehicle revenue miles, rather than to passenger miles. This new performance measure will more accurately reflect that the greatest safety risks on transit come from collision with pedestrians and third-party occupants, and not from passengers.

⁵ This number has been adjusted due to late data reporting from transit agencies.

⁶ The transit fatality rate for FY 2020 exceeds the 2020 target. Passenger miles traveled decreased dramatically (currently down -63%) due to the COVID-19 public health emergency, while the number of fatalities did not decrease commensurately.

Key Indicators

(Actual) Fatalities by Mode ¹										
	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019	CY 2020 ²
Bus (MB)	92	97	104	86	88	95	84	76	80	57
Heavy Rail (HR)	94	102	111	93	97	105	88	132	124	82
Light Rail (LR)	36	45	35	39	46	39	49	40	51	21
Other Modes	4	21	23	18	23	18	18	12	13	7
Total*	226	265	273	236	254	257	239	260	268	167

¹ Data are based on Calendar Years, January through December, and reporters are required to report within 30 days of a fatality. The following are excluded (and are regulated by FRA): All commuter rail modes, PATH heavy rail, Portland Tri-Met hybrid rail, and Austin Capital Metro hybrid rail.

² CY 2020 data, as of September 1, 2020. This table will be updated throughout the year to capture late reporters. Reporters have 30 days after an incident to report to the National Transit Database (NTD.)

Key Indicators

Reduce Transit Collisions Involving People						
		FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Total Rail Transit Collisions with Persons ¹	Targets²	---	450	420	430	430
	Actuals	408	425	483 ³	377 ⁴	N/A

N/A not available.

¹ Source: National Transit Database. Data are reported by Federal fiscal year. Rail transit collisions with persons include suicides. The following are excluded (and are regulated by FRA): All commuter rail modes, PATH heavy rail, Portland Tri-Met hybrid rail, and Austin Capital Metro hybrid rail.

² Targets: FY 2017 was the baseline year. Targets for FY 2019 and FY 2020 were revised downward in December 2018, based on FTA exceeding targets in FY 2018. Targets for FY 2020 were slightly revised again after review of FY 2019 data.

³ This number has been adjusted due to late data reporting from transit agencies.

⁴ Data include preliminary data for July and August 2020 only. September 2020 data are expected to be available in early November 2020.

Key Indicators

Rail Safety

Reduce Rail-Related Fatalities (FRA) ¹⁰				
		FY 2019	FY 2020*	FY 2021
Highway-Rail Grade Crossing Incidents	Targets	---	2,165	1,885
	Actuals	2,279	1,984	N/A
Rail Right-Of Way Trespass Incidents	Targets	---	1,015	983
	Actuals	1,068	1,035	N/A

A highway-rail incident is any impact regardless of severity between rail and highway users (vehicles, pedestrians, and bicycles) at a public or private crossing. A rail right-of-way trespass incident is any event that causes a death or injury in a rail right-of-way, other than at a highway-rail grade crossing.

*Actual data are subject to change and might differ from prior-year materials based on the latest information available. FY 2020 Q4 data will be available in January 2021. FY 2020 Actual is the Q1, Q2, and Q3 total annualized for four quarters.
N/A not available.

¹⁰ In FY 2020, FRA changed its grade crossing and trespass indicators from incidents per million train-miles to number of incidents. To reduce casualties, FRA is focused on engaging communities that experience higher numbers of grade crossing and trespasser incidents. Therefore, the number of incidents is a better metric to gauge FRA effectiveness going forward than the rate of incidents per total U.S. train-miles.

Key Indicators

Pipeline and Hazardous Materials Safety

Performance Goal: Reduce Pipeline and Hazardous Materials Safety-Related Fatalities (PHMSA)							
		FY 2016	FY 2017	FY 2018	FY 2019	FY 2020**	FY 2021
Fatalities Caused by the Release of Hazardous Materials Transported via Pipeline or Surface Transportation Conveyance ¹¹	Targets	---	---	---	25	24	22
	Actuals	25	16	18	25*	16*	N/A

**Preliminary. Actual data for FY 2019 will be available in October 2020, and actuals for FY 2020 will be available in October 2021.*

***In FY 2020 Q1-Q4, sixteen fatalities were reported, including ten related to hazardous materials transported by pipeline and six related to transport by other modes.*

N/A not available.

