FISCAL YEAR 2021

PERFORMANCE REPORT

U.S. DEPARTMENT OF TRANSPORTATION

TABLE OF CONTENTS

INTRODUCTION

The U.S. Department of Transportation (DOT or the Department) ensures our nation has the safest, most efficient, and modern transportation system in the world. The work of DOT boosts our economic productivity and global competitiveness enhancing the quality of life in both rural and urban communities.

In accordance with the Government Performance and Results Act of 1993, as amended by the GPRA Modernization Act of 2010 (GPRAMA), DOT is pleased to present the Fiscal Year (FY) 2021 Performance Report. Further information detailing DOT's performance is available at https://www.performance.gov.

The FY 2021 Performance Report evaluates DOT's success in meeting the targets for its performance goals and indicators in FY 2021. Each strategic goal is linked to one or more strategic objectives, and progress in each strategic objective is measured by performance indicators. The performance information included in this document is used to inform DOT budget, policy, and legislative reauthorization proposals.

The FY 2021 Performance Report contains measures that tie to DOT's Strategic Plan for FY 2018 – 2022. A new Strategic Plan for FY 2022 – 2026 is published with the President's FY 2023 Budget. Please note that in this edition of the report, DOT has reported performance for the 2021 calendar or fiscal year for most performance goals. COVID-19 fundamentally affected transportation systems during that period, which, in certain cases, is reflected in the data reported here. Where appropriate, the report speaks to those impacts, including actions taken by DOT.

Organizational Structure

Congress established DOT in 1967, consolidating 31 transportation agencies and functions under the first U.S. Secretary of Transportation, Alan S. Boyd. Approximately 54,000 DOT employees continue to bring innovations and integrity to the work of improving the safety and performance of our multi-modal transportation system.

Legislative Authorities

Congress provides the funding and legislative authorities needed to carry out DOT's mission. DOT's authorities are substantially codified under Titles 23 (highways), 46 (maritime), and 49 (aviation, railroads, and other surface modes) of the United States Code. The following were significant authorization acts for DOT's programs through FY 2021:

- **Fixing America's Surface Transportation Act** (Public Law No. 114-94: December 4, 2015)**:** Authorized appropriations to the Department from FY 2016 through FY 2020 to improve the nation's surface transportation infrastructure, including roads, bridges, transit systems, and rail transportation network. The Act reformed and strengthened transportation programs, refocused national priorities, provided long-term certainty and more flexibility for State and local governments, streamlined project approval processes, and maintained a strong commitment to safety. Congress extended the Act through FY 2021 and approved a $13.6 billion General Fund transfer to maintain Highway Trust fund solvency through the end of FY 2021.
- **Federal Aviation Administration Reauthorization Act of 2018** (Public Law No. 115-254: October 5, 2018)**:** Provides a five-year authorization of the Federal Aviation Administration (FAA), the first significant, multi-year reauthorization since the FAA Modernization and Reform Act of 2012 (Public Law 112-95), and the first five-year reauthorization in over a decade. The Act authorizes appropriations to FAA through FY 2023 and includes important changes related to increasing the safety and pace of Unmanned Aircraft Systems (UAS) integration, expediting the financing and development of airport capital projects, directing FAA to advance leadership in the field of international supersonic aircraft policies, reforming the aircraft certification process, addressing aircraft noise, and ensuring safe lithium battery transport.
- **Consolidated Appropriations Act of 2021** (Public Law No. 116- 260: December 27, 2020)**:** Authorized the continued oversight of the nation's more than 2.8 million miles of oil, gas, and hazardous liquid pipelines; set forth mandates for publication of new and revised safety standards for leak detection and gas distribution pipelines; and authorized research, grants, programs, and the related appropriations from FY 2021 through FY 2023. It includes several mandates to issue regulations to improve safety of the nation's pipelines and reduce leaks and methane emissions from pipeline facilities. The Act provides the Pipeline and Hazardous Materials Safety Administration (PHMSA) with new authority to establish pilot programs to evaluate innovative technologies and operations practices designed to enhance pipeline safety. The Act also directs PHMSA to conduct several studies, including a study on resources needed to establish a National Center of Excellence for Liquefied Natural Gas Safety to further U.S. government expertise in operations, management, and regulatory practices of Liquified Natural Gas facilities and a study on the costs and benefits of establishing an independent pipeline safety testing facility under DOT.
- **National Defense Authorization Act for Fiscal Year 2021** (Public Law No. 116-283)**:** Authorized appropriations for Maritime Administration (MARAD) programs, including Federal and State Maritime Academies, ship operations, the Maritime Security Program, grants to small U.S. shipyards, and loan guarantees for ships constructed or reconditioned in the United States. While the National Defense Authorization Act is an annual authorization, the Department anticipates that Congress will reauthorize it for the fiscal years referred to within this report for programs overseen by MARAD.

Overview of Strategic Goals and Objectives

The Strategic Plan for FY 2018 – 2022 included four strategic goals, which were outcome-oriented, long-term goals for the major functions and operations of DOT. Each strategic goal had associated strategic objectives, which expressed more specifically the impact DOT hoped to achieve. The Department also set numerous performance goals and indicators that defined what success looked like for each strategic objective. Some performance goals and indicators were managed by a single Operating Administration, while others were shared among two or more Operating Administrations. The graphic below depicts how DOT's strategic goals and objectives for FY 2018 – 2022 were organized. DOT will be releasing a new Strategic Plan with corresponding goals and objectives in spring 2022.

STRATEGIC GOALS		STRATEGIC OBJECTIVES	
1	SAFETY	1.1	SYSTEMIC SAFETY APPROACH
2	INFRASTRUCTURE	2.1	PROJECT DELIVERY, PLANNING, ENVIRONMENT, FUNDING & FINANCE
		2.2	LIFE CYCLE AND PREVENTIVE MAINTENANCE
		2.3	SYSTEM OPERATIONS & PERFORMANCE
		2.4	ECONOMIC COMPETITIVENESS & WORKFORCE
3	INNOVATION	3.1	DEVELOPMENT OF INNOVATION
		3.2	DEPLOYMENT OF INNOVATION
4	ACCOUNTABILITY	4.1	REGULATORY REFORM
		4.2	MISSION EFFICIENCY & SUPPORT

Cross-Agency Priority Goals

Cross-Agency Priority Goals are a tool used to accelerate progress on a limited number of priority areas where implementation requires active collaboration between multiple agencies, overcoming organizational barriers to achieve better performance than one agency can achieve on its own. GPRAMA requires Cross-Agency Priority Goals to be addressed in the Annual Performance Report. Please refer to https://www.performance.gov for the Department's contributions and progress toward those goals, where applicable.

Agency Priority Goals

Agency Priority Goals (APGs) provide agencies with mechanisms to focus leadership priorities, set outcomes, and measure results. These include goals that can be achieved within about 24 months and depend predominantly on agency implementation. DOT had four APGs that spanned the FY 2020 – 2021 cycle (more information is available on https://www.performance.gov):

- Reduce Surface Transportation-Related Fatalities
- Reduce Aviation-Related Fatalities
- Improve America's Transportation-Related Infrastructure
- Enhance Commercial Space Innovation

Throughout the FY 2021 Performance Report, various performance goals are designated as aligning to the Department's FY 2020 – 2021 APGs.

STRATEGIC GOAL 1: SAFETY

DOT's top priority is to make the U.S. transportation system the safest in the world. The United States has made progress in reducing overall transportation-related fatalities and injuries over the past two decades, even as the U.S. population and travel rates increased significantly. However, over the past 11 calendar years (CY), the number of fatalities on the roadways has increased by 11.2%. Based on early estimates, fatalities increased to 38,680 in CY 2021 (final data will be available in spring 2022).

Objective 1.1: Systemic Safety Approach

The following summaries of progress and performance goal data mark the conclusion of the reporting cycle for Objective 1.1: Systemic Safety Approach, as aligned to the Strategic Plan for FY 2018 – 2022. This objective was supported by seven Operating Administrations through the following performance goals:

- Reduce U.S.-Owned Commercial Carrier Aviation Fatalities per 100 Million Persons on Board (FAA)[APG]
- Reduce General Aviation Fatal Accidents per 100,000 Flight Hours (FAA)[APG]
- Reduce Runway Incursions (FAA)[APG]
- Exert Global Leadership at the International Civil Aviation Organization (FAA)[APG]
- Reduce Motor Vehicle-Related Fatalities Overall (FHWA, FMCSA, NHTSA)[APG]
- Reduce Motor Vehicle-Related Fatalities by Type (FHWA, FMCSA, NHTSA)[APG]
- Reduce High-Risk Motor Carriers (FMCSA)
- Reduce Fatal Motor Carrier Crashes (FMCSA)
- Reduce Rail-Related Fatalities (FRA)[APG]
- Reduce Train Accidents (FRA)
- Improve Safe Transport of Hazardous Materials by Rail (FRA)
- Reduce Rail Transit Collisions Involving Persons (FTA)[APG]
- Reduce Transit-Related Fatalities (FTA)[APG]
- Reduce Transit-Related Fatalities per 100 Million Passenger Miles (FTA)[APG]
- Reduce Transit-Related Fatalities per 100 Million Vehicle Revenue Miles (FTA)[APG]
- Reduce Serious Injuries (NHTSA)
- Improve Safety of Fleet on U.S. Roadways (NHTSA)
- Improve Timeliness of Data (NHTSA)
- Reduce Fatalities Caused by Pipelines and Hazardous Materials (PHMSA)
- Improve Safe Delivery of Pipeline Products and Hazardous Materials (PHMSA)
- Prevent Accidental Damage to Gas and Hazardous Liquid Pipelines (PHMSA)

Federal Aviation Administration (FAA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce U.S.-Owned Commercial Carrier Aviation Fatalities per 100 Million Persons on Board[APG]	U.S.-Owned Commercial Carrier Fatalities per 100 Million Persons on Board	*Target*	6.4	6.2	5.9	5.7	5.4
		Actual	0.03	0.1	0.5	0.6	0.0
Reduce General Aviation Fatal Accidents per 100,000 Flight Hours[APG]	General Aviation Accidents per 100,000 Flight Hours	*Target*	1.01	1.0	0.98	0.97	0.96
		Actual	0.83	0.89	0.95	0.91	0.73*
Reduce Runway Incursions	Weighted Surface Safety Risk Index per Million Operations for Commercial Aviation	*Target*	N/A	N/A	0.35	0.35	0.35
		Actual	N/A	N/A	0.105	0.053	0.039**
	Weighted Surface Safety Risk Index per Million Operations for Non-Commercial Aviation	*Target*	N/A	N/A	0.60	0.60	0.60
		Actual	N/A	N/A	0.537	0.204	0.102**
Exert Global Leadership at the International Civil Aviation Organization	*Develop global pandemic risk mitigation measures for passenger and aviation professionals in alignment with U.S. best practices in the International Civil Aviation Organization Council Aviation Recovery Task Force. Develop, maintain, and actively promote an FAA policy position in support of CART implementation measures in at least three bilateral and multilateral venues, to include International Civil Aviation Organization regional engagement.*						

N/A: Not available

APG: This performance goal aligned to one of the Department's FY 2020 - 2021 APGs

** Final data expected December 2022*

*** Final data expected spring 2022*

FY 2021 Summary of Progress

Accomplishments: In FY 2021, FAA continued to work with the General Aviation Joint Steering Committee (GAJSC) on improving general aviation safety. The GAJSC, formed by FAA and aviation industry partners, uses a non-regulatory, proactive, and data-driven strategy to improve aviation safety. The GAJSC has developed 46 safety enhancements aimed at addressing the top causes of fatal accidents. Of this total, 30 have been completed to date, with one of those completed in FY 2021 and work on the remaining 16 underway. FAA has also supported global COVID-19 risk mitigation through its work with the International Civil Aviation Organization Council Aviation Recovery Task Force by developing and publishing guidance documents that serve as a global benchmark for testing protocols and vaccine and testing certificates and reflect policies and recommendations championed by FAA.

Challenges: Category A is a serious incident in which a collision was narrowly avoided. Category B is an incident in which separation decreases and there is a significant potential for collision, which may result in a time critical corrective/evasive response to avoid a collision. In FY 2021, runway incursion rates continued to trend well below

target, even relative to reduced operations as a result of COVID-19 restrictions. Because Category A/B runway incursions are so rare relative to the number of operations and events, even one instance of a runway incursion can cause a misleading spike in the data.

COVID-19 Impacts: FAA collects aviation safety incident and situation reports from the Aviation Safety Reporting Program and the National Aeronautics and Space Administration's Aviation Safety Reporting System website. These reports are indicative of individual events and provide a snapshot of concerns throughout various domains. This past year, the National Aeronautics and Space Administration delivered COVID-19-related reports to FAA regarding operational safety and health safety issues.[1,2] A weekly Aviation Safety Reporting System COVID-19 summary was provided to FAA executives, highlighting the most predominant issues broken out by the nature of the issue and domain. FAA also continued to support activities related to the Council Aviation Recovery Task Force and High-Level Conference on COVID-19.

Federal Highway Administration (FHWA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce Motor Vehicle-Related Fatalities Overall[APG]	Total Motor Vehicle-Related Fatalities per 100 Million Vehicle Miles Traveled	*Target*	1.02	1.02	1.02	1.01	1.01
		Actual	1.17	1.13	1.10	1.37*	TBD
Reduce Motor Vehicle-Related Fatalities by Type[APG]	Passenger Vehicle Occupant Fatalities per 100 Million Vehicle Miles Traveled*	*Target*	0.75	0.75	0.74	0.74	0.74
		Actual	0.74	0.70	0.68	TBD*	TBD
	Large Truck and Bus Fatalities per 100 Million Vehicle Miles Traveled	*Target*	0.114	0.114	0.114	0.114	0.114
		Actual	0.160	0.162	0.161	TBD*	TBD
	Non-Occupant Fatalities (Pedestrian, Bicycle) per 100,000 Population	*Target*	2.15	2.15	2.10	2.10	2.10
		Actual	2.15	2.25	2.24	TBD*	TBD
	Motorcycle Fatalities per 100,000 Motorcycle Registrations	*Target*	62	62	62	61	61
		Actual	59.34	57.50	58.33	TBD*	TBD

TBD: To be determined

APG: This performance goal aligned to one of the Department's FY 2020 – 2021 APGs

** Final data expected spring 2022*

[1] Operational safety issues are those pertaining to the procedures and environment of the National Airspace System that may have been caused or influenced by COVID-19 disruptions to regular operations.

[2] Health safety issues pertain to concerns over potential exposure to communicable disease including COVID-19.

FY 2021 Summary of Progress

Notable Achievements: FHWA safety staff hosted more than 30 safety webinars and virtual trainings and published more than 60 case studies, reports, videos, virtual trade show booths, and other resources in FY 2021. Topics of these resources included advancing the Safe System Approach, improving safety data, implementing the Highway Safety Improvement Program effectively, preventing roadway departures, advancing intersection safety, speed management, improving pedestrian and bicyclist safety, and more. For example, the FHWA Office of Safety hosted an Every Day Counts Safety Summit Series during September 2021 to highlight seven key safety initiatives, including success stories and how to implement them to save lives.

FHWA also launched working groups on several Biden-Harris Administration priorities, including a cross-office Complete Streets group to identify methods to help State, Tribal, and local agencies routinely elevate safety for all users; an intermodal group on Safe System implementation; and an Equity in Safety Transportation working group aimed at integrating safety across FHWA programs.

Challenges: While Americans drove less beginning in FY 2020 due to the COVID-19 pandemic, early estimates for FY 2021 show that traffic fatalities increased by 7.2%, the largest increase in fatalities since FY 2007. FHWA is continuing to implement a Safe System Approach and is placing a greater emphasis on speed reduction strategies to address a travel environment affected by new travel patterns caused by the pandemic.

COVID-19 Impacts: COVID-19 has impacted FHWA's ability to conduct in-person trainings and onsite technical assistance. FHWA has responded by being mission-driven, adaptable, and safe through the development of innovative virtual trainings and assistance.

Federal Motor Carrier Safety Administration (FMCSA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce Motor Vehicle-Related Fatalities Overall APG	Total Motor Vehicle-Related Fatalities per 100 Million Vehicle Miles Traveled	*Target*	1.02	1.02	1.02	1.01	1.01
		Actual	1.17	1.13	1.10	1.37*	TBD
Reduce Motor Vehicle-Related Fatalities by Type APG	Passenger Vehicle Occupant Fatalities per 100 Million Vehicle Miles Traveled*	*Target*	0.75	0.75	0.74	0.74	0.74
		Actual	0.74	0.70	0.68	TBD*	TBD
	Large Truck and Bus Fatalities per 100 Million Vehicle Miles Traveled	*Target*	0.114	0.114	0.114	0.114	0.114
		Actual	0.160	0.162	0.161	TBD*	TBD
	Non-Occupant Fatalities (Pedestrian, Bicycle) per 100,000 Population	*Target*	2.15	2.15	2.10	2.10	2.10
		Actual	2.15	2.25	2.24	TBD*	TBD
	Motorcycle Fatalities per 100,000 Motorcycle Registrations	*Target*	62	62	62	61	61
		Actual	59.34	57.50	58.33	TBD*	TBD

Reduce High-Risk Motor Carriers	Average Number of Days to Investigate "High Risk" Designated Carriers	*Target*	N/A	55	55	55	55
		Actual	N/A	49.6	50	66	82.7*
Reduce Fatal Motor Carrier Crashes	Number of Motor Carrier Incidents	*Target (CY)*	4,352	4,308	4,264	4,220	4,176
		Actual (CY)	4,588	4,660	4,706	4,277	2,980*

TBD: To be determined

APG: This performance goal aligned to one of the Department's FY 2020 – 2021 APGs

** Final data expected spring 2022*

FY 2021 Summary of Progress

Notable Achievements: FMCSA's Commercial Driver's License (CDL) Drug and Alcohol Clearinghouse is a database that contains information about violations of FMCSA's drug and alcohol testing program for the holders of CDLs. The Clearinghouse identifies commercial motor vehicle (CMV) drivers who have committed drug and alcohol violations that render them ineligible to operate a CMV. As of October 31, 2021, the Clearinghouse had 2,767,838 registered users, more than 8,962,483 queries run, and 103,364 violations reported. The number of queries conducted increased by 9.97% from FY 2020 (4,268,411) to FY 2021 (4,694,072) and number of violations decreased by 8.98% from FY 2020 (54,111) to FY 2021 (49,253). Positive drug tests account for 82% of the total violations reported. As of November 1, 2021, 95,876 CDL holders in the Return-to-Duty (RTD) process have at least one violation. In addition, 75,337 of those drivers were listed as prohibited because they had not completed the required RTD processes. FMCSA will need to study future trends to make more correlations between the Clearinghouse's influence on driver behavior and safety.