¹¹ Beginning in FY 2019, PHMSA replaced its APG measure of “incidents involving fatalities and major injury resulting from the transport of hazardous materials by all modes, including pipelines” with “confirmed fatalities caused by the release of hazardous materials transported via pipeline or surface transportation conveyance.” Surface transportation conveyance includes road, rail, water, and air transport. The revised measure focuses on fatalities only, rather than incidents, and more closely aligns with the Department’s other operating administrations. Please note that while these data were tracked prior to FY 2019, targets were not set until the new performance indicator was implemented in FY 2019.

Key Indicators

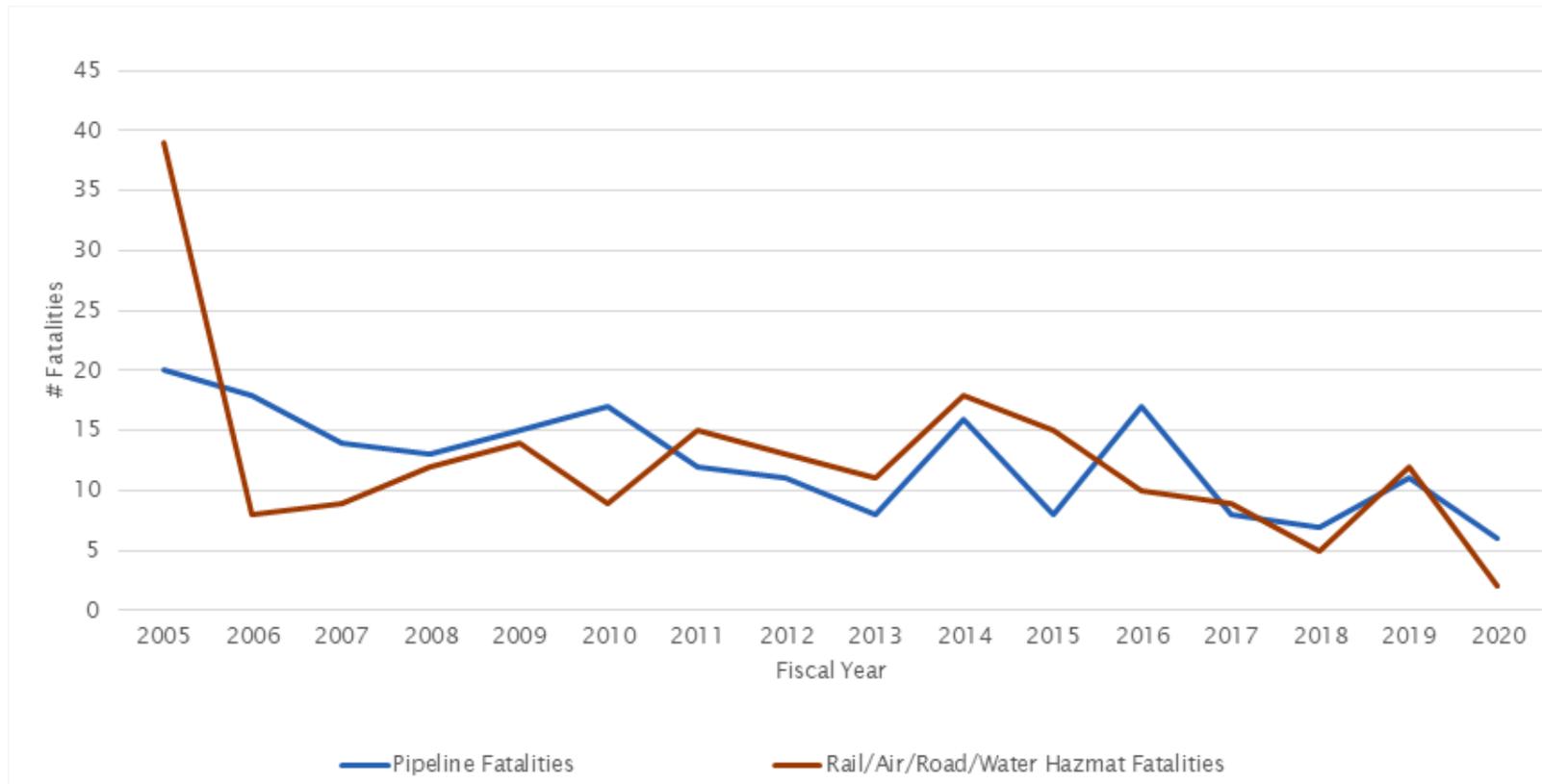


Figure 2: Fatalities Caused by Release of Hazardous Materials (All Modes)

Data Accuracy & Reliability

Surface Fatalities

Measures

- Passenger Vehicle Occupant Fatalities per 100 Million VMT
- Passenger Fatalities Per 100 Million VMT
- Large Truck and Bus Fatalities Per 100 Million VMT
- Non-Occupant Fatalities (Pedestrian, Bicycle) Per 100,000 Population
- Motorcycle Fatalities Per 100,000 Motorcycle Registrations

Methodologies

Roadway fatalities per 100 million VMT are calculated for each calendar year (CY). The number of fatalities included in National reports is a count of deaths of a motorist or a non-motorist occurring within 30 days of a crash involving a motor vehicle traveling on a traffic-way customarily open to the public within the 50 States, the District of Columbia, and Puerto Rico.

A roadway fatality is the death of any vehicle occupant (driver, passenger, or person riding on the exterior of a motor vehicle), including motorcycle (two- or three-wheeled motor vehicle) riders or passengers, and any non-occupants (any person not an occupant of a motor vehicle in transport, such as a pedestrian or cyclist) in a motor vehicle crash.

VMT include all vehicle miles traveled by all types of vehicles including:

- Passenger cars
- Motorcycles
- Buses
- All two-axle four tire vehicles (including vans, pickup trucks, and sport/utility vehicles)
- Single unit two-axle six tires or more trucks

Data Accuracy & Reliability

- Combination trucks

Sources

Roadway fatality data are obtained from NHTSA's Fatality Analysis Reporting System (FARS). The FARS database is a census of fatal traffic crashes within the 50 States, the District of Columbia, and Puerto Rico and is based on Police Crash Reports (PCRs).

Annual VMT are estimated using data from FHWA's Highway Performance Monitoring System (HPMS). The HPMS compiles data from the States annually concerning the condition and performance of all roads in the United States. HPMS includes the annual average daily traffic (AADT) by road segment. States provide AADT on all Federal-aid highway sections. These data are based on traffic counts taken at least once every three years on the NHS, interstate, and principal arterials and at least once every six years on minor arterials and collectors. Traffic counts are adjusted by States to reflect day-of-week and seasonal variations, current year conditions, and axle corrections, as necessary. When these AADTs are multiplied by the length of each road segment and summed for all road segments and days of the year, they yield the annual VMT.

Monthly VMT are calculated using the annual VMT from HPMS and the monthly traffic counts that States submit to FHWA from their automated traffic recorders (ATRs). These ATRs are permanent traffic counting devices such as inductive loops in the roadway. There are about 4,000 ATRs reported to FHWA each month. ATR data are submitted and processed using the Travel Monitoring Analysis System (TMAS). Monthly average daily traffic (MADT) is computed from the ATR traffic counts. Each MADT is compared with the MADT for the same month the previous year to yield a change rate. The change rates are averaged by functional class of road. If a State does not provide traffic data in time, its change rates are estimated from the surrounding states. Monthly VMT are estimated and reported in FHWA's Traffic Volume Trends (TVT) by combining the change rates for each month with the most recent annual VMT from HPMS. The TVT report is available to the public within 60 days after the close of the month. Data that covers a minimum of 30 States and 70 percent of the VMT are required for publication.

Statistical Issues

Data Accuracy & Reliability

Both HPMS and TVT are based on samples of the traffic; there are associated sampling errors.

Completeness

Annual traffic fatalities are currently available through CY 2017, published in October 2018. VMT are completed through 2017. The final 2017 VMT estimate was made available in March 2019.

Reliability

NHTSA is careful to ensure consistency in FARS data by establishing trainings, numerous quality control measures, and standard data coding guidelines, thereby assuring adequate National data to facilitate accurate analyses. For example, to complete each FARS case, the analyst applies specific definitions and guidelines and inputs the appropriate element values for each data element into the data entry system. In this way, all data contained in the FARS system are uniform, eliminating state differences in collecting and maintaining relevant crash records.