On November 8, 2021, the second Clearinghouse final rule went into effect prohibiting State Driver Licensing Agencies from issuing a CDL or a commercial learner's permit for any individual prohibited under FMCSA's regulations from performing safety-sensitive functions, including driving a CMV, due to one or more drug and alcohol program violations. Further, State Driver Licensing Agencies must remove the commercial learner's permit or CDL privilege from the driver's license of an individual subject to the CMV driving prohibition, resulting in a downgrade of the license until the driver complies with RTD requirements. Drivers who complete the RTD process before their license is downgraded may continue to operate.

Challenges: Conducting truck and bus inspections while observing the Centers for Disease Control and Prevention's COVID-19 safety protocols was a challenge for FMCSA. As a result, FMCSA collaborated with motor carrier companies to follow safety guidelines to keep workers safe while conducting necessary inspections. FMCSA and its State partners performed 44,971 new entrant safety audits and 2,875,265 roadside truck and bus inspections in FY 2021.

COVID-19 Impacts: Due to COVID-19, the number of FMCSA motor carrier inspections and investigations decreased in FY 2021. FMCSA issued interim policy guidance in FY 2020, which expanded offsite investigations and remote onsite investigations on unsafe carriers. In addition, FMCSA recently resumed roadside inspections and is in the process of resuming Onsite Investigations and Skills Performance Evaluations. As FMCSA implements a phased reentry to normal operations, FMCSA will continue to execute its mission-critical functions.

Federal Railroad Administration (FRA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce Rail-Related Fatalities*	Highway-Rail Grade Crossing Incidents	*Target*	---	---	---	2,165	2,057
		Actual	2,115	2,162	2,281	1,957	2,071
	Rail Right-of-Way Trespass Incidents	*Target*	---	---	---	1,015	964
		Actual	977	955	1,045	1,056	1,060
Reduce Train Accidents	Train Accidents	*Target*	---	---	---	1,921	1,566
		Actual	1,806	1,939	2,024	1,667	1,586
Improve Safe Rail Transport of Hazardous Materials	Rate of Non-Accident Releases of Hazardous Materials (per 10,000 Tank-Car Originations)	*Target*	---	2.30	2.28	1.59	1.52
		Actual	2.42	2.47	1.67	N/A	N/A

N/A: Not available

FY 2021 Summary of Progress

Notable Achievements: The Rail Safety Improvement Act of 2008 required the 10 States with the most grade crossing collisions to develop action plans. The Fixing America's Surface Transportation Act required those 10 States to report on implementation of Rail Safety Improvement Act-mandated plans and to submit updated plans for FRA approval. This legislation also established a one-time requirement for other States and the District of Columbia to submit plans for FRA approval. In FY 2021, FRA issued the State Highway-Rail Grade Crossing Action Plans final rule to implement these requirements. The Agency also developed guidance materials and provided technical assistance to help States comply with the rule.

FRA had several test programs underway in FY 2021 to evaluate autonomous track geometry measurement systems, including combinations of visual and automated inspections at differing frequencies. FRA is analyzing data from these programs and is working with the Railroad Safety Advisory Committee to incorporate the results into a comprehensive recommendation on future regulatory action. FRA is also overseeing field testing of second-generation positive train control systems.

Challenges: COVID-19 safety guidelines limited FRA's ability to conduct community engagement, workshops, and "hot spot" investigations intended to address grade crossing collisions and trespassers on railroad property in FY 2021.

COVID-19 Impacts: After two 60-day extensions, railroad associations asked FRA for long-term regulatory relief to accommodate COVID-19. Following a public comment period, FRA extended relief through September 2021 to facilitate social distancing and mitigate documented workforce shortages for commuter railroads and short-line railroads due to employees with confirmed or potential virus exposures or cases. Ongoing FRA data analysis shows no adverse safety impacts due to this regulatory relief.

Federal Transit Administration (FTA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce Rail Transit Collisions Involving Persons[APG]	Total Rail Transit Collisions with Persons	*Target*	N/A	450	420	430	430
		Actual	N/A	425	482	426	382
Reduce Total Transit-Related Fatalities[APG]	Total Number of Transit Fatalities	*Target*	---	278	260	255	255
		Actual	259	245	254	311	283
Reduce Transit-Related Fatalities per 100 Million Vehicle Revenue Miles[APG]	Total Transit Fatalities per 100 Million Vehicle Revenue Miles	*Target*	N/A	N/A	N/A	6.3	6.25
		Actual	N/A	N/A	6.68	9.56	8.98

N/A: Not available

APG: This performance goal aligned to one of the Department's FY 2020 – 2021 APGs

FY 2021 Summary of Progress

Notable Achievements: All transit agencies and States subject to the Public Transportation Agency Safety Plan Rule have certified that they have met the rule's requirements prior to the July 20, 2021 deadline. To further improve the safety culture of public transit agencies, FTA delivered trainings and issued 515 certifications to transit safety professionals enrolled in the Public Transportation Safety Certification Training Program. FTA also completed development of a new State Safety Oversight Reporting system to collect all 2020 State Safety Oversight Agency Annual Reports.

FTA's cross-functional Safety Assessment Team and Executive Safety Review Board continued to evaluate safety topics and published Safety Bulletins and a Request for Information on four key safety risks: inward- and outward-facing cameras in rail transit operating compartments, end-of-railcar door signage, roadway worker protection, and signal system safety. FTA also published three final Transit Advisory Committee for Safety reports that cover the safety focus areas from the 2018 – 2020 Charter: 1) Final Report 18-01 on Employee Safety Reporting, 2) Final Report 18-02 Roadway Worker Protection, and 3) Final Report 18-03 Trespass and Suicide Prevention.

Challenges: Transit-related fatalities increased during FY 2021. FTA is investigating likely causal factors.

COVID-19 Impacts: FTA has continued to identify ways to improve transit safety while reducing the burden on transit agencies during COVID-19. This has included disseminating information, best practices, and answers to Frequently Asked Questions pertaining to the Centers for Disease Control and Prevention Mask Order and Transportation Security Administration Security Directive; issuing a second notice of enforcement discretion to delay the regulatory certifications for more than 750 agencies from December 21, 2020, to July 20, 2021; and providing guidance on the use of grant funding to support operations and reduce the transmission of COVID-19 on transit. FTA also hosted three listening sessions and developed an online discussion forum to facilitate peer-to-peer exchange of best practices during the pandemic.

National Highway Traffic Safety Administration (NHTSA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce Motor Vehicle-Related Fatalities Overall[APG]	Total Motor Vehicle-Related Fatalities per 100 Million Vehicle Miles Traveled	*Target*	1.02	1.02	1.02	1.01	1.01
		Actual	1.17	1.13	1.10	1.37*	TBD
Reduce Motor Vehicle-Related Fatalities by Type[APG]	Passenger Vehicle Occupant Fatalities per 100 Million Vehicle Miles Traveled*	*Target*	0.75	0.75	0.74	0.74	0.74
		Actual	0.74	0.70	0.68	TBD*	TBD
	Large Truck and Bus Fatalities per 100 Million Vehicle Miles Traveled	*Target (CY)*	0.114	0.114	0.114	0.114	0.114
		Actual (CY)	0.160	0.162	0.161	TBD*	TBD
	Non-Occupant Fatalities (Pedestrian, Bicycle) per 100,000 Population	*Target*	2.15	2.15	2.10	2.10	2.10
		Actual	2.15	2.25	2.24	TBD*	TBD
	Motorcycle Fatalities per 100,000 Motorcycle Registrations	*Target*	62	62	62	61	61
		Actual	59.34	57.50	58.33	TBD*	TBD
Reduce Serious Injuries from Motor Vehicle Crashes	Occupants Ejected from Passenger Vehicles per 100 Emergency Medical Services Motor Vehicle Crash Dispatches	*Target*	---	1.2	1.1	1.0	1.0
		Actual	N/A	0.75	0.76	0.87*	N/A
Improve Safety of Fleet on U.S. Roadways	Percentage of Fleet Crash Tested	*Target*	---	86%	85%	85%	85%
		Actual	86%	87%	90%	89%	87%
Improve Timeliness of Data	Percentage of States that Meet the Quarterly Benchmark for Reporting	*Target*	---	80%	82%	84%	86%
		Actual	80%	90%	85%	88%	78%

TBD: To be determined

APG: This performance goal aligned to one of the Department's FY 2020 - 2021 APGs

** Final data expected spring 2022*

FY 2021 Summary of Progress

Notable Achievements: In FY 2021, NHTSA administered more than $500 million in highway safety program grants to the 50 States, District of Columbia, U.S. territories, and Bureau of Indian Affairs. NHTSA also hosted and participated in numerous webinars and meetings to help States develop their annual Highway Safety Plans, focusing on establishing attainable, data-driven performance targets as well as expanding strategic partnerships and effective programming to combat the top risky driving behaviors (impaired, unbelted, and distracted driving and speeding). NHTSA also promoted road user safety through national media campaigns, released an open letter to the public, published numerous reports providing insight into traffic safety trends, and launched two webinar series to engage State and local agencies in the development of effective countermeasures. Additionally, NHTSA released the 10th edition of Countermeasures That Work, which supports a proactive, equitable Safe System approach toward eliminating fatalities on the nation's roads. NHTSA also established internal working groups to align messaging and scale up activities related to the Safe System approach, equity, traffic law enforcement, partnerships, and transparency, including expanding working groups on vulnerable road users, Tribal communities, and rural safety.

Challenges: The COVID-19 pandemic affected traffic safety in a variety of ways, influencing behavior on the roadways; States' ability to carry out the highway safety grants program; and NHTSA's activities related to data and research, communication strategies, and technical assistance. NHTSA adapted to deliver virtual program assessments and update its Car Seat Inspection Finder to help parents and caregivers locate virtual appointments. Under the Coronavirus Aid, Relief, and Economic Security (CARES) Act, NHTSA provided waivers and postponements covering various grant program requirements for FY 2021.

COVID-19 Impacts: The pandemic substantially impacted driving patterns and behaviors, which NHTSA continues to study. Unique traffic safety conditions included emptier roads, faster speeds, and increased incidence of driving under the influence of alcohol and other drugs. NHTSA continues to collaborate with Federal partners, as well as researchers, traffic safety advocates, State and local transportation officials, and first responders, to promote, implement, and institutionalize the Safe System approach.

Pipeline and Hazardous Materials Safety Administration (PHMSA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce Fatalities Caused by Pipelines and Hazardous Materials	Confirmed Fatalities Caused by the Release of Hazardous Materials Transported via Pipeline or Surface Transportation Conveyance	*Target*	---	---	25	24	22
		Actual	16	18	25	16	21*
Improve Safe Delivery of Pipeline Products and Hazardous Materials	Incidents Involving Death or Major Injury Resulting from the Transport of Hazardous Materials by All Modes Including Pipelines	*Target*	---	63	62	61	61
		Actual	45	52	49	34	37*
	Pipeline Hazardous Liquid Spilled, Gross Volume (Barrels)	*Target*	---	---	55,800	53,900	52,600
		Actual	---	37,875	53,120	71,625	39,212

Improve Safe Delivery of Pipeline Products and Hazardous Materials	Pipeline Hazardous Liquid Spilled, Net Volume (Barrels)	*Target*	---	29,300	23,500	22,900	22,500
		Actual	29,251	4,594	20,323	16,176	12,683
	Hazardous Materials Incidents Reported Annually	*Target*	---	18,000	17,000	16,000	15,000
		Actual	---	19,150	22,036	22,000	27,000*
Prevent Accidental Damage to Gas and Liquid Hazardous Pipelines	Damages per 1,000 One-Call Tickets for Gas Distributions Pipelines (National Average)	*Target*	---	---	3.0	3.0	3.0
		Actual	2.8	2.8	2.7	2.6	2.5

N/A: Not available

** Final data expected October 2022*

FY 2021 Summary of Progress

Notable Achievements: Through continuous assessments, inspections, enforcements, and collaboration with State partners and operators, PHMSA expects to achieve a significant reduction in gross barrels spilled, meeting the target in FY 2021 for both gross and net volume spilled measures. Fatalities continue to decrease in hazardous materials transportation by highway. Some decreases may be temporary due to a reduction in vehicle miles traveled during COVID-19.

Challenges: There were an estimated 18 fatalities in FY 2021, which exceeds the FY 2020 target and actual number of fatalities. Gas distribution accounts for roughly 80% of fatalities in pipeline systems in the U.S., with vehicular incidents and third-party excavation damages as the other main causes of serious incidents and associated fatalities. PHMSA continues to work to mitigate these types of incidents by partnering with States, operators, and other stakeholders through education and outreach, safety inspection and enforcement, research and development, and grant programs, in addition to assessing and developing congressionally mandated studies and regulations around leak detection and repair. PHMSA's efforts to streamline hazardous materials incident filing have been successful but have also resulted in increased processing efforts. PHMSA has been conducting outreach with hazardous materials stakeholders to address underreporting and transitioning from paper to electronic reporting, which has led to a significant increase in the number of incidents reported.

COVID-19 Impacts: PHMSA has realized a safety benefit in transporting hazardous materials by highway, based on the reduction in vehicle miles traveled during the COVID-19 pandemic.

STRATEGIC GOAL 2: INFRASTRUCTURE

To stimulate growth and retain economic competitiveness, DOT guides strategic investments that enable more efficient movement of people and goods. To achieve the Infrastructure Strategic Goal, DOT provided guidance, technical assistance, and research to leverage Federal funding, accelerate project delivery, reduce project lifecycle costs, optimize the operation and performance of existing facilities, and provide multimodal travel options for people of all ages and abilities.

Objective 2.1: Project Delivery, Planning, Environment, Funding, and Finance

The following summaries of progress and performance goal data mark the conclusion of the reporting cycle for Objective 2.1: Project Delivery, Planning, Environment, Funding, and Finance, as aligned to the Strategic Plan for FY 2018 – 2022. This objective was supported by four Operating Administrations and one OST office through the following performance goals:

- Maintain Accountability for Permitting Projects (FAA, FHWA, FTA, OST-P)
- Reduce the Time to Complete an Environmental Impact Statement (FAA, FHWA, FRA, FTA, OST-P)
- Reduce the Time to Complete a Major Infrastructure Project (FAA, FHWA, FRA, FTA, OST-P)
- Increase the Number of State and Local Agencies Using a Federal Innovative Finance Tool (FHWA)
- Improve Major Project Performance in FHWA Portfolio (FHWA)
- Improve Major Project Performance in FTA Portfolio (FTA)
- Increase Grants to Rural and Small Urban Areas (FTA)
- Decrease Grant Processing Time (FTA)
- Increase Percentage of Grants Identified as Inactive at the Beginning of the Fiscal Year that are Either Closed or Returned to Active Status (FTA)

Federal Aviation Administration (FAA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Maintain Accountability for Permitting Projects*	Percentage of DOT Environmental Impact Statements Posted on Permitting Dashboard that are On Schedule	*Target*	---	90%	90%	90%	N/A
		Actual	---	70%	82%	95%	N/A
	Percentage of DOT Major Infrastructure Projects Posted on Permitting Dashboard that are On Schedule	*Target*	---	90%	90%	90%	N/A
		Actual	---	100%	100%	100%	N/A
Reduce the Time to Complete an Environmental Impact Statement*	Average Months to Complete an Environmental Impact Statement	*Target*	---	---	---	---	24 months
		Actual	---	---	---	---	27.9 months

N/A: Not available

** FAA shares ownership of this performance goal with the Federal Highway Administration, Federal Railroad Administration, Federal Transit Administration, and Office of the Assistant Secretary for Transportation Policy*

FY 2021 Summary of Progress

Notable Achievements: FAA completed the environmental review permitting process for its first Major Infrastructure Project, the LaGuardia Airport Access Improvement Project. As the lead agency for this complex project, FAA coordinated with more than 17 Federal and State agencies to streamline the environmental review process, ensure timely completion of the review, and make informed permitting decisions.

Challenges: Significant staff time was required to review, interpret, and apply ongoing changes to National Environmental Policy Act regulations.

COVID-19 Impacts: Although some on-site activities were delayed due to the pandemic, projects proceeded and remained on schedule.

Federal Highway Administration (FHWA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Maintain Accountability for Permitting Projects*	Percentage of DOT Environmental Impact Statements Posted on Permitting Dashboard that are On Schedule	*Target*	---	90%	90%	90%	N/A
		Actual	---	70%	82%	95%	N/A
	Percentage of DOT Major Infrastructure Projects Posted on Permitting Dashboard that are On Schedule	*Target*	---	90%	90%	90%	N/A
		Actual	---	100%	100%	100%	N/A
Reduce the Time to Complete an Environmental Impact Statement*	Average Months to Complete an Environmental Impact Statement	*Target*	---	---	---	---	24 months
		Actual	---	---	---	---	27.9 months
Increase the Number of State and Local Agencies Using Federal Innovative Finance Methods	Number of States and Local Agencies That Have Used Federal Innovative Finance Methods for Highway Projects (In the Current Year)	*Target*	---	18	20	20	21
		Actual	15	17	17	17	21
Improve Major Project Performance in the FHWA Portfolio	Percentage of FHWA-Funded Projects Over $500 Million within Two Percent of Schedule	*Target*	---	80%	80%	80%	80%
		Actual	70%	64%	66%	67%	67%
	Percentage of FHWA-Funded Projects Over $500 Million within Two Percent of Cost	*Target*	---	80%	80%	80%	80%
		Actual	84%	80%	79%	80%	81%

N/A: Not available

** FHWA shares ownership of this performance goal with the Federal Aviation Administration, Federal Railroad Administration, Federal Transit Administration, and Office of the Assistant Secretary for Transportation Policy*

FY 2021 Summary of Progress

Notable Achievements: Working with the Build America Bureau, FHWA facilitated the use of Federal innovative financing tools in 21 States during FY 2021. Notably, State DOTs continued to pledge future Federal-aid revenues to secure Grant Anticipation Revenue Vehicle Bonds, demonstrating investor confidence in the Federal government's continued support for transportation infrastructure. Although toll facilities financed in part by the Transportation Infrastructure Finance and Innovation Act (TIFIA) loans saw pandemic-related downturns in traffic and revenue, several took advantage of low borrowing costs to reduce the interest rate on their debt and either solidify their credit profile or generate cost savings for future capital needs. The Build America Bureau financed $10 billion during FY 2021.

The Major Projects Team launched a new publicly accessible database of project information. The new database reduces inefficiencies, ensures data consistency and uniformity, and promotes data-driven decision making. The Major Projects Team has also made significant progress in the advancement of the Notice of Proposed Rulemaking process for creating a Major Projects regulation based on 23 U.S. Code § 106(h).

Challenges: Several transportation agencies terminated or delayed public-private partnership procurements in light of rising costs or uncertain revenues. These long-term agreements would transfer the responsibility to design, build, finance, operate, and maintain transportation facilities from public owners to private concessionaires.