Data Accuracy & Reliability

Transit-Related Fatalities

Measures

- Total Transit Fatalities
- Total Transit Fatalities per 100 Million Passenger Miles

Scope

These data only include rail transit systems subject to FTA's SSO Program (see "Reduce Transit Collisions Involving Persons" for systems excluded from oversight).

Fatality data are also collected from all other non-rail transit systems. These data exclude fatalities from rural transit systems and from small urbanized systems that receive a small system reporting waiver.

Transit fatality data include passengers, revenue facility occupants, trespassers, employees, other transit workers (e.g., contractors), pedestrians, occupants of third-party vehicles, and others. A transit fatality is a death within 30 days of an incident on a transit right-of-way, in a transit revenue facility, in a transit maintenance facility, or involving a transit revenue vehicle. Excluded are deaths due to medical conditions or natural causes occurring on public transportation systems. Also excluded are occupational safety deaths occurring inside administrative buildings.

Sources

These data are sourced from NTD Monthly Safety Reports.

Statistical Issues

Fatality rates are calculated by dividing CY fatalities by NTD report year passenger miles for those systems reporting monthly fatalities. The major source of uncertainty in the measure relates to passenger miles traveled. The number of passenger miles is an estimate typically derived from data on reported unlinked

Data Accuracy & Reliability

passenger trips and average trip length provided by each transit authority. Differences in measurement occur across transit authorities.

To approximate passenger miles, total unlinked trips are multiplied by average trip length. An unlinked trip is recorded each time a passenger boards a transit vehicle, even though the rider may be transferring from one transit vehicle to another on the same journey.

Transit authorities do not routinely record trip length. To obtain an average trip length for their bus routes, transit authorities use Automatic Passenger Counters with Global Positioning System (GPS) Technology or an FTA-approved sampling technique. To obtain passenger mile data on rail systems, ferryboats, and paratransit, transit authorities often use computerized tracking systems, such as the Smart Card. In some cases, such as small fare-free systems or large free-transfer systems (e.g., the New York City subway), passenger miles are sampled directly, because data for a 100 percent count of unlinked passenger trips are not available. Validation based on annual trend analysis is performed on the passenger mile inputs from the transit industry. The validation is performed by analysts at the NTD program.

Completeness

Within the scope defined above, the fatality count data are complete. Transit systems must report reportable safety events to the NTD within 30 days of the event.

Reliability

Transit systems must report reportable safety events to the NTD within 30 days of the event. Rail safety events are reconciled against SSO Investigatory Reports. Data reports are self-certified by a designate of the transit system's CEO.

Verification and Validation

Data Accuracy & Reliability

FTA employs an NTD Validation Services contractor to verify and validate safety event reports. Passenger mile data are validated against the operations and financial data in the rest of the annual NTD report to ensure consistency and are validated against the prior year's reported passenger miles.

Data Accuracy & Reliability

Rail-Related Fatalities

Measures

- Highway-Rail Grade Crossing Incidents
- Rail Right-of Way Trespass Incidents

Scope

The railroad accident/incident reporting subsystem compiles rail-related accident and incident data from railroads subject to FRA oversight. Railroads subject to oversight must have an accident and incident record-keeping system that meets or exceeds federal standards. Requirements to report an event to FRA apply when the event's consequences exceed the annually adjusted damage threshold. The reporting threshold for CY 2016 was \$10,500. A rail equipment (including train) accident is any collision, derailment, fire, explosion, act of God, or other event involving the operation of railroad on-track equipment (standing or moving) that results in damages greater than the current reporting threshold to railroad on-track equipment, signals, track, track structures, or roadbed. Railroads must also maintain internal records on accountable events (those that are generally less impactful than reportable events), employee on-duty injuries, and occupational illnesses that are not required to be reported to FRA. These internal records are subject to FRA review.

Railroads report train accidents on FRA form F6180.54, Rail Equipment Accident/Incident Report and operational data, including train-miles, on FRA form F6180.55, Railroad Injury and Illness Summary.

Sources

FRA's railroad accident/incident reporting subsystem compilation of railroad-reported data that railroads submit as required under 49 CFR Part 225. This subsystem contains approximately 40 years of data on railroad casualties, train accidents, highway-rail grade crossing collisions, and operating statistics, including train-miles.