COVID-19 Impacts: Although tax and user fee revenues declined in response to the COVID-19 pandemic, the TIFIA loan portfolio weathered the distress without a loan payment default. As noted, several borrowers improved their long-term prospects via TIFIA's ability to reduce interest rates and lower long-term costs.

Due to the pandemic, both FHWA and State staff were operating under full-time telework, which required meetings such as Cost & Schedule Risk Assessments to be conducted virtually. This reduced the effectiveness of these workshops and may have had potential impact on data accuracy. The pandemic also affected the Notice of Proposed Rulemaking advancement effort due to a lead FHWA employee contacting COVID-19.

Federal Transit Administration (FTA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Maintain Accountability for Permitting Projects*	Percentage of DOT Environmental Impact Statements Posted on Permitting Dashboard that are On Schedule	*Target*	---	90%	90%	90%	N/A
		Actual	---	70%	82%	95%	N/A
	Percentage of DOT Major Infrastructure Projects Posted on Permitting Dashboard that are On Schedule	*Target*	---	90%	90%	90%	N/A
		Actual	---	100%	100%	100%	N/A
Reduce the Time to Complete an Environmental Impact Statement*	Average Months to Complete an Environmental Impact Statement	*Target*	---	---	---	---	24 months
		Actual	---	---	---	---	27.9 months
Increase Grants to Rural and Small Urban Areas	FTA Grant Dollars Allocated to Rural and Small Urban Areas (Billions)	*Target*	---	$1.56B	$1.59B	$1.62B	$1.62B
		Actual	---	$1.79B	$1.60B	$6.07B	$3.86B

Decrease Grant Processing Time	Average Number of Days from Grant Application Submission to Grant Award	*Target*	---	36	32	32	32
		Actual	---	22	22	15	15
Increase Percentage of Grants Identified as Inactive at the Beginning of the Fiscal Year that are Either Closed or Returned to Active Status	Percentage of Grants Identified as Inactive at the Beginning of the Fiscal Year that are Either Closed or Returned to Active Status	*Target*	90%	95%	95%	95%	95%
		Actual	100%	99.5%	99%	100%	100%

N/A: Not available

** FTA shares ownership of this performance goal with the Federal Aviation Administration, Federal Highway Administration, Federal Railroad Administration, and Office of the Assistant Secretary for Transportation Policy*

FY 2021 Summary of Progress

Notable Achievements: The transit industry faced a record crisis in ridership, revenue, and staffing due to the COVID-19 pandemic. FTA administered additional supplemental funding that allowed transit agencies to continue providing transit service for essential workers to get to and from work, provide personal protective equipment to their employees, and maintain payrolls. FTA delivered critical formula and discretionary grant funding, including emergency relief through the apportionment of the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) and American Rescue Plan (ARP) funds at $14 billion and $30 billion respectively. Funding provided through the CARES Act, CRRSAA, and the ARP totals approximately $70 billion. FTA provided a 100% Federal share on all emergency relief projects, with funds available until expended.

Additional historic transit investments for FY 2021 include awarding more than $182 million to 49 projects for environmentally friendly buses and associated infrastructure and equipment through the highly competitive Low or No Emission Vehicle Program. FTA also awarded nearly $8 million to 25 projects through the competitive Tribal Transit Program, which is the most funding awarded under that program in five years. FTA also continued to implement process improvements to lead industry changes. For example, FTA evaluated and redesigned several civil rights tools to improve effectiveness and efficiency, ensuring that transit agencies meet requirements for Title VI of the Civil Rights Act and the Americans with Disabilities Act to promote equitable and accessible public transit. In addition, FTA continued the development and deployment of the internal Customer Service Portal to strengthen mission support.

Challenges: FTA experienced increased workload demands associated with the development of projects, grants, and the disbursement of funds at record levels during a critical time.

COVID-19 Impacts: FTA provided approximately $70 billion in funding to the transit industry and passengers during the COVID-19 pandemic through the CARES Act, CRRSAA, and ARP. FTA also expanded eligibility and increased the Federal share of funding available under the Urbanized Area and Rural Area formula programs using the agency's Emergency Relief Program provisions. FTA extended this support for two years to January 2022, the maximum permitted by law. FTA also allocated $15.8 million in competitive funding to 37 projects to support strategies to develop, deploy, and demonstrate solutions that improve transit agency operational efficiency and enhance passenger mobility during COVID-19.

Additionally, FTA completed 114 planned Triennial Reviews and State Management Reviews. FTA redesigned the oversight program delivery to address challenges from COVID-19. The majority of reviews were rescheduled from FY 2020 due to the unprecedented impacts of COVID-19 on the transit industry. FTA implemented a COVID-19 status reporting project to collect information on how the pandemic has affected transit providers, developing COVID-19 Relief dashboards for tracking award progress. FTA also developed and deployed office technology packages to enable staff to work effectively in a maximum telework and virtual communication environment in response to the pandemic. Lastly, FTA responded to the demands associated with the disbursement of CARES Act grants by ensuring timely hiring, posting more than 100 job announcements, and selecting or appointing about 90 employees.

Office of the Assistant Secretary for Transportation Policy (OST-P)

			FY 17	FY 18	FY 19	FY 20	FY 21
Maintain Accountability for Permitting Projects*	Percentage of DOT Environmental Impact Statements Posted on Permitting Dashboard that are On Schedule	*Target*	---	90%	90%	90%	N/A
		Actual	---	70%	82%	95%	N/A
	Percentage of DOT Major Infrastructure Projects Posted on Permitting Dashboard that are On Schedule	*Target*	---	90%	90%	90%	N/A
		Actual	---	100%	100%	100%	N/A
Reduce the Time to Complete an Environmental Impact Statement*	Average Months to Complete an Environmental Impact Statement	*Target*	---	---	---	---	24 months
		Actual	---	---	---	---	27.9 months

N/A: Not available

** OST-P shares ownership of this performance goal with the Federal Aviation Administration, Federal Highway Administration, and Federal Railroad Administration*

FY 2021 Summary of Progress

Notable Achievements: OST-P made improvements to the Federal permitting dashboard, including updates to account for COVID-19-related delays, that increased data quality and accountability. The office also worked with Operating Administrations to shift from in-person to virtual meetings to ensure that projects that could move forward without further delays.

Challenges: With the onset of COVID-19, OST-P worked with DOT Operating Administrations to identify ways that public meetings related to environmental reviews could be conducted virtually while still reaching those that may be impacted to provide for a meaningful public involvement process. Projects that required in-person meetings were put on hold temporarily until public meetings could resume. As COVID-19-related restrictions were lifted, several in-person public meetings were permitted to occur with certain safety protocols in place.

COVID-19 Impacts: COVID-19 had a negative impact on the environmental review process, creating unanticipated delays to surveying and site data collection efforts needed for underlying analysis. However, it is important to note that these issues were resolved quickly as standards were developed.

Objective 2.2: Life Cycle and Preventive Maintenance

The following summaries of progress and performance goal data mark the conclusion of the reporting cycle for Objective 2.2: Life Cycle and Preventive Maintenance, as aligned to the Strategic Plan for FY 2018 – 2022. This objective was supported by three Operating Administrations through the following performance goals:

- Maintain Good Runway Condition (FAA)[APG]
- Maintain Roadway Pavement Condition (FHWA)
- Maintain Bridge Condition in the National Highway System (FHWA)
- Monitor Condition and Performance of Transit Systems (FTA)[APG]

Federal Aviation Administration (FAA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Maintain Good Runway Condition[APG]	Percentage of Runways in FAA's National Plan of Integrated Systems in Excellent, Good, or Fair Condition	*Target*	93%	93%	93%	93%	93%
		Actual	97.7%	97.9%	97.9%	97.9%	97.8%

APG: This performance goal aligned to one of the Department's FY 2020 – 2021 APGs

FY 2021 Summary of Progress

Notable Achievements: In FY 2021, there was a five percent increase in runways reported in excellent condition and a 10% reduction in runways reported in poor condition, as compared to FY 2020. This indicates maintenance and rehabilitation activities are focusing on runways in deteriorated condition.

Challenges: Runways in fair condition increased 3.7% from FY 2020 to FY 2021, which indicates that maintenance activities are being deferred causing runways to approach a condition where major rehabilitation will be required.

COVID-19 Impact: Air travel reductions due to COVID-19 have allowed some airports to implement extended closures of normally busy runways to perform major maintenance or rehabilitation activities that had long been deferred due to difficulties in scheduling closures around operational needs. However, COVID-19-related revenue losses may force airports to defer maintenance activities, which could lead to challenges in improving pavement condition. These deferred maintenance activities could result in higher maintenance or rehabilitation costs in future years and increases in the percentage of runways in poor or failed condition throughout the National Plan of Integrated Airport Systems.

Federal Highway Administration (FHWA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Maintain Roadway Pavement Condition	Percentage of Interstate Pavement in Good or Fair Condition	*Target*	---	---	---	95.5%	95%
		Actual	---	---	99.1%	99.1%	99.2%
Maintain Bridge Condition in the National Highway System	Percentage of Deck Area on National Highway System Bridges in Good or Fair Condition	*Target*	---	---	---	95%	95%
		Actual	---	95.5%	95.4%	95.7%	95.8%

FY 2021 Summary of Performance

Notable Achievements: The Department and FHWA are implementing the Competitive Highway Bridge Program (CHBP) and the Bridge Replacement and Rehabilitation Program, which provide additional funds to States to replace or rehabilitate bridges. The CHBP awarded a total of $225 million to 20 projects in 18 States in FY 2019 and the Bridge Replacement and Rehabilitation Program provided $2.7 billion to States from FY 2019 to FY 2021. FHWA also initiated the Demonstration to Advance New Pavement Technologies Pooled Fund Study to partner with State DOTs and implement pavement techniques and tools that improve pavement performance. To date, 13 State DOTs have joined the study.

Challenges: In FY 2021, FHWA set aside funds in four States that exceeded the 10% penalty threshold for National Highway System (NHS) bridges in poor condition, as described in 23 U.S. Code § 119. Two States did not meet data requirements and minimum pavement condition standards and were subject to the interstate pavement condition penalty. FHWA will work with its State partners to obligate these set-aside funds for eligible bridge projects on the NHS and interstate pavement projects and continue to encourage efforts to improve the percentage of NHS bridges and pavements in good and fair condition.

COVID-19 Impacts: These programs were not significantly impacted by COVID-19 in FY 2021. However, States experienced some challenges collecting pavement condition data due to social distancing restrictions throughout the country. It is unknown at this point if construction project delays related to COVID-19 will impact bridge and pavement condition in future years.

Federal Transit Administration (FTA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Maintain Bridge Condition in the National Highway System[APG]	State of Good Repair Backlog (Current-Year Dollars in Billions)	*Target*	$105B	$109B	$109B	$109B	$109B
		Actual	$105B	$105B	$105B	$105B	$105B*

APG: This performance goal aligned to one of the Department's FY 2020 – 2021 APGs

** Data based on the 24th edition of the Conditions and Performance Report (FY 2016 data)*

FY 2021 Summary of Performance

Notable Achievements: FTA selected six projects through the Real-Time Transit Infrastructure and Rolling Stock Condition Assessment Research and Demonstration Program to receive $1.37 million to enhance asset management of infrastructure and safety by deploying innovative technologies that can provide real-time condition assessment of transit capital and facilities. FTA also continued implementation of the Transit Asset Management (TAM) Rule, focusing on the first TAM Plan updates due in FY 2022. FTA published State of Good Repair performance targets for the industry for the second time. The performance target reporting process is an integral part of FTA's innovative strategy for encouraging the transit industry to raise the bar for State of Good Repair, even in the absence of significant additional funding.

Challenges: FTA allowed agencies to phase in the reporting of condition assessments of their transit facilities (physical structures) over four years to reduce the burden of collecting potentially thousands of ratings at one time. Under the TAM Rule, transit agencies began submitting annual data to the National Transit Database in 2018.

COVID-19 Impacts: Due to pandemic-related operations difficulties in the transit industry, FTA extended a middle phase requirement of 50% reporting for facility condition assessments, from one to two reporting years. By the end of CY 2022, all transit agencies will submit condition assessments and/or data on 100% of the transit fleet to FTA.

Objective 2.3: System Operations and Performance

The following summaries of progress and performance goal data mark the conclusion of the reporting cycle for Objective 2.3: Systems Operations and Performance, as aligned to the Strategic Plan for FY 2018 – 2022. This objective was supported by four Operating Administrations through the following performance goals:

- Alleviate Freight Congestion (FHWA)
- Decrease Average Wait Time (FAA)
- Maintain Airport Capacity (FAA)
- Increase the Integration of Drones into the Airspace without Sacrificing Safety (FAA)
- Alleviate Urban Congestion (FHWA)[APG]
- Improve Passenger Rail On-Time Performance (FRA)
- Provide Sustainment Sealift to the U.S. Armed Forces (MARAD)

Federal Aviation Administration (FAA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Decrease Average Wait Time	National Airspace System On-Time Arrival at Core Airports	*Target*	88%	88%	88%	88%	88%
		Actual	91.25%	89.80%	88.31%	93.03%	93.6%
Maintain Airport Capacity	Average Daily Capacity of Arrivals and Departures at Core Airports	*Target*	---	59,136	59,303	56,771	56.771
		Actual	60,492	60,448	59,446	58,755	60,370
Increase the Integration of Drones into the Airspace Without Sacrificing Safety	Percentage of Manual Part 107 Airspace Authorizations Processed Within the 90- Day Timeline Mandated by Congress	*Target*	---	---	---	95%	95%
		Actual	---	---	---	99.9%	99.9%
	Average Time to Process Unmanned Aircraft System Part 107 Operational Waivers	*Target*	---	50 days	45 days	40 days	N/A
		Actual	50 days	21 days	17 days	17 days	N/A

N/A: Not available

FY 2021 Summary of Progress

Notable Achievements: The Operations Over People rule became effective on April 21, 2021, which permits drone pilots operating under Part 107 of the Small Unmanned Aircraft Systems Regulations to fly at night, over people, and moving vehicles without a waiver as long as they meet the requirements defined in the rule. After FAA issued this rule and related guidance, the FAA waiver team noticed an improvement in the quality of waiver applications.

Challenges: The main challenge was ensuring the public was aware of updated guidance based on the Operations Over People rule.

COVID-19 Impacts: COVID-19 increased interest among drone operators in using drones to enable social distancing. Additionally, some airport construction projects were started sooner than planned due to lower airline demand.

Federal Highway Administration (FHWA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Alleviate Urban Congestion[APG]	Percentage of Person-Miles Traveled on the Interstate that are Reliable	*Target*	---	83.7%	83.7%	83.1%	82.8%
		Actual	---	83.7%	83.4%	83.8%	93.9%*

APG: This performance goal aligned to one of the Department's FY 2020 – 2021 APGs

** The reduction in travel during the COVID-19 pandemic improved reliability on the interstate system*

FY 2021 Summary of Progress

Notable Achievements: FHWA worked to ensure the continued availability of data used by State DOTs to calculate the reliability measure via a new National Performance Management Research Data Set contract. Since 2013, FHWA has actively maintained steady engagement through quarterly webinars with dataset users to share their knowledge and experience with analyzing and reviewing the system operation and performance data. In response to stakeholder needs in implementing Transportation Performance Management requirements, FHWA developed technical assistance papers on *Approaches to Target Setting and Forecasting for Target Setting*, to be published in FY 2022. FHWA also developed a prototype for exploring the potential for aggregating data in a monthly dashboard to provide simple-to-understand trends, along with a storytelling component on the causes of travel time changes or to highlight operational strategies. FHWA also hosted a third performance measure rulemaking peer exchange with State DOT stakeholders to discuss lessons learned and future research and technical assistance needs.

Challenges: FHWA is in the early stages of determining the effects of funding reliability improvements. FHWA is funding two projects to better link operational strategy evaluations with performance measures for use by State DOTs and Metropolitan Planning Organizations in their investment decision-making, to be completed in FY 2022 and FY 2023.

COVID-19 Impacts: As travel continues to recover from COVID-19, it remains to be seen if initial improvements in reliability will revert to pre-pandemic levels or if reliability issues outside of peak hours will occur more frequently.

Federal Railroad Administration (FRA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Improve Passenger Rail On-Time Performance	On-Time Performance System-Wide	*Target*	---	---	---	80%	80%
		Actual	---	72.9%	74.3%	79.7%	77.5%
	On-Time Performance for the Northeast Corridor	*Target*	---	84%	85%	80%	80%
		Actual	76.1%	79%	83.7%	86.9%	84.0
	On-Time Performance for State-Supported Routes	*Target*	---	84%	85%	80%	80%
		Actual	80.7%	79.9%	74.6%	80.9%	82.4%
	On-Time Performance for Long-Distance Routes	*Target*	---	---	---	80%	80%
		Actual	---	44.1%	46.2%	58.7%	51.7%

FY 2021 Summary of Progress

Notable Achievements: On November 16, 2020, FRA published a final rule for measuring the performance and service quality of intercity passenger train operations. The final rule requires Amtrak and its host railroads to certify Amtrak schedules and sets an on-time performance minimum standard of 80% for any two consecutive calendar quarters. Other metrics defined in the final rule include ridership, train delays, station performance, and host running time. The final rule gives customers, Amtrak, service providers, FRA, and other stakeholders a common tool for objectively measuring intercity passenger train travel. The metrics also support the Surface Transportation Board in its investigations of substandard intercity passenger rail train performance. Amtrak began formally reporting on-time performance under the rulemaking in late FY 2021.

Challenges: Amtrak on-time performance in FY 2021 dropped more than two percentage points from FY 2020 to 77.5%. As passenger and freight traffic continued to recover from the sharp declines experienced in FY 2020 due to COVID-19, on-time performance also declined. Severe weather and natural disasters in FY 2021, such as hurricanes and wildfires, also negatively affected performance.

COVID-19 Impacts: Since the onset of COVID-19, delays caused by passenger train interference have decreased across Amtrak's network. Delays due to freight train interference continue to persist.

Maritime Administration (MARAD)

			FY 17	FY 18	FY 19	FY 20	FY 21
Provide Sustainment Sealift to the U.S. Armed Forces	Number of U.S.-Flagged Vessels	*Target*	---	81	82	83	84
		Actual	81	83	81	86	83

Provide Sustainment Sealift to the U.S. Armed Forces	Percentage of DOD-Required Shipping Capacity Complete with Crews Available within Mobilization Timelines	*Target*	94%	94%	94%	94%	94%
		Actual	97%	94%	92%	90%	72%

FY 2021 Summary of Progress

Notable Achievements: As of September 30, 2021, MARAD reported 83 U.S.-flagged, internationally sailing vessels, which is one ship below target and three ships fewer than FY 2021. MARAD received funding in FY 2021 for a new Cable Security Fleet program, which will support the U.S.-flagged fleet with two internationally sailing commercial cable repair vessels that will be available on-call for emergency undersea cable repairs to restore global communication capabilities if ever severed or damaged.