Statistical Issues

Data Accuracy & Reliability

Highway-rail grade crossing incident rate is calculated in terms of train miles (operated). Adding vehicle exposure would provide a more accurate picture.

Completeness

Railroad systems that do not connect with the general rail system are excluded from reporting to FRA. Examples include subway systems (e.g., Washington, D.C. Metro and New York City Subway), track existing inside an industrial compound, and insular rail (e.g., rail not connected to the general system and not intersecting a public highway-rail grade crossing or navigable waterway).

Although railroads are generally required to report accidents and incidents within 30 days after the end of the month in which the event occurred, FRA keeps its data files open for amendment for five years to capture late reports, audit findings, and other updates. Data must be updated if the costs of an accident are more than 10 percent higher or lower than the initially reported cost. Data processing requires up to 30 days to prepare the information for merging into the database. As a result, FRA measures are subject to change and might differ from previous reports. A more detailed explanation of this process is available in FRA's Guide for Preparing Accident/Incident Reports at <http://safetydata.fra.dot.gov>.

Reliability

FRA audits railroads' reporting and internal records. If railroads do not report accurately, completely, and timely, FRA can assess civil monetary penalties.

Validation and Verification

FRA's systems and periodic audits help validate railroad-submitted data to ensure that they are timely, complete, accurate, and reliable. Every two years, FRA conducts a data reporting audit of each of the seven largest carriers, known as Class I railroads, and Amtrak. FRA also audits the smaller railroads about every five years. The purpose of these audits is to check for properly completed reports and verify the reported data, including identifying accidents or incidents that meet thresholds, but were not reported. After verification and validation, FRA provides public access to the data through its website at <http://safetydata.fra.dot.gov>.

Data Accuracy & Reliability

Pipeline and Hazardous Materials Fatalities

Measure

Confirmed Fatalities Caused by the Release of Hazardous Materials Transported via Pipeline or Surface Transportation Conveyance

Scope

Incidents on gas pipeline systems, liquefied natural gas facilities, and underground natural gas storage facilities must be reported to PHMSA under 49 CFR 191.15. Hazardous liquid and carbon dioxide (CO₂) pipeline system accidents must be reported to PHMSA under 49 CFR 195.50. Both interstate and intrastate pipeline systems are subject to the reporting requirements. Additionally, any person in possession of a hazardous material(s) during air, water, rail, or highway transportation, including loading, unloading, and storage incidental to transportation, must disclose them if certain conditions are met under 49 CFR 171.15 and 171.16.

A fatality resulting from a failure in a hazardous materials transportation system in which there is a release of a hazardous liquid, CO₂, or natural gas must be reported. This includes operator employees, contractors working for the operator, other workers in the right of way, emergency responders, and the public. If an injured person dies within 30 days of the incident date, it is counted as a death, not as an injury. PHMSA partners with operators, state partners, and other stakeholders to identify/confirm deaths that occurred due to a release of hazardous liquid, gas, or other hazardous materials regulated by PHMSA.

Sources

DOT/PHMSA incident data are used for this measure. For pipeline incidents, these data are derived from pipeline operator reports submitted on PHMSA Forms, F-7100.1, F-7100.2, F-7100.3, and F-7000-1. PHMSA regulations require incidents to be reported online through the PHMSA Portal. For incidents involving all other modes of transportation, hazardous materials transportation incident data are derived from reports submitted on Form DOT F 5800.1 and maintained in the Hazardous Materials Information System (HMIS). In addition,

Data Accuracy & Reliability

PHMSA's Office of Hazardous Materials Safety seeks information and data to identify potentially reportable incidents through the National Response Center (NRC), as well as the monitoring print, television, and social media daily.

Statistical Issues

Results in any single year should be interpreted with caution. There is some normal variation in the number of reported incidents each year, particularly given the small number of these fatalities, and this variation might not reflect real changes in the underlying risk.

Targets are presented as ranges to account for this variation. The target each year is set at one standard deviation from the trend line estimated based on best-fit function to account for normal variation year-to-year. This provides about 80 percent probability of achieving the target if the risk continues to follow the trend line. The trend line is evaluated and calibrated at the end of every fiscal year.