MARAD reported an overall 72% availability of U.S. Department of Defense-required shipping capacity complete with crews within mobilization timelines. MARAD did not meet the 94% readiness target, primarily due to intensive maintenance encompassing significant replacement of hull steel, and even emergent repairs of obsolete systems and equipment for the aging Ready Reserve Force (RRF), thus rendering several vessels unavailable. In Q4 of FY 2021, MARAD awarded a contract for a commercial ship operator as a Vessel Acquisition Manager (VAM) to manage the search, purchase, and modernization of used sealift ships to recapitalize the RRF fleet. The VAM will provide an Indefinite Delivery/Indefinite Quantity vehicle for procuring sealift vessels as funds are made available from the Department of the Navy. During FY 2021, the RRF successfully provided 215 mission days of support, including one vessel's 79-day critical mission for the U.S. Department of State, and three vessels deployed to U.S. Indo-Pacific Command for partnership exercises.

Challenges: MARAD continues to face challenges in addressing the shortage in the number of U.S.-flagged product tankers sailing internationally. These vessels are necessary to provide for greater U.S. control over the global energy supply chain, as well to meet the to meet the fuel requirements of deployed U.S. military forces in times of crisis, which was further emphasized in the Department of Defense's recent tanker study for secure refueling operations in contested environments. To address this priority risk, the President's FY 2022 Budget requested funding for MARAD to implement a Tanker Security Program, which if funded will provide for 10 U.S.-flagged militarily useful, commercially viable product tankers sailing in international trade.

Additionally, the RRF fleet has an average age of more than 46 years, which makes recapitalization critical as readiness of the fleet continues to see delays. To support these efforts, MARAD awarded a contract for a VAM in July 2021, who will identify, modernize, and procure the first ships for recapitalizing the fleet. MARAD will continue to work closely with the U.S. Department of the Navy and U.S. Transportation Command on this procurement action and timeline.

COVID-19 Impacts: Initially, the economic effects of the COVID-19 pandemic negatively impacted the government-owned sealift fleet and the commercial trades of most U.S.-flagged carriers, particularly the strategically critical roll-on/roll-off and multi-purpose vessel markets. However, the shift in U.S. consumer spending toward material goods and commensurate increases in both imports and exports allowed these carriers to benefit from a strong commercial freight market, which is expected to continue through FY 2022.

Planned maintenance activities for the RRF were impacted by national, State, and local COVID-19 protocols; however, strict management controls are now effectively in place (e.g., a seven-day Restriction of Movement period and testing for the entire crew before sailing) to sustain operations throughout the COVID-19 pandemic and ensure optimal readiness of the fleet.

Objective 2.4: Economic Competitiveness and Workforce

The following summaries of progress and performance goal data mark the conclusion of the reporting cycle for Objective 2.4: Economic Competitiveness and Workforce, as aligned to the Strategic Plan for FY 2018 – 2022. This objective was supported by three Operating Administrations through the following performance goals:

- Alleviate Freight Congestion (FHWA)
- Provide a Safe, Reliable, and Efficient U.S. Portion of the St. Lawrence Seaway to its Commercial Users (GLS)
- Reduce Time to Issue Hazardous Materials Transportation Permits (PHMSA)

Federal Highway Administration (FHWA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Alleviate Freight Congestion	Interstate Truck Travel Time Reliability Index	*Target*	---	1.36	1.38	1.41	1.43
		Actual	---	1.36	1.38	1.39	1.28

FY 2021 Summary of Progress

Notable Achievements: FHWA began preparing a resource guide for States on how to apply Transportation System Management and Operations and performance-based planning practices to improve reliability and mobility of freight. FHWA also developed the Freight Mobility Trends dashboard to provide Federal, State, and Metropolitan Planning Organization decision-makers with information on national freight mobility conditions, trends, reliability, and congestion, including highway corridors, ports, border crossings, and bottlenecks. FHWA is also publishing information on the top 100 national freight bottlenecks to identify locations on the interstate system that have the greatest impediment for supply chain mobility.

Challenges: States must apply a large portion of their transportation funding towards maintaining the condition of the transportation system, which limits major investments needed to address the largest bottlenecks on the freight transportation system.

COVID-19 Impacts: The reduction in commuter travel during the pandemic decreased peak hour congestion in many major urban areas, which increased average truck speeds.

Great Lakes St. Lawrence Seaway Development Corporation (GLS)

			FY 17	FY 18	FY 19	FY 20	FY 21
Provide a Safe, Reliable, and Efficient U.S. Portion of the St. Lawrence Seaway to its Commercial Users	Percentage of Time the U.S. Portion of the St. Lawrence Seaway is Available to Commercial Users	*Target*	99%	99%	99%	99%	99%
		Actual	98.7%	96.2%	99.3%	99.1%	99.6%

FY 2021 Summary of Progress

Notable Achievements: In FY 2021, GLS achieved its annual performance goal of providing commercial users with a safe and reliable commercial transportation route for the movement of global trade. The reliability rate for the U.S. portion of the Seaway in FY 2021 was 99.55 (compared to an annual target of 99%). Delays included weather, vessel incidents, and lock downtime. GLS has the most control over the proper functioning of its two locks in Massena, New York. GLS' lock availability rate, a subset of the system reliability rate, was 99.89% (7 hours, 40 minutes) in FY 2021, or one-tenth of one percent of total navigation time during the fiscal year.

Challenges: The COVID-19 pandemic was the most notable challenge to Seaway operations in FY 2021. GLS was able to maintain uninterrupted Seaway operations throughout the fiscal year with its workforce.

COVID-19 Impacts: Throughout FY 2021, GLS successfully implemented numerous COVID-19-related workplace and operational contingencies and resiliency measures to protect staff safety while ensuring the continued operation of the Seaway. GLS management and its unionized workforce collaborated on many of these contingencies and measures resulting in GLS operating the U.S. locks and waters throughout the fiscal year without any COVID-19 related interruptions.

Pipeline and Hazardous Materials Safety Administration (PHMSA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce Time to Issue Hazardous Materials Transportation Permits	Number of Days to Resolution of Hazardous Materials Special Permit Applications	*Target*	---	120	115	110	105
		Actual	120	92	107	83	93*

** Final data expected in spring 2022. Special permits have 120 days to deny or approve applications.*

FY 2021 Summary of Progress

Notable Achievements: The Office of Hazardous Materials Safety issued special permits to support numerous satellite launches, including SpaceX and other members of the aerospace industry.

Challenges: Though not expected to be a long-term challenge, PHMSA has experienced a short-term challenge related to organizational restructuring. The special permits team has been relocated to the Office of Hazardous Materials Safety standards and rulemaking division, resulting in additional change management burdens.

COVID-19 Impacts: The prioritization and prompt processing of several special permits in FY 2020 allowed for public health benefits in the fight against COVID-19.

STRATEGIC GOAL 3: INNOVATION

The transportation sector is rapidly evolving to become one of the most innovative and dynamic areas of the nation's economy. Significant developments and convergence of robotics, artificial intelligence, sensors, mapping, data and communications are driving innovation in the transportation space. Emerging technologies such as Automated Driving Systems (ADS), unmanned aircraft systems, the Internet of Things, Mobility on Demand, automated rail technologies, autonomous ships, automated ports, and others represent examples of where these technologies are aiming to transform the future use, operation, adaptability, and development of the transportation system.

Objective 3.1: Development of Innovation

The following summaries of progress and performance goal data mark the conclusion of the reporting cycle for Objective 3.1: Development of Innovation, as aligned to the Strategic Plan for FY 2018 – 2022. This objective was supported by one OST office through the following performance goal:

- Increase the Development of Innovations in Transportation (OST-R)

Office of the Assistant Secretary for Research and Technology (OST-R)

			FY 17	FY 18	FY 19	FY 20	FY 21
Increase the Development of Innovations in Transportation	Research Outcomes Made Publicly Available in Research Hub	*Target*	---	N/A	54	10% increase	10% increase
		Actual	---	N/A	54	60	71
	Reports Made Publicly Available in the National Transportation Library	*Target*	---	N/A	42,500	44,500	46,500
		Actual	---	N/A	42,500	45,000	57,000

N/A: Not available

FY 2021 Summary of Progress

Notable Achievements: OST-R developed the Performance Management Data System (PMDS) to establish standardized processes to collect, process, and transfer modal research data, which has improved DOT's ability to make more research publicly available. OST-R is also improving internal processes to automate data collection, allowing the office to collect higher volumes of data.

Challenges: Data integration has remained a challenge, which requires additional work to gather performance data. The ongoing development of the PMDS has helped to bridge these gaps between databases.

COVID-19 Impact: The pandemic did not impact progress on this strategic objective in FY 2021.

Objective 3.2: Deployment of Innovation

The following summaries of progress and performance goal data mark the conclusion of the reporting cycle for Objective 3.2: Deployment of Innovation, as aligned to the Strategic Plan for FY 2018 – 2022. This objective was supported by two Operating Administrations and one OST office through the following performance goals:

- Maintain Major System Efficiency (FAA)
- Complete Annual NextGen Advisory Committee Recommendations for the Northeast Corridor (FAA)
- Monitor Safety of Vehicles Equipped with Automated Driving Systems (NHTSA)
- Increase Effectiveness of Technology Transfer (OST-R)

Federal Aviation Administration (FAA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Maintain Major System Investment Efficiency	Percentage of Major System Investments Completed On-Time and On Budget	*Target*	90%	90%	90%	90%	90%
		Actual	95.2%	90.5%	75%	65%	90.9%
Complete Annual NextGen Advisory Committee Recommendations for the Northeast Corridor*	Percentage of NextGen Projects Completed	*Target*	90%	90%	90%	90%	---
		Actual	92%	91.3%	100%	100%	---
	Percentage of Completed NextGen Priorities for the Northeast Corridor	*Target*	---	---	80%	80%	---
		Actual	---	---	100%	100%	---

This performance goal was discontinued for FY 2021.

FY 2021 Summary of Progress

Notable Achievements: FAA is projected to successfully meet the FY 2021 target for its "Maintain Major System Investment Efficiency" performance indicator. Ten out of 11 programs (90%) are projected to stay within a -10% variance of their cost, schedule, and performance baseline.

Challenges: Due to the work restrictions associated with the COVID-19 pandemic, program schedules and costs are still at risk of being impacted. FAA continues to track work and progress based on the evolving effects of the COVID-19 pandemic.

COVID-19 Impacts: Although some programs have had challenges due to the work restrictions associated with the COVID-19 pandemic, none of the programs related to the "Maintain Major System Investment Efficiency" performance indicators are projecting impacts greater than -10%.

National Highway Traffic Safety Administration (NHTSA)

			FY 17	FY 18	FY 19	FY 20	FY 21
Monitor Safety of Vehicles Equipped with Automated Driving Systems	Automated Driving Systems Safety	*Target*	*No targets associated with this performance goal*				
		Actual					

FY 2021 Summary of Progress

Notable Achievements: In FY 2021, NHTSA announced the expansion of the Automated Vehicle Transparency and Engagement for Safe Testing Initiative from a pilot to a full program. The information provided through this initiative will help keep the public informed of the progress, advancement, and safety implications regarding the automated vehicles that participate in the program. The portal and interactive tool are available and will be updated as new information is submitted.

NHTSA sets terms and conditions for ADS Vehicle Import Exemptions and monitors their compliance. As of September 1, 2021, 150 vehicles have received permission to operate in 123 projects across 22 States. Additionally, on June 29, 2021, NHTSA released a new Standing General Order requiring manufacturers and operators of vehicles equipped with SAE Level 2 advanced driver assistance systems or SAE Levels 3 to 5 Automated Driving Systems to report crash information. This action will enable NHTSA to collect critical and timely information necessary to identify imminent risks and safety defects in keeping the public safe on the roadways and providing further transparency as the technology deployed on the nation's roads continues to evolve.

Challenges: The expanding field of ADS and advanced driver assistance system manufacturers presents an ongoing challenge, but NHTSA remains engaged with new and existing manufacturers and other stakeholders. There continues to be confusion related to technology capabilities, limitations, and state of maturity among the media, consumers, and the broader stakeholder community. NHTSA is implementing various initiatives and communication programs to address such confusion.

COVID-19 Impacts: NHTSA's ability to monitor the safety of vehicles, including those deployed with advanced technologies, was not negatively impacted by the COVID-19 pandemic. In April 2020, NHTSA issued a letter encouraging manufactures to employ technological solutions to the crisis and to communicate the ways in which NHTSA could facilitate the development and implementation of such solutions consistent with motor vehicle safety. However, research involving human subjects related to some of the important human factors questions with advanced driver assistance systems encountered some delays during the pandemic due to social distancing requirements.

Office of the Assistant Secretary for Research and Technology (OST-R)

			FY 17	FY 18	FY 19	FY 20	FY 21
Increase Effectiveness of Technology Transfer	Technologies Toward Implementation	*Target*	---	---	---	75	100
		Actual	---	---	100	150	175
	Success Stories (Evidence of Societal Benefits)	*Target*	---	10	10	12	12
		Actual	---	8	9	15	N/A*

N/A: Not available

** Final data expected in June 2022*

FY 2021 Summary of Progress

Notable Achievements: PMDS is maturing into an internal repository of research activities across the Department. PMDS features include natural language processing to develop and disseminate tools for and best practices in technology transfer and research management to accelerate the deployment of transformative innovation and improve DOT's efficiency.

Challenges: Disparate and disconnected data sources can increase the level of effort needed to collect performance data.

COVID-19 Impacts: COVID-19 did not impact PMDS activities.

STRATEGIC GOAL 4: ACCOUNTABILITY

Objective 4.1: Regulatory Reform

Office of General Counsel (OGC)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce the Regulatory Burden on the Transportation Industry and Public While Still Achieving Safety Standards	Compliance with Executive Order to Reduce Two Regulations for Each New Regulation	*Target*	---	2:1	2:1	2:1	N/A
		Actual	---	23:1	23:4	15:1	N/A
	Economic Impact of Regulations	*Target*	---	-$35M	-$140M	-$2.8B	N/A
		Actual	---	-$86.2M	-$149M	-$6.28B	N/A

N/A: Not available

Objective 4.2: Mission Efficiency and Support

The following summary of progress and performance goal data mark the conclusion of the reporting cycle for Objective 4.2: Mission Efficiency and Support, as aligned to the Strategic Plan for FY 2018 – 2022. This objective was supported by five OST offices through the following performance goals:

- Increase IT Shared Service Utilization Percentage (OCIO)
- Improve DOT's Cybersecurity (OCIO)
- Decrease Improper Payments (OST-B)
- Improve Effectiveness and Efficiency of Support Services (OST-M)
- Increase Facility Consolidation (OST-M)
- Increase Use of Best-in-Class Contracts (OSPE)
- Reduce the Number of Unessential Federal Advisory Committees (S-10)

Office of the Chief Information Officer (OCIO)

			FY 17	FY 18	FY 19	FY 20	FY 21
Increase IT Shared Service Utilization	Shared Service Utilization Percentage of Total IT Budget	*DOT Target*	25%	39%	25%	59%	50%
		FHWA	28.59%	41.16%	30.41%	42.28%	39.10%
		FMCSA	42.03%	48.82%	42.03%	52.46%	49.21%
		FRA	24.99%	30%	24.24%	23.88%	34.85%
		FTA	42.76%	62.04%	63.83%	68.32%	52.40%
		MARAD	22.66%	26.91%	29.56%	27.45%	30.05%
		NHTSA	32.16%	60.68%	32.16%	52.23%	61.22%
		OST	17.86%	36.68%	13.70%	42.71%	38.80%
		PHMSA	21.39%	37.16%	27.96%	43.95%	27.30%
		GLS	28.33%	34.54%	19.56%	34.88%	44.76%
Improve DOT's Cybersecurity	Percentage of Systems with Proper Security Authorizations	*Target*	---	99%	99%	100%	100%
		Actual	---	99%	98%	100%	86%

FY 2021 Summary of Progress

Notable Achievements: In FY 2021, OCIO consolidated duplicate information technology (IT) programs, systems, and applications by continuing to review all IT procurements across the Department regardless of size and amount. As OCIO adds more enterprise IT contracts, further consolidation is expected. The lead Software Engineering Support Enterprise contract has seen more than 31 contracts, valued at $217 million, transition from a variety of contracts throughout the Department.

Challenges: Some planned shared service transition activity has been slowed.

COVID-19 Impacts: COVID-19 did not impact OCIO's work to achieve DOT's mission efficiency goals.

Office of the Assistant Secretary for Budget and Programs (OST-B)

			FY 17	FY 18	FY 19	FY 20	FY 21
Decrease Improper Payments	Improper Payments Percentage for Activities Identified as Susceptible	*Target*	0.62%	0.49%	1.51%	0.85%	0.80%
		Actual	0.30%	2.21%	0.88%	0.37%	1.41%

FY 2021 Summary of Progress

Notable Accomplishments: DOT's Office of Inspector General issued a report in FY 2021 that found DOT in compliance with Payment Integrity Information Act requirements.

Challenges: The number of programs susceptible to improper payment increased from one to three in FY 2021. The increase is due to supplemental disaster relief funding provided by the Bipartisan Budget Act of 2018. By FY 2022, the Department expects to report additional improper payment estimates related to supplemental funding appropriated to DOT for COVID-19 relief.

COVID-19 Impacts: DOT is performing risk assessments of supplemental COVID-19 relief funding to determine if related program activities are susceptible to improper payments. DOT will report an improper payment estimate and implement targeted corrective actions for programs determined to be susceptible to significant improper payments.

Office of the Assistant Secretary for Administration (OST-M)

			FY 17	FY 18	FY 19	FY 20	FY 21
Improve Effectiveness and Efficiency of Support Services	Percentage Accomplished Against Shared Services (HR, IT, and Acquisitions) Implementation Plan	*Target*	N/A	33%	66%	65%	70%
		Actual	N/A	35%	50%	66%	70%
Increase Facility Consolidation	Net Change in Office and Warehouse Square Footage	*Target*	---	(59,624)	(47,471)	(54,073)	(11,390)
		Actual	---	(88,806)	(28,147)	(72,841)	(142,000)

N/A: Not available

FY 2021 Summary of Progress

Notable Achievements: OST-M continued to streamline and enhance mission support services over the past year in the acquisitions, human resources, and facilities arenas. The office continued to standardize human resources operations and classification functions. The Executive and Political Resources Center of Excellence began using dashboards and incorporated feedback from customers into operations, while the IT Acquisition Center of Excellence continued its pilot. Further consolidation is expected as OCIO adds more enterprise contracts.