The performance measure is not normalized for changes in exposure – external factors like changes in pipeline mileage, energy consumption, or U.S. population – that could affect the number of incidents with fatality.

Completeness

Compliance in reporting is very high and most incidents that meet reporting requirements are submitted. Operators must submit reports within 30 days of an incident or face penalties for non-compliance. There is typically a 30-day lag between the date of the pipeline incident and PHMSA receipt of the incident report. Pipeline operators can supplement incident reports at any time after original submittal. For other modes, there may be a 30- to 60-day lag in reporting, verifying, validating, and compiling information in the database for analysis, as many companies do not file incident reports on time. Filers have one year to modify their 5800.1 submission.

Reliability

Data Accuracy & Reliability

PHMSA routinely cross checks incident reports against other sources of data, such as immediate notifications provided to the NRC and media outlets. PHMSA inspectors also regularly discuss accidents with operator personnel during routine inspections. PHMSA continues to work to improve the quality of the incident data.

Verification and Validation

All incident data are collected on Office of Management and Budget (OMB)-approved forms online. Detailed OMB-approved instructions for incident reports are available on the PHMSA website. Validation checks are run in the online instrument prior to submittal to ensure all required data fields have been populated.

PHMSA staff are responsible for reviewing each incident report to ensure the data matches information gained during PHMSA investigation or media reports. Pipeline operators have online access to each report they have submitted. On the PHMSA website, the public can download all the incident raw data or view 20-year trend lines of pipeline incident data with views of individual report data available.

Additional Information

Stakeholder / Congressional Consultations

- FHWA, NHTSA, and FMCSA leadership teams and their Government Affairs Offices provide briefings and technical assistance for Congressional members and staff on highway safety issues when requested. State, local, and tribal stakeholder engagement and dialogue is an essential element for the success of the Department's strategic safety initiatives. FHWA, NHTSA, and FMCSA regularly engage with the public and other stakeholders (industry, safety advocates, State and local agencies, advisory committees) to seek feedback and input into current and future initiatives. These three agencies have also partnered with the National Safety Council to support the development of a coalition that has brought together more than 900 State and local organizations to focus on developing short and long-term strategies to reduce crashes and fatalities.
- FMCSA holds regular listening sessions with the public and stakeholders throughout the year on a variety of issues pertinent to motor carrier safety and rulemakings the agency is contemplating or undertaking. Most recently, FMCSA hosted Broker listening Session on October 28, 2020. During this event, FMCSA was hearing directly from truckers, brokers, and motor carrier stakeholders regarding the important issue of broker transparency. FMCSA works closely with the Motor Carrier Safety Advisory Committee (MCSAC), the Medical Review Board (MRB), and Household Goods (HHG) Consumer Protection Working Group. The MCSAC provides advice and recommendations to the FMCSA Administrator on motor carrier safety programs and regulations. The MRB was established to improve highway safety by providing expert advice on medical standards, guidelines, and research on the medical certification of CMV drivers. HHG Consumer Protection Working Group develops recommendations on how to best convey to consumers relevant information with respect to Federal laws concerning the interstate transportation of household goods by motor carrier.
- FTA partners with the American Public Transportation Association and the Transportation Research Board for research on industry standards and best practices. The agency works with transit agencies to assist with safety certification programs and staff training. FTA also partners with the National Transit Institute and other DOT modes to provide training to the industry and access to data and

Additional Information

industry trends. FTA partners with the State DOTs who are required to create State Safety Oversight programs for rail transit safety.

- FRA works with dozens of stakeholder organizations, representing all segments of the railroad community, including management, labor, safety advocates, suppliers, manufacturers, and large and small railroad. Stakeholder engagement includes meetings of the Rail Safety Advisory Committee and issue-specific activities, such as positive train control collaboration sessions and grade crossing symposiums. FRA consults with Members of Congress and their professional staff at least quarterly, through briefings, teleconferencing, and correspondence.
- PHMSA works closely with its stakeholders to collect and share data to provide a standard of reference for safety performance, improve data quality, and motivate changes in behavior. PHMSA also cooperates with other federal agencies, including the Departments of Homeland Security, Energy, State, Interior, and Labor, the Environmental Protection Agency, and others on all pipeline and hazardous materials safety matters.