Challenges: Facility consolidation slowed as DOT, along with the rest of the Federal government, began to reexamine office space and brainstorm more innovative approaches for future-of-work planning.

COVID-19 Impacts: COVID-19 did not impact OST-M's mission support efficiency work; however, the pandemic did impact facility consolidation efforts. Some Operating Administrations opted to extend existing leasing and to enter into new lease agreements with shorter leasing terms to provide for more flexibility.

Office of the Senior Procurement Executive (OSPE)

			FY 17	FY 18	FY 19	FY 20	FY 21
Increase Use of Best-in-Class Contracts	Best-in-Class Performance	*Target*	---	35.0%	$167.4M	$184.1M	$202.6M
		Actual	5.0%	6.6%	$163.3M	$176.7M	$167.7M

FY 2021 Summary of Progress

Notable Achievements: Best-in-Class (BIC) utilization is a component of strategically managing Federal procurement spend following Category Management principles. In FY 2021, DOT elevated the governing body in support of the Department's Category Management implementation, from the Category Management Leadership Steering Committee to the Category Management Executive Steering Committee. This change elevated the participants from the Operating Administration Chiefs of the Contracting Offices (primarily General Schedule-15 employees) to the Operating Administration Heads of Contracting Activities (primarily senior executives). In addition, the Department appointed five Category Managers in the categories of transportation, construction, IT, and professional services. One new acquisition policy was also published to reinforce Category Management. Lastly, DOT has partnered with the General Services Administration (GSA) to improve service offerings at DOT. This partnership has led to enhanced customer service from GSA, training on BIC vehicles, and collaboration on GSA's next generation BIC vehicles.

COVID-19 Impacts: Although COVID-19 has impacted DOT's contract spend, there was little to no impact in utilization of BIC contracts. For example, DOT's BIC spend in FY 2021 was $177 million, compared to $163 million in FY 2019.

Office of the Executive Secretariat (OST-S-10)

			FY 17	FY 18	FY 19	FY 20	FY 21
Reduce the Number of Unessential Federal Advisory Committees	Federal Advisory Committees Reduced	*Target*	---	12	19	21	23
		Actual	---	12	16	19	20

FY 2021 Summary of Progress

Notable Achievements: By FY 2021, two Federal advisory committees finished their statutory requirements and submitted their final reports to the Secretary of Transportation and Congress. The Executive Secretariat also completed its Annual Comprehensive Review with GSA before the deadline. DOT was chosen to be an instructor for the Federal Advisory Committee Act 201 Training to present the Department's leading experience on virtual meetings.

The Executive Secretariat has successfully transferred from in-person to virtual meetings, resulting in significant cost savings. The office plans to keep a hybrid model for all committee meetings moving forward.

COVID-19 Impacts: The Office had to adapt new correspondence processes to move all committee management processes online and work with its Designated Federal Officers from all Operating Administration to ensure effective communications.

ACRONYMS AND ABBREVIATIONS

ADS	Automated driving systems
APG	Agency Priority Goal
ARP	American Rescue Plan
BIC	Best-in-Class
CARES Act	Coronavirus Aid, Relief, and Economic Security Act
CDL	Commercial driver's license
CHBP	Competitive Highway Bridge Program
CMV	Commercial motor vehicle
CRRSA	Coronavirus Response and Relief Supplemental Appropriations Act
CY	Calendar year
DOT	Department of Transportation
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FY	Fiscal year
GAJSC	General Aviation Joint Steering Committee
GLS	Great Lakes St. Lawrence Seaway Development Corporation
GPRAMA	Government Performance and Results Act Modernization Act
GSA	General Services Administration
HSIP	Highway Safety Improvement Program
IT	Information technology
MARAD	Maritime Administration
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
OCIO	Office of the Chief Information Officer
OGC	Office of General Counsel
OSPE	Office of the Senior Procurement Executive
OST	Office of the Secretary
OST-B	Office of the Assistant Secretary for Budget and Programs
OST-M	Office of the Assistant Secretary for Administration
OST-R	Office of the Assistant Secretary for Research and Technology
OST-S-10	Office of the Executive Secretariat
PHMSA	Pipelines and Hazardous Materials Safety Administration
PMDS	Performance Management Data System
RRF	Ready Reserve Force
RTD	Return-to-duy
TAM	Transit Asset Management
TIFIA	Transportation Infrastructure Finance and Innovation Act
VAM	Vessel Acquisition Manager

PERFORMANCE DATA COMPLETENESS AND RELIABILITY

U.S. DEPARTMENT OF TRANSPORTATION

TABLE OF CONTENTS

A review of the U.S. Department of Transportation's Fiscal Year 2021 Performance Report by the Bureau of Transportation Statistics.

This appendix outlines the processes the U.S. Department of Transportation (DOT) uses to support the general accuracy and reliability of performance information, reduce the risk of inaccurate performance data, and provide a sufficient level of confidence to the Congress and the public that the information presented is credible, as appropriate, to its intended use (Office of Management and Budget [OMB] Circular A-11, Section 260.9: Assessing the completeness, reliability, and quality of performance data). Please note that measures not provided to the Bureau of Transportation Statistics (BTS) for verification and validation prior to the submission deadline for the Fiscal Year (FY) 2020 Annual Performance Report are not included in this year's Performance Data Completeness and Reliability appendix.

49 U.S. Code § 6302(b)(3)(B)(ix) tasks the Director of BTS with reviewing and reporting to the Secretary of Transportation on the sources and reliability of the statistics produced to measure outputs and outcomes as required by the Government Performance and Results Act of 1993 (Public Law 103-62). To complete this task, BTS assessed the completeness, reliability, and quality of the performance measures that feed into the DOT Annual Performance Report. The review included all measures that DOT actively collects. P

er Subsection 6302(b)(3)(B)(ix), BTS judges the reliability and other statistical properties of the measures, not whether the measures are the most appropriate reflection of performance for the particular goal or program. BTS' review supports the Department's Learning Agenda, which is required by the Foundations for Evidence-Based Policymaking Act of 2018 (Public Law 115-435).

Each section of this appendix includes a description of performance measures and associated data provided by the agency or agencies in charge of those measures.

- **Scope:** Provides a definition and overview of the performance measure;
- **Sources:** Identifies the sources from which the data for each measure were taken;
- **Statistical Issues:** Describes the variability of the measure and other issues, based on information provided by BTS and the agency or agencies in charge of the measure;
- **Completeness:** Describes any limitations due to missing data or availability of current measures, and provides methods used to develop projections, as appropriate;
- **Reliability:** Provides the reader with an indication of the consistency and quality of the measure; and
- **Verification and Validation:** Explains the processes agencies have in place to support the general accuracy and reliability of performance information, reduce the risk of inaccurate performance data, and provide a sufficient level of confidence to the Congress and the public that the information presented is credible, as appropriate, for its intended use (OMB Circular A-11, Section 260.9: *Assessing the completeness, reliability, and quality of performance data*).

STRATEGIC GOAL 1: SAFETY

REDUCE MOTOR VEHICLE-RELATED FATALITIES OVERALL

Performance Leads: FHWA, NHTSA, FMCSA

Measure: Motor Vehicle-Related Fatalities per 100 Million Vehicle Miles Traveled

Scope: Roadway fatalities per 100 million vehicle miles traveled (VMT) are calculated for each calendar year (CY). The number of fatalities included in national reports is a count of deaths of motorists or non-motorists 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 (i.e., 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 (i.e., a person not an occupant of a motor vehicle in transport, such as a pedestrian or cyclist) in a motor vehicle crash. VMT are measured for all types of vehicles including:

- Passenger cars;
- Motorcycles;
- Buses;
- Two-axle, four-tire vehicles (including vans, pickup trucks, and sport/utility vehicles);
- Single unit two-axle, six-tire or more trucks; and
- 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, based on Police Crash Reports (PCRs), within the 50 States, the District of Columbia, and Puerto Rico.

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

Monthly VMT are calculated using the annual VMT from the 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. About 6,000 ATRs are reported to FHWA each month, which are submitted and processed using the Travel Monitoring Analysis System. 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, their change rates are estimated based on data from 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 the HPMS. The TVT report is available to the public within 60 days after the close of the month. Data that cover a minimum of 30 States and 70% of the VMT are required for publication.

Roadway fatality counts rates for CY 2020 and CY 2021 are statistical projections, and rates are based on those projections. Fatalities for CY 2019 were taken from the 2019 FARS annual report file. VMT are taken from the FHWA March 2021 TVT.

Statistical Issues: As both the HPMS and TVT are based on samples of the traffic, there are associated sampling errors.

Completeness: Annual traffic fatalities are currently available through CY 2019, published in September 2021. VMT are complete through 2019. The final 2019 VMT estimate was made available in March 2021.

Reliability: 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.

Verification and Validation: FARS counts of motor vehicle crash fatalities are known to be different from

fatality statistics by cause of death reported by the National Center for Health Statistics, as FARS captures only fatalities from vehicle crashes on public roadways and that occur within 30 days of the crash. NHTSA ensures consistency in FARS data by establishing training, quality control measures, and standard data coding guidelines, thereby assuring adequate national data to facilitate accurate analyses. Training for field personnel includes a new analyst training program that provides a self-directed preparatory training followed by a five-day classroom session, as well as an annual, system-wide training for all analysts. Training issues identified throughout the year and changes to the system are addressed at this system-wide training. Ongoing coding assistance, quality checks, and guidance for FARS analysts are available through a FARS hot line. The data itself are controlled upon entry with the FARS data entry system edit checks. These edit checks are updated annually along with a Coding and Validation Manual that provides definitions, rules, and guidance for each data element. The quality of a FARS case also is monitored for completeness, unknown values, and violations of edit check rules. Once in the database, the FARS data are also monitored through statistical quality control charts, which identify deviations from expected trends in the data and indicate when an inconsistency in the data occurs.

While these activities help to ensure consistency in data acquisition, additional factors such as changes in the collection of the data in States and corresponding changes in FARS make monitoring data quality more complex. When these changes occur, they can limit the effectiveness of data monitoring using trend analysis to identify potential problems. To help address these issues, steps have been taken to develop additional means to support data quality that involves manual reviews of the casework coded by the FARS analysts. The FARS case re-coding process was developed to conduct annual case sampling and re-coding for data quality monitoring, analyst performance assessment, and training. The design combines the concepts of selected case re-coding with State-specific training. This quality assurance process uses samples from the current file year so that corrective actions to improve the quality of the data can be performed throughout the file year when inconsistencies are identified. The aim is to provide more immediate benefits from a case re-coding effort in the form of analyst training and tangibly improve data quality.

REDUCE MOTOR VEHICLE-RELATED FATALITIES BY TYPE

Performance Leads: FHWA, NHTSA, FMCSA

Measure: Passenger Vehicle Occupant Fatalities per 100 Million Vehicle Miles Traveled

Scope: Passenger vehicle occupant fatalities per 100 million VMT are calculated for each calendar year. The number of fatalities included in national reports is a count of passenger vehicle occupant deaths 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. An occupant is any person, driver or passenger(s), inside or on the exterior of a passenger vehicle in transport. VMT cover all types of passenger vehicles including:

- Passenger cars;
- Vans;
- Pickup trucks; and
- Sport/utility vehicles.

Sources: Roadway fatality data are obtained from NHTSA's 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 PCRs (see Reduce Motor Vehicle-Related Fatalities Overall for VMT source information). Roadway fatality counts for CY 2019 were taken from the 2019 FARS Annual Report File and rates were derived using VMT March 2021. For more information, see Reduce Motor Vehicle-Related Fatalities Overall.

Statistical Issues: As both the HPMS and TVT are based on samples of traffic, there are associated sampling errors.

Completeness: Annual traffic fatalities and VMT are currently available through CY 2019. The CY 2019 VMT estimate was available by March 2021.

Reliability: There is concern about consistency in vehicle counts across States. Further research is needed to address this concern. In order 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.

Verification and Validation: See Reduce Motor Vehicle-Related Fatalities Overall.

Performance Leads: FHWA, NHTSA, FMCSA

Measure: Large Truck and Bus Fatalities per 100 Million Vehicle Miles Traveled

Scope: The number of fatalities included in national reports is a count of deaths occurring within 30 days of a crash involving large trucks or buses traveling on a traffic-way customarily open to the public within the 50 States, the District of Columbia, and Puerto Rico. VMT cover 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-tire-or-more trucks; and
- Combination trucks.

Sources: Roadway fatality data are obtained from NHTSA's 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 PCRs (see Reduce Motor Vehicle-Related Fatalities Overall for VMT source information). Roadway fatality counts for CY 2018 were taken from the CY 2018 FARS Annual Report File and rates were derived using VMT from March 2020. For more information, see Reduce Motor Vehicle-Related Fatalities Overall.

Statistical Issues: As both the HPMS and TVT are based on samples of the traffic, there are associated sampling errors. Projections depend on the continuation of individual and market behavior regarding highway safety policies, VMT, seat belt use, and alcohol-related fatalities for large trucks and buses. The assumptions inherent in these projections, together with the normal levels of uncertainty inherent in statistical evaluations, may influence the accuracy of the projection.

Completeness: Annual traffic fatalities and VMT are currently available through CY 2019. The 2019 VMT estimate was available by March 2021.

Reliability: There is concern about consistency in vehicle counts across States. Further research is needed to address this concern. In order 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.

Verification and Validation: See Reduce Motor Vehicle-Related Fatalities Overall.

Performance Leads: FHWA, NHTSA, FMCSA

Measure: Non-Occupant Fatalities (Pedestrian, Bicycle) per 100,000 Population[1]

Scope: The number of fatalities included in national reports is a count of non-occupant deaths 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 non-occupant is any person involved in a traffic crash who is not an occupant of a motor vehicle in transport, including:

- Pedestrians;
- Bicyclists and other pedal cyclists;
- Occupants of parked motor vehicles;
- Joggers and skateboard riders; and
- People riding on animals and in animal-drawn conveyances.

Sources: Roadway fatality data are obtained from NHTSA's 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 PCRs. Roadway fatality counts for CY 2019 were taken from the 2019 FARS Annual Report File. Population data are obtained from the U.S. Bureau of the Census.

Statistical Issues: Non-occupant fatalities occur in places not covered by FARS, which is limited to public roads.

Completeness: Annual traffic fatalities are currently available through CY 2019, published in September 2021.

Reliability: In order 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.

Verification and Validation: See Reduce Motor Vehicle-Related Fatalities Overall.

[1] Starting in CY 2016, this measure changed to fatalities per 100,000 population to better align with the U.S. Department of Transportation Strategic Plan for FY 2018-2022.

Performance Leads: FHWA, NHTSA, FMCSA

Measure: Motorcycle Fatalities per 100,000 Motorcycle Registrations

Scope: Motorcyclist fatalities per 100,000 registrations are calculated for each calendar year. The number of motorcyclist fatalities included in national reports is a count of motorcyclist (rider, operator, and passenger) deaths occurring within 30 days of a crash involving a motorcycle traveling on a traffic-way customarily open to the public within the 50 States, the District of Columbia, and Puerto Rico. A motorcycle is a two- or three-wheeled motor vehicle designed to transport one or two people (i.e., motor scooters, minibikes, and mopeds).

Sources: Roadway fatality data are obtained from NHTSA's 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 PCRs. States collect motorcycle registration data and provide the data to FHWA, which then publishes the data to the public.

Fatality counts for CY 2018 were taken from the CY 2018 FARS Annual Report File, and rates were derived using FHWA's motorcycle registration data (March 2020).

Statistical Issues: Motorcyclist fatalities occur in places not covered by FARS, which is limited to public roads. FHWA estimates of registered motorcycles may be an underestimate of the true number of motorcycles used on the roads each year. Data collected by the Motorcycle Industry Council corroborate this possibility and have noted that not all motorcyclists register their bikes (National Transportation Safety Board [NTSB] – Safety Recommendation H-07-036: Oct 3, 2007).

The motorcycle registration date varies among States. Although many States continue to register specific vehicle types on a calendar year basis, all States use some form of the "staggered" system to register motor vehicles. This system permits a distribution of the renewal workload throughout all months. Most States allow pre-registration or permit grace periods to better distribute the annual registration workload.

To present vehicle registration data uniformly for all States, the information is shown as nearly as possible on a calendar year basis. Insofar as possible, the registrations reported exclude transfers and re-registrations and any other factors that could otherwise result in duplication of the vehicle counts.

Completeness: Annual traffic fatalities are currently available through CY 2019, published in September 2021.

Reliability: FHWA motorcycle registration data include all vehicles that have been registered at any time during the calendar year. Data include vehicles that were retired during the year and vehicles that were registered in more than one State. In some States, it is also possible that, contrary to the FHWA reporting instructions, vehicles that have been registered twice in the same State may be reported as two vehicles. The NHTSA data include only those vehicles that are published by FHWA. Therefore, they do not include vehicles registered in the last half of the calendar year or vehicles that may only be registered for a part of a year such as those for farm use.

In order 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.

Verification and Validation: See Reduce Motor Vehicle-Related Fatalities Overall.

REDUCE HIGH-RISK MOTOR CARRIERS

Performance Lead: FMCSA

Measure: Average Number of Days to Investigate "High-Risk" Designated Carriers

Scope: The average number of days from identification until investigation is the average number of days from identification as high-risk to when an investigation is conducted, for carriers investigated during this time. The FMCSA policy is to investigate identified high-risk carriers within 90 days. This measure informs and guides the following programs for FMCSA:

- Roadway safety policy;
- Safety program planning;
- Regulatory development;
- Resource allocation; and
- Operational mission performance.

FMCSA identifies and investigates carriers that pose the greatest safety risk, based on roadside performance data and investigation results. Criteria include:

- *Passenger Carriers:* Two or more of the following Behavior Analysis and Safety Improvement Categories (BASIC) at or above the 90th percentile for one month: unsafe driving, crash indicator, Hours of Service compliance, and vehicle maintenance. These are the BASICs most closely correlated with crash risk and have not received an on-site investigation in the previous 12 months.
- *Non-Passenger Carriers:* Two or more of the BASICs listed above at or above the 90th percentile for two consecutive months and have not received an on-site investigation in the previous 18 months.

Sources: Investigation data are obtained from the Motor Carrier Management Information System (MCMIS). The MCMIS Crash File contains data on commercial trucks and buses in fatal, injury, and towaway crashes (i.e., crashes in which at least one vehicle is disabled as a result of the crash and transported away from the crash scene). Crash severity thresholds and vehicle type definitions in MCMIS differ slightly from those in FARS and the General Estimating System/Crash Report Sampling System, and all tables are noted accordingly.

Statistical Issues: The MCMIS Crash File is intended to be a census of trucks and buses involved in fatal, injury, and towaway crashes; however, some States do not report all FMCSA-eligible crashes, and some report more than those that are eligible. FMCSA continues to work with the States to improve data quality and reporting of eligible large truck and bus crashes to the MCMIS Crash File.

Completeness: MCMIS fatal crash data used in the calculation for large trucks and buses are reported based on a subset of the Model Minimum Uniform Crash Criteria used by FARS. Total annual fatalities are available from MCMIS through CY 2020 and partial data are available through September 2021. Because FMCSA investigation results take time to upload, all data are considered preliminary for 22 months to allow for changes.

Reliability: Further research is needed to determine reliability of the data.

Verification and Validation: FMCSA analyzes self-reported MCMIS registration data and applies filters to identify and remove inaccurate entries to avoid over- or under-estimating values.

REDUCE FATAL MOTOR CARRIER CRASHES

Performance Lead: FMCSA

Measure: Number of Motor Carrier Incidents

Scope: The number of fatal crashes included in national reports includes a count of deaths occurring within 30 days of a crash involving large trucks or buses traveling on a traffic-way customarily open to the public within the 50 States, the District of Columbia, and Puerto Rico.

Sources: Roadway fatality data are obtained from NHTSA's 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 PCRs. A large truck is defined in FARS as a truck with a gross vehicle weight rating greater than 10,000 pounds. A bus is defined in FARS as any motor vehicle designed primarily to transport nine or more persons, including the driver.

Statistical Issues: As both the HPMS and TVT are based on samples of traffic, there are associated sampling errors.

Completeness: Annual traffic fatalities are currently available through CY 2019, published in October 2021.

Reliability: In order 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.

Verification and Validation: See Reduce Motor Vehicle-Related Fatalities Overall.

REDUCE RAIL-RELATED FATALITIES / REDUCE TRAIN ACCIDENTS

Performance Lead: FRA

Measures:

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

Scope: The railroad accident and 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 was increased from $10,700 to $11,200, effective January 8, 2021.

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: Injury/Illness Summary.

Sources: FRA's railroad accident and incident reporting subsystem is a compilation of railroad-reported data, which are submitted as required under Title 49 of the Code of Federal Regulations (CFR) § 225 - Railroad Accidents/Incidents: Reports Classification and Investigations. 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: No statistical issues identified.

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 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% 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 the FRA Guide for Preparing Accident/Incident Reports.

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

Verification and Validation: 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 approximately 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 at https://safetydata.fra.dot.gov/OfficeofSafety/default.aspx.

IMPROVE SAFE RAIL TRANSPORT OF HAZARDOUS MATERIALS

Performance Lead: FRA

Measure: Rate of Non-Accident Releases of Hazardous Materials

Scope: A non-accident release (NAR) is the unintentional release of a hazardous material while in transportation, including loading and unloading while in railroad possession, that is not caused by a derailment, collision, or other rail-related accident. NARs consist of leaks, splashes, and other releases from improperly secured or defective valves, fittings, and tank shells, and include undesired venting of non-atmospheric gases from safety relief devices. Normal safety venting of atmospheric gases, such as carbon dioxide and nitrogen, is not considered a NAR. Most reported NARs involve small quantities. Although 99.99% of all hazardous materials shipments are transported without incident, the tracking and analyzing of NAR data allows FRA to identify trends and set inspection priorities for inspection and auditing offeror (shipping/receiving) facilities and their "pre-trip" processes.

Sources:

- PHMSA Hazardous Material Incidents Reports (DOT Form F 5800.1);
- Surface Transportation Board (STB) Confidential Waybill Sample; and
- Association of American Railroads (AAR) Annual Hazardous Materials Leak Reports.

Statistical Issues: No statistical issues identified.

Completeness: This measure reflects data reported primarily by the Class I railroads with limited 5800.1 reporting from the regional and short-line railroads. Initial 5800.1 reporting must be completed within 30 days of the discovery of a release, while a final report can take months to complete. The STB waybill data are provided to FRA on a quarterly basis. The AAR's annual leak reports are usually published in August (e.g., AAR will publish its FY 2021 data in August 2022).

Reliability: If the railroads do not report NARs in a timely and accurate manner, and FRA does not receive the waybill data from STB timely, FRA estimates specific inputs by extrapolating trends.

Verification and Validation: FRA does not audit or verify data from the outside sources. When subject matter experts observe inconsistencies or unexpected results, FRA works with those sources to resolve any questions. Validation of the previous calendar year takes place after receipt of AAR's annual leak report in August.

REDUCE RAIL TRANSIT COLLISIONS INVOLVING PERSONS

Performance Lead: FTA

Measure: Total Rail Transit Collisions with Persons

Scope: This measure includes only those rail transit systems subject to FTA's State Safety Oversight (SSO) Program. The following rail transit systems are excluded from this measure:

- Dubuque Street Elevator, Los Angeles Angel's Flight, Los Angeles Strand Beach Funicular, and Las Vegas Monorail, which do not accept FTA funding and are not subject to FTA's SSO Program;
- All commuter rail systems, the Alaska Railroad, the PATH system in New York City, the Austin Capital Metro, and the Portland TriMet Westside Express system, all of which accept FTA funding, but are subject to FRA regulation;
- The Florida Virgin Brightline, which does not accept FTA funding and is subject to FRA regulation;
- All aerial tramway systems; and
- Amtrak, including the FTA-funded Keystone Corridor and Maine Downeaster Corridor, which are grandfathered into FTA funding.

This only includes collisions between transit rail and a person that results in a reportable safety event (i.e., an event resulting in one or more fatalities, one or more serious injuries, or one or more persons being removed from the scene for medical treatment).

Sources: Data come from the National Transit Database (NTD) Monthly Safety Event Reports.

Statistical Issues: No statistical issues identified. These data are collected as a complete count.

Completeness: Within the scope defined above, the data are complete. In some cases, a train might impact a person and the train operator may be unaware of the collision. Such events are inherently unknowable. From time to time, transit operators find a body in the right-of-way, in which case they make their best determination if a collision occurred. In some cases, a transit operator might fail to report an event to the FTA, although FTA attempts to ensure that all transit operators meet their reporting obligations.

Reliability: Transit systems must report reportable safety events to the NTD within 30 days of the event. Most reportable rail safety events must also be investigated by the SSO Organization that has been designated in each State with rail transit. National Transit Database safety event reports are reconciled against the list of SSO Investigations on an annual basis. Data reports are self-certified by a designate of the transit system's Chief Executive Officer (CEO).

Verification and Validation: FTA employs an NTD Validation Services contractor that verifies and validates safety event reports.

REDUCE TOTAL TRANSIT-RELATED FATALITIES

Performance Lead: FTA

Measure: Total Transit Fatalities

Scope: This measure includes only those rail transit systems subject to FTA's SSO Program. See Reduce Transit Collisions Involving Persons for a list of the systems excluded from FTA's oversight.

Additionally, fatalities are collected from most other non-rail transit systems that report to the NTD. This excludes fatalities from those systems that do not report to the NTD and fatalities from rural transit systems and 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 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: Data are from NTD Monthly Safety Reports.

Statistical Issues: No statistical issues identified. These data are collected as a complete count.

Completeness: Within the scope defined above, the fatality count data are complete. In some cases, a transit operator might fail to report an event to the FTA, although FTA attempts to ensure that all transit operators meet their reporting obligations.

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: FTA employs an NTD Validation Services contractor that verifies and validates safety event reports.

REDUCE TRANSIT-RELATED FATALITIES PER 100 MILLION PASSENGER MILES

Performance Lead: FTA

Measure: Total Transit Fatalities per 100 Million Passenger Miles

Scope: See Reduce Total Transit-Related Fatalities.

Sources: Data come from NTD Monthly Safety Reports.

Statistical Issues: Fatality rates are calculated by dividing calendar year 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. Passenger miles are an estimate typically derived from reported unlinked passenger trips and average trip length 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, ferry boats and paratransit, transit authorities often use computerized tracking systems, such as the Smart Card. In some cases when a 100% count of unlinked passenger trips is not available, such as small fare-free systems or large free-transfer systems (e.g., the New York City subway), passenger miles are sampled directly. Validation based on annual trend analysis is performed on the passenger mile inputs from the transit industry. The validation is performed by NTD analysts.

Completeness: See Reduce Total Transit-Related Fatalities.

Reliability: Rail safety events are reconciled against SSO Investigatory Reports. Methodologies for reporting passenger miles must either follow FTA guidance, or else be approved by a qualified statistician. Data reports are self-certified by a designate of the transit system's CEO.

Verification and Validation: FTA employs an NTD validation services contractor that verifies and validates 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.

REDUCE TRANSIT-RELATED FATALITIES PER 100 MILLION VEHICLE REVENUE MILES

Performance Lead: FTA

Measure: Total Transit Fatalities per 100 Million Vehicle Revenue Miles

Scope: The scope of fatalities is the same as for the Reduce Total Transit-Related Fatalities goal. The scope of this measure is limited to those systems that report fatalities, per the above. Vehicle revenue miles are defined as the number of miles that transit vehicles travel while in revenue service. Revenue service means that the transit vehicle is open and available to transport passengers, regardless of whether any passengers have actually boarded the vehicle. This excludes deadhead time when the vehicle is traveling from a garage to the first passenger pickup point, or is traveling from the last passenger pickup point back to the garage. Revenue service also excludes operator training time, maintenance testing time, and other non-revenue uses of transit vehicles.

Sources: Data are pulled from NTD Monthly Safety Reports for Fatalities and NTD Monthly Service Reports for Vehicle Revenue Miles.

Statistical Issues: No statistical issues identified. Both fatalities and vehicle revenue miles are collected as complete counts.

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. In some cases, a transit operator might fail to report an event to the FTA, although FTA attempts to ensure that all transit operators meet their reporting obligations. The vehicle revenue mile data are also complete within the defined scope.

Reliability: Transit systems must report reportable safety events to the NTD within 30 days of the event. Most reportable rail safety events must also be investigated by the SSO Organization that has been designated in each State with rail transit. The NTD safety event reports are reconciled against the list of SSO Investigations annually. Data reports for both safety events and vehicle revenue miles are self-certified by a designate of the transit system's CEO annually.

Verification and Validation: FTA employs an NTD validation services contractor that verifies and validates safety event reports. Data are validated against the operations and financial data in the rest of the annual NTD report to ensure consistency, and are also validated against the prior year's reported vehicle revenue miles.

REDUCE SERIOUS INJURIES FROM MOTOR VEHICLE CRASHES

Performance Lead: NHTSA

Measure: Occupants Ejected from Passenger Vehicles per 100 Emergency Medical Services Motor Vehicle Crash Dispatches

Scope: This measure includes emergency medical services (EMS) data from U.S. States and territories.

Sources: The National Emergency Medical Services Information System (NEMSIS) database is a product of NHTSA's Office of EMS in collaboration with the University of Utah Technical Assistance Center (TAC). It is a national database that is used to store EMS data from U.S. States and territories. The NEMSIS is a universal standard for how patient care information resulting from an emergency 9-1-1 call for assistance is collected. The NEMSIS is a collaborative system to improve patient care through the standardization, aggregation, and utilization of point of care EMS data at the local, State, and national levels.

Local agencies send EMS data in the proper XML format to States, then on to the NEMSIS. The system is versatile and allows local and State agencies to customize their reports while also maintaining consistent national elements.

- Local agency providers select elements according to their needs, while keeping the national and State elements as part of their selection.
- States select elements from the NEMSIS dataset according to their needs, while keeping the national elements as part of their selection.
- The national elements are transmitted to the NEMSIS TAC to populate the National EMS Dataset.

Statistical Issues: The data from the NEMSIS are event-based, not patient-based. That is, a single patient may be represented in more than one record for a variety of reasons. For example, several agencies may respond to

the same event (i.e., one patient) and each submit a patient care record to NEMSIS.

Completeness: Data files received from contributing EMS agencies and States are checked for completeness, logical consistency, and proper formatting. Any data files not passing the NEMSIS validation and data cleaning processes are rejected or flagged based upon the seriousness of the discovered errors. A data profile report is generated for each submitted file from a State (and/or submitting entity), allowing the opportunity to review the quality of submitted data, correct errors, and resubmit their data if needed.

The proportion of missing data varies across data elements. In most cases, NEMSIS data are not missing at random and analyses, therefore, are subject to bias if missing data are ignored. Excluding observations with missing values is the default for most software programs when running statistical analyses. Another option is to provide plausible values for the missing data, either by single value or multiple value imputation. A single imputation of a value may be an educated guess at the value, substitution of the mean value, or substitution based on a regression equation using other (observed) values. Most statistical software packages can do imputations without much difficulty.

Reliability: The NEMSIS is a large convenience sample, meaning it consists solely of data submitted by participating EMS agencies within States and it is not a population-based data set. In addition, NEMSIS inherits the individual deficiencies originating from its contributing entities.

Verification and Validation: The NEMSIS TAC employs edit checks to identify invalid or out-of-range values for the variables included the research data set. There are currently over 300 edit checks.

IMPROVE SAFETY OF FLEET ON U.S. ROADWAYS

Performance Lead: NHTSA

Measure: Percentage of Fleet Crash Tested

Scope: Each year, NHTSA tests new cars, trucks, sport utility vehicles, and vans and rates them using the 5-Star Safety Rating system. Five stars indicate the highest safety rating and one star indicates the lowest. The 5-Star Safety Rating evaluates how well vehicles perform in crash tests to help consumers make smart decisions about safety when purchasing a vehicle. Vehicle safety ratings are provided at the point of sale on the window sticker that is applied to new vehicles, on NHTSA's website, and other consumer information outlets. This provides consumers with a reliable, transparent, and unbiased assessment of the safety performance of passenger cars and trucks sold in the U.S.

Sources: Data are from NHTSA's fleet crash test program.

Statistical Issues: No statistical issues identified.

Completeness: NHTSA conducts crash testing on approximately 85% of the new vehicle fleet. NHTSA categorizes vehicles by class and curb weight of a vehicle (standard equipment including the maximum capacity of fuel, oil, coolant, and air conditioning). A vehicle's 5-Star Safety Rating combines the results of the frontal and side crash tests and a rollover resistance test into one score that indicates the overall risk of injury to a vehicle occupant if the vehicle is involved in a crash. The rating also includes information about recommended advanced crash avoidance technologies, including forward collision warning, automatic emergency braking, and lane departure warning.

Reliability: NHTSA has developed detailed control mechanisms to ensure that the crash testing process is consistent and reliable for crash tests conducted across all brands and vehicle types. The data are carefully reviewed for any potential anomalies.

Verification and Validation: NHTSA's protocols for conducting crash tests has been developed, refined, and verified over the course of 50 years.

IMPROVE TIMELINESS OF DATA

Performance Lead: NHTSA

Measure: Percentage of States that Meet the Quarterly Timeliness Benchmark

Scope: The data collected are 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 open to the public within the 50 States, the District

of Columbia, and Puerto Rico.

Sources: Roadway fatality data are obtained from NHTSA's FARS.

Statistical Issues: Further research is needed to identify potential statistical issues.

Completeness: Annual traffic fatalities are currently available through CY 2019, published in October 2021 and CY 2018 were made available in October 2020.

Reliability: In order 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.

Verification and Validation: See Reduce Motor Vehicle-Related Fatalities Overall.

REDUCE FATALITIES CAUSED BY PIPELINES AND HAZARDOUS MATERIALS

Performance Lead: PHMSA

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 - Transmission Systems, Gathering Systems, Liquified Natural Gas Facilities, and Underground Natural Gas Storage Facilities: Incident Report. Hazardous liquid and carbon dioxide (CO_2) pipeline system accidents must be reported to PHMSA under 49 CFR § 195.50 - Reporting Accidents. Both interstate and intrastate pipeline systems are subject to the reporting requirements. Additionally, any person in possession of a hazardous material during air, water, rail, or highway transportation, including loading, unloading, and storage incidental to transportation, must report incidents if certain conditions are met under 49 CFR § 171.15 - Immediate Notice of Certain Hazardous Materials Incidents and 49 CFR § 171.16 - Detailed Hazardous Materials Incident Reports. A fatality resulting from a failure in a hazardous materials transportation system in which there is a release of a hazardous liquid, CO_2, natural gas, or other regulated hazardous material 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 and confirm deaths that occurred due to a release of hazardous liquid, gas, or other hazardous material regulated by PHMSA.

Sources: Departmental and 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 DOT Form F 5800.1 and maintained in the Hazardous Materials Information System. In addition, PHMSA seeks information and data to identify potentially reportable hazardous materials 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 annual variation in the number of reported incidents each year, particularly given the small number of fatalities, and this variation might not reflect real changes in the underlying risk. 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% 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 or external factors such as changes in pipeline mileage, energy consumption, or U.S. population that could affect the number of incidents with fatalities.

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 transportation 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 submission.

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 incidents with operator personnel during routine inspections.

Verification and Validation: All incident data are collected on OMB-approved forms online. Detailed OMB-approved instructions for incident reports are available on the PHMSA at https://www.phmsa.dot.gov/. 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. 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 on the PHMSA website at https://www.phmsa.dot.gov/.

IMPROVE SAFE DELIVERY OF PIPELINE PRODUCTS AND HAZARDOUS MATERIALS

Performance Lead: PHMSA

Measure: Incidents Involving Death or Major Injury Resulting from the Transport of Hazardous Materials by All Modes Including Pipelines

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 CO_2 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 during air, water, rail, or highway transportation, including loading, unloading, and storage incidental to transportation, must report incidents if certain conditions are met under 49 CFR § 171.15 and 49 CFR § 171.16.

Incidents involving death or major injury represent a fraction of the total incidents reported under 49 CFR. A fatality resulting from a failure in a hazardous materials transportation system in which there is a release of a hazardous liquid, CO_2, or natural gas must be reported. A major injury is an injury in which an individual requires in-patient hospitalization as a result of a failure from a hazardous materials transportation system in which there is a release of a hazardous liquid, CO_2, or natural gas. An individual, which includes employees, emergency responders, and members of the public, that was injured as a direct result of hazardous materials during transportation in modes other than pipeline and was admitted to the hospital overnight and/or lost three days or more from work due to the injury is deemed as a major injury. If an injured person dies within 30 days of the incident date, it is counted as a death, not as an injury. In-patient hospitalization means hospital admission and at least one overnight stay (detailed guidance is available on the PHMSA at https://www.phmsa.dot.gov/).

Sources: Departmental and PHMSA Hazardous Liquid accident data are used for this measure. The data are submitted online by pipeline operators using PHMSA Form F 7000-1.

Statistical Issues: See Reduce Fatalities Caused by Pipelines and Hazardous Materials.

Completeness: See Reduce Fatalities Caused by Pipelines and Hazardous Materials.

Reliability: Data for incidents involving death or major injury are considered the most reliable of PHMSA's incident data. These incidents have additional verification and validation procedures to include follow-up contact with the company or individual who made the report, contact with State and local law enforcement and/or emergency response officials, and data matching with initial reports made to the NRC. PHMSA also partners with operators, State partners, and other stakeholders to identify and confirm deaths that occurred due to a release of hazardous liquid, gas. PHMSA continues to work to improve the quality of the incident data.

Verification and Validation: See Reduce Fatalities Caused by Pipelines and Hazardous Materials.

Performance Lead: PHMSA

Measure: Pipeline Hazardous Liquid Spilled, Gross Volume (Barrels)

Scope: Hazardous liquid pipeline incidents must be reported to PHMSA under 49 CFR § 195.50. PHMSA tracks both gross and net volume spilled from pipeline systems transporting crude oil, refined products, and biofuels. The gross spilled volume measure shows how effective pipeline safety standards and programs are at containing energy products moving through pipelines. Beginning in FY 2019, PHMSA included a measure of the gross volume spilled for crude oil, refined products, and biofuels from pipeline systems.

Sources: Departmental and PHMSA Hazardous Liquid accident data are used for this measure. The data are submitted online by pipeline operators using PHMSA Form F 7000-1.

Statistical Issues: Results in any single year should be interpreted with caution. There is some normal annual variation in the volume spilled each year, particularly given the annual number of failures, and this variation might not reflect real changes in the underlying risk. Targets account for year-to-year variations in gross spilled over 13-year period. The target each year is set at one standard deviation from the trend line that uses a best-fit function to account for normal variation annually. This performance measure is not normalized for changes in exposure, or external factors such as changes in pipeline mileage, petroleum consumption, or ton-miles moved through pipelines, that could affect the gross volume of hazardous liquids spilled.

Completeness: Compliance in reporting is very high and reports are submitted for most or all incidents that meet reporting requirements. 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 incident and PHMSA receipt of the report.

Reliability: See Reduce Fatalities Caused by Pipelines and Hazardous Materials.

Verification and Validation: See Reduce Fatalities Caused by Pipelines and Hazardous Materials.

Performance Lead: PHMSA

Measure: Pipeline Hazardous Liquid Spilled, Net Volume (Barrels)

Scope: Hazardous liquid pipeline accidents are reportable to PHMSA under 49 CFR § 195.50. PHMSA tracks both gross and net volume spilled from pipeline systems transporting crude oil, refined products, and biofuels. The gross spilled volume measure shows how effective pipeline safety standards and programs are at containing energy products moving through pipelines, while the net spilled volume considers the effectiveness of remediation standards and pipeline operator actions after the spill.

Sources: Departmental and PHMSA accident data are used for this measure. The data are submitted online by pipeline operators using PHMSA Form F 7000-1.

Statistical Issues: Results in any single year should be interpreted with caution. There is some normal annual variation in the volume spilled each year, particularly given the small number of failures, and this variation might not reflect real changes in the underlying risk. The target each year is set at one standard deviation from the trend line to account for normal variation annually. This provides about 80% probability of achieving the target if the risk continues to follow the trend line. An exponential trend line is used to reflect the concept of diminishing returns as the numbers decline. This performance measure is not normalized for changes in exposure, or external factors such as changes in pipeline mileage, petroleum consumption, or ton-miles moved through pipelines, that could affect the number of major hazardous liquid spills.

Completeness: Compliance in reporting is very high and most or all accidents that meet reporting requirements are submitted. Operators must submit reports within 30 days of an accident or face penalties for non-compliance. There is typically a 30-day lag between the date of the accident and PHMSA receipt of the report.

Reliability: See Reduce Fatalities Caused by Pipelines and Hazardous Materials.

Verification and Validation: See Reduce Fatalities Caused by Pipelines and Hazardous Materials.

Performance Lead: PHMSA

Measure: Hazardous Materials Incidents Reported Annually

Scope: 49 CFR § 171 requires that certain types of hazardous materials incidents be reported to PHMSA. Any person in possession of a hazardous material during transportation (air, water, rail, and highway), including loading, unloading, and storage incidental to transportation, must report if certain conditions are met under 49 CFR § 171.15 and 49 CFR § 171.16 All injuries and fatalities that are a direct result of the hazardous materials during transportation are reportable. An individual, which includes employees, emergency responders, and members of the public, who is injured as a direct result of hazardous materials and was admitted to the hospital overnight and/or lost three days or more from work due to the injury is deemed as a major injury. An individual that was injured as a direct result of hazardous materials and sought on-site treatment or was seen in the emergency room and released is deemed as a minor injury.

Sources: Hazardous materials transportation incident data are derived from reports submitted on Form DOT F 5800.1 and maintained in the Hazardous Materials Information System. In addition, PHMSA seeks information and data to identify potential incidents through the NCR, as well as monitoring print, television, and social media daily.

Statistical Issues: PHMSA is currently examining factors that could be used to normalize the data. Specifically, PHMSA is examining economic indicators that could be used to normalize the data, as well as methods (i.e., ton miles traveled) to normalize the data when comparing different modes. The target each year is set at one standard deviation from the trend line to account for normal variation year-to-year (which shows a decline of about 10% on average every eight years over the past 28 years [CYs 1988-2015]). An exponential trend line is used to reflect the concept of diminishing returns as the numbers decline.

Currently, the performance measure is not normalized for changes in exposure, or external factors such as changes in the amount of hazardous materials shipped, number of shipments, or population of the United State, that could affect the number of incidents with death or major injury.

Completeness: PHMSA has instituted several actions to improve compliance regarding incident reporting. Specifically, PHMSA has implemented rulemakings to increase the penalty for not reporting when required. In addition, PHMSA field operations have focused enforcement efforts on individuals who fail to comply when the incident resulted in a fatality or major hazardous material injury.

Lastly, PHMSA seeks information and data to identify potentially reportable incidents through the NRC as well as the monitoring print, television, and social media. 49 CFR § 171.16 requires a written report for certain types of hazardous materials incidents within 30 days of the incident, and a follow-up written report within one year of the date of incident, based on certain circumstances. Each person in physical possession of a hazardous material at the time an incident occurs (loading, unloading, and temporary storage) during transportation must submit a Hazardous Materials Incident Report on DOT Form F 5800.1 within 30 days of discovery of the incident. This means that when the conditions apply for completing the report, the entity having physical control of the shipment is responsible for filling out and filing DOT Form F 5800.1. 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. Projections from partial-year data include all months for which PHMSA has reliable data plus an estimated number for the missing months based on the historical fraction those months represent in the final totals over the past five years.

Reliability: Data on incidents involving death or major injuries, which represent a fraction of the total number of reportable incidents, are the most reliable of the available incident data. These incidents have additional verification and validation procedures that include follow-up contact with the company or individual who made the report, contact with State and local law enforcement and/or emergency response officials, and matching data with initial reports made to the NRC.

Verification and Validation: PHMSA routinely cross-checks incident data against other sources of data, including matching incident reports with reports made to the NRC and the use of a news clipping service to provide information on significant hazardous materials incidents that might not be reported. If sufficient information exists, PHMSA follows up with carriers who may need to file an incident report. PHMSA has established several data quality initiatives that include, but are not limited to:

- *Standardizing Processes to Improve Efficiency:* Evaluating and documenting current systems requirements and implementing a standardized continuous improvement process. This process will provide performance management, identify areas for improvement, and implement processes to promote efficiencies;

- *Fostering Innovation and Enhancement of Data Collection Systems:* Improving information technology (IT) functionality and internal and external systems regarding incident reporting. This includes the development of web-based systems to improve the user experience;
- *Enhancing Risk Management Principles and Encouraging the Use of Safety Management Systems:* Continuing to build a risk assessment methodology based on a multidisciplinary approach, including developing better commodity flow data and applying statistical analysis, data modeling, and predictive analytics;
- *Increasing Compliance, Training, and Outreach:* Educating the regulated community on incident reporting, particularly on what must be reported and the mechanisms available to report. This includes the development of educational materials such as quick reference guides to the DOT 5800.1 incident reporting form; and
- *Enhancing Coordination with Other Agencies:* Working closely with other government agencies to ensure sharing of data and collaboration where appropriate.

PREVENT ACCIDENTAL DAMAGE TO GAS AND HAZARDOUS MATERIALS PIPELINES

Performance Lead: PHMSA

Measure: Damages per 1,000 One-Call Tickets for Gas Distribution Pipelines (National Average)

Scope: This measure refers to the instances of excavation damages to pipelines. The desired outcome focuses on reducing the number of excavation-related incidents. Excavation damages are the number one cause of pipeline-related injuries and fatalities. Measuring likelihood of calling 811 or submitting a One-Call ticket is a direct indication of the success or failure of PHMSA's programs to influence use of the service. This measure is influenced by 811 awareness, safe digging practices, State enforcement of One-Call laws, and technology improvements.

Sources: The source of the data for damages per 1,000 One-Call tickets is PHMSA's gas distribution operator annual report submissions. By March 15 of each year, pipeline operators are required to submit annual reports to PHMSA and its State partners. The aggregated information is available to the public on the PHMSA website at https://www.phmsa.dot.gov/data-and-statistics/pipeline/data-and-statistics-overview.

Statistical Issues: Results in any single year should be interpreted with caution. The performance measure does not fully capture other damage prevention results or external factors.

Completeness: Compliance in reporting is very high and reports are submitted for most or all incidents that meet reporting requirements. Operators must submit reports within 30 days of an accident or face penalties for non-compliance. There is typically a 30-day lag between the date of the accident and PHMSA's receipt of the report.

Reliability: PHMSA continues to work to improve the quality of the incident and accident data.

Verification and Validation: PHMSA routinely cross-checks incident data against other sources of data, such as immediate notifications provided to the NRC and media outlets. Pipeline operators have online access to each report they have submitted and can supplement the report at any time after the original submittal. Validation checks are run in the portal prior to submittal to ensure all required data fields have been populated. PHMSA also uses Common Ground Alliance annual reporting to compare these damage totals to the number of One-Call tickets.

REDUCE U.S.-OWNED COMMERCIAL CARRIER AVIATION FATALITIES PER 100 MILLION PERSONS ON BOARD

Performance Lead: FAA

Measure: U.S.-Owned Commercial Carrier Aviation Fatalities per 100 Million Persons on Board[2]

Scope: This metric includes both scheduled and nonscheduled flights of U.S. passenger and cargo air carriers (14 CFR § 121 - Operating Requirements: Domestic, Flag, and Supplemental Operations) and scheduled passenger flights of commuter operators (14 CFR § 135 - Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft). It excludes on-demand (i.e., air taxi) service and general aviation. Accidents involving passengers, crew, ground personnel, and the uninvolved public are all included.

Sources: Data on commercial fatalities come from NTSB's Aviation Accident Database. All but a small share of the data form persons on board comes from the air carriers, who submit information for all passengers on board to the Office of Airline Information within BTS. Additionally, FAA estimates crew on board based on the distribution of aircraft departures by make and model, plus an average of 3.5 persons on board per Part 121 cargo flight.

Statistical Issues: Both accidents and passengers on board are censuses, having no sampling error. Crew on board is an estimate with a small range of variation for any given make and model of aircraft. Departure data and enplanements for Part 121 are from the BTS. The crew estimate is based on fleet makeup and crew requirements per number of seats. For the current fleet, the number of crew is equal to about seven percent of all Part 121 enplanements. The average number of cargo crew on board is 3.5 per departure, based on data from subscription services such as Air Claims, a proprietary database used by insurers to obtain information such as fleet mix, accidents, and claims. Cargo crews typically include two flight crew members, and occasionally another pilot or company representative or two deadheading passengers.

Part 135 data also come from BTS and Air Claims databases, but are not as complete. The Office of Aviation Policy and Plans verifies with the operators when it identifies gaps in the data. Based on previous accident and incident reports, the average Part 135 enplanement is five per departure. Crew estimates for Part 135 are based on previous accident and incident data. Any error that might be introduced by estimating crew will be very small and will be overwhelmed by the passenger census. Importantly, the fatality rate is low and could significantly fluctuate from year to year due to a single accident.

Completeness: FAA does comparison checking of the departure data collected by BTS. These data are needed for crew estimates. However, FAA has no independent data sources against which to validate the numbers submitted to BTS. FAA compares its list of carriers to the DOT list to validate completeness and places the carriers in the appropriate category (i.e., Part 121 or Part 135). The number of actual persons on board for any given period is considered preliminary for up to 18 months after the close of the reporting period. This is due to amended reports subsequently filed by the air carriers. Preliminary estimates are based on projections of the growth in departures developed by Office of Aviation Policy, Planning, and Environment. However, changes to the number of persons on board should rarely affect the annual fatality rate.

To overcome reporting delays of 60 to 90 days, FAA must rely on historical data, partial internal data sources, and Official Airline Guide scheduling information to project at least part of the fiscal year activity data. FAA uses Official Airline Guide data until official BTS data are available. The final result for the air carrier fatality rate is not considered reliable until BTS provides preliminary numbers. Due to reporting procedures in place, it is unlikely that calculation of future fiscal year departure data will be markedly improved. This lack of complete historical data on a monthly basis and independent sources of verification increases the risk of error in the activity data. NTSB and the Office of Accident Investigation and Prevention confer periodically to validate information on the number of fatalities. Accident data are considered preliminary. NTSB usually completes investigations and issues reports on accidents that occur during any fiscal year by the end of the next fiscal year. Results are considered final when all those accidents have been reported in the NTSB press release published early in the following year. FY 2018 results will therefore be final after the FY 2020 press release. In general, however, the number of fatalities is not likely to change significantly between the end of the fiscal year and the date they are finalized.

Reliability: Results are considered preliminary based

[2] FAA's goal is to reduce the commercial air carrier fatalities per 100 million persons on board by 50% over an 18-year period (FYs 2008-2025), with no more than 4.4 fatalities per 100 million persons in FY 2025.

on projected activity data. Most accident investigations are a joint undertaking. NTSB has the statutory responsibility to determine probable cause, while FAA has separate statutory authority to investigate accidents and incidents to ensure that FAA meets its broader responsibilities. FAA's own accident investigators and other FAA employees participate in all accident investigations led by NTSB investigators.

Verification and Validation: NTSB and the Office of Accident Investigation and Prevention confer periodically to validate information on the number of fatalities. Accident data are considered preliminary. FAA's own accident investigators and other FAA employees participate in all accident investigations led by NTSB investigators. FAA uses performance data extensively for program management, personnel evaluation, and accountability. Results are considered final when all those accidents have been reported in the NTSB press release published early in the following year. For departure data, FAA does comparison checking on the data collected by BTS. Data are reviewed by FAA senior leadership every week. This metric is part of a core group of goals which the FAA pegs employee performance-based pay.

REDUCE GENERAL AVIATION FATAL ACCIDENTS PER 100,000 FLIGHT HOURS

Performance Lead: FAA

Measure: U.S. General Aviation Fatal Accidents per 100,000 Flight Hours[3]

Scope: This metric includes U.S.-registered, on-demand (non-scheduled, 14 CFR § 135) and general aviation flights. General aviation comprises a diverse range of aviation activities, from single-seat homebuilt aircraft, helicopters, balloons, single and multiple engine land and seaplanes, to highly sophisticated, extended range turbojets.

Sources: The data for general aviation fatal accidents come from the NTSB Aviation Accident Database. Aviation accident investigators, under the auspices of the NTSB, develop the data. Annual flight hours are derived from FAA's annual General Aviation and Part 135 Activity Survey. FAA's Forecast and Performance Analysis Division provides current year estimates.

Statistical Issues: The NTSB finalizes the actual number of general aviation fatal accidents. As this is a simple count of accidents, there are no statistical issues identified. The general aviation community and the General Aviation Joint Steering Committee (GAJSC), as part of the Safer Skies initiative, recommended development of a data collection program that will yield more accurate and relevant data on general aviation demographics and utilization. Improved general aviation survey and data collection methodologies have been developed. Because of these efforts, FAA, working with the General Aviation Manufacturers Association, the NTSB, and other aviation industry associations, has made many improvements to the survey. An improved survey was initiated in FY 2004. These annual surveys created, for the first time, a statistically valid report of activity on which the general aviation community could agree. First, the sample size has significantly increased. Second, a reporting form has been created to make it much easier for organizations with large fleets to report. Third, the agency worked with the Aircraft Registry to improve the accuracy of contact information. Each year, significant changes are being made to substantially improve data accuracy.

The GAJSC, its Safety Analysis Team, and the General Aviation Data Improvement Team worked closely with the general aviation community and industry to develop this performance metric and target. There was unanimous support and consensus for the metric and target.

Completeness: The number of general aviation fatal accidents, even when reported as preliminary, is very accurate. The NTSB and the Office of Accident Investigation and Prevention confer periodically to validate information on the number of fatalities. The NTSB usually completes investigations and issues reports on accidents that occur during any fiscal year by the end of the next fiscal year. Results are considered final when all those accidents have been reported in the NTSB press release published early in the following year. Fiscal year 2018 results will therefore be final after the FY 2020 press release. In general, however, the numbers of fatalities are not likely to change significantly between the end of the fiscal year and the date they are finalized. Further research is needed to determine how well annual flight hours derived from FAA's annual General Aviation and Part 135 Activity Survey capture total general aviation flight hours. General aviation survey calendar hours are finalized by December 31 of the following year. Hence, the fatal accident rate for FY 2019 will not be considered final/complete until December 31, 2021.

[3] FAA's goal is to reduce the GA fatal accident rate to no more than 0.89 fatal accidents per 100,000 flight hours by FY 2028.

Reliability: Results are considered preliminary based on projected activity data. Most accident investigations are a joint undertaking. The NTSB has the statutory responsibility to determine probable cause, while FAA has separate statutory authority to investigate accidents and incidents to ensure that FAA meets its broader responsibilities. FAA's own accident investigators and other FAA employees participate in all accident investigations led by NTSB investigators.

Verification and Validation: For the number of fatal accidents, NTSB and the Office of Accident Investigation and Prevention confer periodically to validate their information. For flight hours, general aviation survey data are highly accurate with a percent-standard error of less than one percent. The general aviation community and the GAJSC, as part of the Safer Skies initiative, recommended development of a data collection program that will yield more accurate and relevant data on general aviation demographics and utilization. Improved general aviation survey and data collection methodologies have been developed. FAA senior leadership review safety data on a weekly basis. This metric is part of a core group of goals which FAA pegs employee performance-based pay.

REDUCE RUNWAY INCURSIONS

Performance Lead: FAA

Measure: Weighted Surface Safety Risk Index per Million Operations for Commercial Aviation

Scope: The metric measures the overall safety performance of the National Airspace System (NAS) in the runway environment. It includes all manner of commercial operations, aircraft, vehicles, and pedestrians that occur in that environment. It includes runway collision accidents, runway excursion accidents, taxiway collision accidents, runway incursion incidents, runway excursion incidents, and taxiway surface incidents. Operations are defined as total takeoffs and landings. Commercial operations are considered those operating under CFR § 121, 129, and 135; all other operation types are considered non-commercial.

Sources: The NTSB database is the primary source of runway accident data. Runway excursion data are supplemented by the Office of Accident Investigation and Prevention's Aviation Safety Information Analysis and Sharing database, which aggregates runway excursion data from multiple sources. Air traffic controllers and pilots are the primary source of runway incursion and surface incident reports. The data are recorded in the Comprehensive Electronic Data Analysis Reporting system, which replaced the FAA Air Traffic Quality Assurance database for the Air Traffic Organization (ATO).

Preliminary incident reports are evaluated when received and evaluation can take up to 90 days. Operations data used to calculate the runway incursion rate are provided via Operations Network and are downloaded directly from the FAA Operations and Performance Data database.

Statistical Issues: Categorization of the various accidents is performed using statistical modeling, which is prone to sampling error.

Completeness: FAA conducts annual reviews of reported data and compares them with data reported from previous years. Annual runway incursion and surface incident data are used to provide a statistical basis for research, analysis, and outreach initiatives. The Surface Safety Metric will be recalculated if accidents or incidents are reported late or if operations data are retroactively adjusted.

Reliability: A classification algorithm with approximately 95% accuracy is used to classify NTSB events as runway collisions, taxiway collisions, or runway excursions. Given this classification error, there is a small chance that irrelevant accidents will be included in the Surface Safety Metric calculation or relevant accidents will be excluded.

Verification and Validation: FAA verifies and validates the accuracy of runway incursion and surface incident data through the initial validation process followed by quality assurance and quality control reviews. Reconciliation of the databases is conducted monthly and anomalies are explored and resolved. In cases where major problems are identified, a request to re-submit is issued.

Performance Lead: FAA

Measure: Weighted Surface Safety Risk Index per Million Operations for Non-Commercial Aviation

Scope: The metric measures the overall safety performance of the NAS in the runway environment. It includes all manner of non-commercial operations, aircraft, vehicles, and pedestrians that occur in that environment. It includes runway collision accidents, runway excursion accidents, taxiway collision accidents, runway incursion incidents, runway excursion incidents, and taxiway surface incidents. Operations are defined as total takeoffs and landings. Commercial operations are considered those operating under CFR § 121, 129, and 135; all other operation types are considered non-commercial.

Sources: The NTSB database is the primary source of runway accident data. Runway excursion data are supplemented by the Office of Accident Investigation and Prevention's Aviation Safety Information Analysis and Sharing database, which aggregates runway excursion data from multiple sources. Air traffic controllers and pilots are the primary source of runway incursion and surface incident reports. Data are recorded in the Comprehensive Electronic Data Analysis Reporting system, which replaced the FAA Air Traffic Quality Assurance database for the ATO.

Preliminary incident reports are evaluated when received and evaluation can take up to 90 days. Operations data used to calculate the runway incursion rate are provided via Operations Network and are downloaded directly from the FAA Operations and Performance Data database.

Statistical Issues: Categorization of the various accidents is performed using statistical modeling, which is prone to sampling error.

Completeness: FAA conducts annual reviews of reported data and compares them with data reported from previous years. Annual runway incursion and surface incident data are used to provide a statistical basis for research, analysis, and outreach initiatives. The Surface Safety Metric will be recalculated if accidents or incidents are reported late or if operations data are retroactively adjusted.

Reliability: A classification algorithm with approximately 95% accuracy is used to classify NTSB events as runway collisions, taxiway collisions, or runway excursions. Given this classification error, there is a small chance that irrelevant accidents will be included in the Surface Safety Metric calculation or relevant accidents will be excluded.

Verification and Validation: FAA verifies and validates the accuracy of runway incursion and surface incident data through the initial validation process followed by quality assurance and quality control reviews. Reconciliation of the databases is conducted monthly and anomalies are explored and resolved. In cases where major problems are identified, a request to re-submit is issued.

EXERT GLOBAL LEADERSHIP AT THE INTERNATIONAL CIVIL AVIATION ORGANIZATION

Performance Lead: FAA

Measure: Exert Global Leadership at the International Civil Aviation Organization

Scope: There are two targets associated with this measure:

- *Target 1:* Prepare a corporate definition of and approach to international training that transforms and expands FAA's influence and impact upon the global aviation community to create support for the U.S. approach to aviation safety; and
- *Target 2:* Combine current goals and expectations with regional and global perspectives to promote U.S.-based standards and best practices.

Sources: At the request of agency executives, the Office of International Affairs examined the agency's current process for program planning, including the focus and effectiveness of international training.

Statistical Issues: No statistical issues identified.

Completeness: As the integrated FAA International Strategy evolves, it may be necessary to revisit the identified data and revise the criteria on a regular basis to ensure it is valid and supports the strategy.

Reliability: It can be assumed that the identified data collection criteria will change on a regular basis as it is updated at the source. Although this may not affect the inclusion of this criterion in the future, it could affect the prioritization process and possibly the end product.

Verification and Validation: FAA uses the International Advisory Board, a formal governance structure, for agency-wide collaboration to make decisions about

how it engages globally and how it can better allocate resources. The agency relies on an expansive internal and external global aviation data to inform and drive the resource allocations. Further, at the direction of the International Advisory Board, FAA established a policy that requires the use of data to decide which foreign countries it will help through technical assistance such as training, flight inspections, equipment, spare parts and repair services, and cooperative agreements.

STRATEGIC GOAL 2: INFRASTRUCTURE

MAINTAIN ACCOUNTABILITY FOR PERMITTING PROJECTS

Performance Lead: OST-Policy

Measures:

- Percentage of DOT Environmental Impact Statements Posting on Permitting Dashboard that are On Schedule
- Percentage of DOT Major Infrastructure Projects Posted on Permitting Dashboard that are On Schedule

Scope: This measure includes the number of Environmental Impact Statements (EIS) on the Federal Infrastructure Permitting Dashboard where the lead agency is a DOT Operating Administration (OA). The Permitting Dashboard tracks DOT projects that result in either an Environmental Assessment (EA) or EIS.

In addition, the dashboard also tracks other agencies' EISs and EAs for infrastructure projects that are covered projects. EISs are projects that result in significant impacts to the environment as defined by each agency through experience. These projects are often complex and involve a number of actions with associated milestones that are tracked on the dashboard. A project remains on schedule if the milestones have been completed or if any estimated milestone dates have not been reached.

Sources:

- Federal Infrastructure Permitting Dashboard: https://www.permits.performance.gov/
- Department Specific Projects: https://data.permits.performance.gov/
- Environmental Impact Statements: https://data.permits.performance.gov/Permitting-Project/DOT-EISs-In-Progress/sgra-wju6

Statistical Issues: No statistical issues identified.

Completeness: Each OA is responsible for updating the project schedules on a quarterly basis. Some OAs are better at uploading their project schedules than others. When there is a missed milestone, it may be attributed to failure to update the schedule rather than the project being delayed. Operating Administrations are creating ways to streamline the entry process so that there are not duplicative tracking processes and data are more complete and up to date.

Reliability: Access to the information provided in the Federal dashboard is limited to only a few dashboard administrators who are able to modify the data. This ensures that the data being entered are reliable and accurate; however, it does result in delays of getting the information put into the system. As OAs develop ways to streamline the data entry into the permitting dashboard through allowing internal systems to seamlessly download to the dashboard, the OAs should do more quality assurance/quality control of the data to ensure that the information is reliable and accurate.

Verification and Validation: The Department pulls a report of the data every quarter. Each OA is asked to verify that they have updated their project schedules and the data in the permitting dashboard is up to date prior to the pull. The OAs are tasked with ensuring the verification and validation of the information within the dashboard.

REDUCE THE TIME TO COMPLETE AN ENVIRONMENTAL IMPACT STATEMENT

Performance Lead: OST-P

Measure: Average Months to Complete an Environmental Impact Statement

Scope: The Office of the Assistant Secretary for Policy (OST-P) tracks the number of EISs on the permitting dashboard where the lead agency is a DOT OA.

Sources: See Maintain Accountability for Permitting Projects.

Statistical Issues: No statistical issues identified.

Completeness: See Maintain Accountability for Permitting Projects.

Reliability: See Maintain Accountability for Permitting Projects.

Verification and Validation: See Maintain Accountability for Permitting Projects.

REDUCE THE TIME TO COMPLETE A MAJOR INFRASTRUCTURE PROJECT

Performance Lead: OST-P

Measure: Average Months to Complete an Environmental Review for Major Infrastructure Projects for Which DOT is the National Environmental Policy Act Lead

Scope: The Department's first major infrastructure project was initiated in FY 2018 and is expected to be completed in January 2021. There are several other projects anticipated to be completed in the spring of FY 2021. As these projects are completed, the average months to complete an environmental review will be tallied.

Sources: Not applicable.

Statistical Issues: Not applicable.

Completeness: Each OA is responsible for updating their project schedules. The major infrastructure project schedules are reviewed every month to ensure they remain on schedule and any shifts in timelines are noted.

Reliability: See Maintain Accountability for Permitting Projects.

Verification and Validation: The Department pulls a report of the data every quarter. Each OA is asked to verify that they have updated their project schedules and the data in the permitting dashboard is up to date prior to the pull. The OAs are tasked with ensuring the verification and validation of the information within the dashboard. These data are then used by OMB to provide for agency scorecards that are posted on their website noting the status of major infrastructure projects, including the Department's overall average for major infrastructure projects.

INCREASE THE NUMBER OF STATES AND LOCAL AGENCIES USING FEDERAL INNOVATIVE FINANCE METHODS

Performance Lead: FHWA

Measure: Number of States and Local Agencies that Have Used Federal Innovative Finance Methods for Highway Projects (in the Current Year)

Scope: The number of States in which a public sponsor has used one of the following innovative finance tools in the current fiscal year to assist a Title 23-eligible project (this measurement applies, whether or not the project receives Title 23 grant assistance):

- Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance;
- Private Activity Bond (PAB) issuance;
- Availability Payment reimbursement agreement;
- Grant Anticipation Revenue Vehicle (GARVEE) bond issuance; and
- State Infrastructure Bank (SIB) credit assistance.

Sources: Data are pulled from the following sources:

- Build America Bureau (TIFIA and PABs);
- FHWA division offices (GARVEEs and SIBs); and
- Availability Payment reimbursement agreements.

Statistical Issues: No statistical issues identified.

Completeness: The Center for Innovative Finance Support (CIF$) has established a web-based data collection process for GARVEEs and SIBs. States and FHWA division offices are required to report their GARVEE and SIB data on March 1 of each year. As such, the GARVEE and SIB data are based on the most recent completed Federal fiscal year.

Reliability: The information is reliable. Data for GARVEEs and SIBs are collected from the 50 States and territories and approved by FHWA division offices. Each AP agreement is developed in close consultation with CIF$. For PABs and TIFIA, this information is tracked and published as the transaction closes.

Verification and Validation: The information is verified and validated with the FHWA Financial System, SIB Financial Statements, DOT Credit Council Reports and external capital market sources (Bond Buyer, Municipal Securities Rulemaking Board). The information is reviewed annually by the CIF$ for consistency and accuracy.

IMPROVE MAJOR PROJECT PERFORMANCE IN FHWA PORTFOLIO

Performance Lead: FHWA

Measures:

- Percentage of FHWA-Funded Projects Over $500 Million Within Two Percent of Schedule
- Percentage of FHWA-Funded Projects Over $500 Million Within Two Percent of Cost[4]

Scope: To assess the performance of each project in the portfolio of major projects, FHWA monitors project financial plans annually to determine the percentage that have two percent or less increase of the prior year cost estimate and project completion date. The goal is to maintain at least 80% of the financial plans approved each fiscal year at two percent or less increase of the prior year cost estimate and completion date. Cost increases include items such as: utility, railroad, or right-of-way costs; in-situ field conditions unknown during the design process; changes in design criteria; construction bids higher than the engineer's estimate; and settlement claims. Schedule increases include items such as: scope changes in the project; lack of funding; design delays; and utility relocation, or right-of-way acquisition cost delays. The major causes of cost or schedule delays are tracked annually and the results are used to establish or update program improvement initiatives such as webinars, training and other outreach activities.

Sources: Project cost and completion date information is collected by FHWA from annual financial plans submitted by project sponsors.

Statistical Issues: A key concern is the sample size for major projects. The number of major projects is small and each project often take years to complete. Therefore, a completed project metric does not provide a basis to control the cost and schedule for major projects because it is too late. To develop an indicator that can be used to measure cost and schedule changes, the agency uses a running one-year sample size of Financial Plan Annual Updates to monitor the changes in cost and schedule. FHWA uses this information to influence annual change to be a two percent increase or less. A one-year running average essentially includes the most recent Financial Plan Annual Update for each project in the sample size.

Completeness: All States with active major projects are required by law to submit an annual financial plan with updates on project cost and schedule. As a result, the measure is expected to include 100% of active major projects. The measure is reported quarterly and is based on the most recent 12 months of financial plans submitted. It is possible that within a 12-month period, all major projects are not reported while other major projects are reported twice. This is caused by the three-month window for submittal, as well as the fact that some States or project sponsors do not always meet the due dates for submitting a financial plan.

Reliability: To ensure reliability, FHWA provides guidance to States and project sponsors for the preparation of financial plans.

Verification and Validation: FHWA provides guidance to States and project sponsors for the preparation of financial plans. FHWA reviews all financial plans for consistency and adherence to the guidance. Cost and schedule data obtained from the financial plans are consolidated in a database maintained by FHWA with limited access rights to select users. The cost and schedule trend information are reviewed annually and compared with previously reported data for consistency and accuracy. In addition, FHWA conducts a workshop before the first financial plan is developed to establish the best estimate of project cost and schedule which is used as the baseline for tracking as the project is constructed.

[4] For each financial plan annual update approved, the percentage difference between the current performance and the previous year's performance is calculated. Then the percentage of the total number of financial plans approved with cost or schedule not exceeding two percent is calculated.

IMPROVE MAJOR PROJECT PERFORMANCE IN FTA PORTFOLIO

Performance Lead: FTA

Measure: Percentage of FTA-Funded Projects Over $500 Million Within or Minus 10 Percent of Cost

Scope: Projects from FTA's Capital Investment Grant program that had a cost baseline of at least $500 million as of October 1 of the current fiscal year.

Sources: Data come from FTA's Office of Capital Projects Management.

Statistical Issues: If a Full-Funding Grant Agreement for a project over $500 million is signed during the current fiscal year, it is not included in the measure until the following fiscal year. If FTA formally approves a new baseline for a project, the total cost of the project is measured against the original baseline. If the new baseline takes the cost estimate for the project above $500 million, it will not be included in the measure until the next year.

Completeness: These data are complete for all such projects.

Reliability: Baselines are reliable, as they are based on formally approved baselines. Current project estimates are provided to FTA by project sponsors. The current project estimates are subject to the normal uncertainties that would apply to any estimate made by the project sponsor.

Verification and Validation: FTA engages project management oversight contractors to provide some oversight over the validity of current project estimates provided by project sponsors.

INCREASE GRANTS TO RURAL AND SMALL URBAN AREAS

Performance Lead: FTA

Measure: FTA Grant Dollars Allocated to Rural and Small Urban Areas[5]

Scope: This measure includes both formula and discretionary grant program.

Sources: FTA's full-year apportionments notice provides the allocations of formula dollars to these areas. Amounts allocated to these areas from discretionary programs are announced once the project selections are made from these discretionary grants and published in the Federal Register as being available for obligation.

Statistical Issues: No statistical issues identified. This measure is a 100% count.

Completeness: This measure is comprehensive of all FTA grant programs. However, though FTA makes funding available to these geographical areas, the announcement will not necessarily result in an obligation.

Reliability: These data are reliable, as they are formal records published in the Federal Register.

Verification and Validation: No verification or validation of these data are needed, as they are formal records published in the Federal Register.

[5] The total number of grant dollars that are allocated to urbanized areas under 200,000 in population, or to rural areas (i.e., areas under 50,000 in population).

DECREASE GRANT PROCESSING TIME

Performance Lead: FTA

Measure: Average Number of Days from Grant Application Submission to Grant Award

Scope: This measure is the sum of all days from the date that each grant was formally submitted to the date that each grant was formally awarded, divided by the total number of all such grants. This measure includes all grants made by FTA whose obligation date was in the current fiscal year. It also includes Transportation Investment Generating Economic Recovery/Better Utilizing Investments to Leverage Development grants for which FTA is the lead agency and whose obligation date was in the current fiscal year.

Sources: Data come from FTA's Transit Award Management System (TrAMS).

Statistical Issues: These data are not weighted by award amount. A large grant has as much weight in the average as a small grant.

Completeness: The time from formal grant application to formal award of the grant only reflects a portion of the timeline for processing and approving a grant.

Reliability: These data are reliable, as they are directly measured from TrAMS.

Verification and Validation: No verification or validation of these data are needed, as these data are directly measured from TrAMS.

Performance Lead: FTA

Measure: Percentage of Grants Identified as Inactive at the Beginning of the Fiscal Year that are Either Closed or Returned to Active Status

Scope: The scope is established by FTA. The agency identifies the list of potentially inactive grants at the beginning of each fiscal year.

Sources: Data come from FTA's TrAMS.

Statistical Issues: No statistical issues identified.

Completeness: The data are complete within the scope identified above.

Reliability: The data are reliable within the scope.

Verification and Validation: No verification or validation activities are conducted.

MAINTAIN BRIDGE CONDITION IN THE NATIONAL HIGHWAY SYSTEM

Performance Lead: FHWA

Measure: Percentage of Deck Area on National Highway System Bridges in Good or Fair Condition

Scope: This measure serves as an indicator of trends in bridges in Good or Fair condition on the NHS. The surface area (i.e., length multiplied by width) of bridge decks is viewed as a more meaningful measure than simply a count of bridges. The area measure recognizes the size difference among bridges and avoids the pitfall associated with counting bridges where every bridge is treated the same regardless of size. Beginning in 1971, and with expanded authority provided in 1978, the National Bridge Inspection Standards (NBIS) have required the inspection of all highway bridges located on public roads and the submission of bridge inventory and inspection data to FHWA for inclusion in the National Bridge Inventory (NBI). FHWA maintains the NBI, which contains data on more than 617,000 highway bridges. The NBI contains 95 data items for each of the bridges as required by the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges. From the data provided, FHWA monitors the condition of the Nation's bridges, which includes identifying those bridges that are in good or fair condition.

Sources: Data used to determine if a bridge is in Good or Fair condition are contained in the NBI and are currently assembled from annual data submissions from States, Federal agencies, and tribal governments. Deck area is calculated from length and width data reported to the NBI.

Statistical Issues: Further research is needed.

Completeness: The NBI is the world's most comprehensive database of bridge information. States, Federal agencies, and tribal governments are required to report their data by March 15 of each year. Updates are accepted until end of year, when the full data set is archived and published.

Reliability: Because the performance measure relies on

data associated with more than 145,000 NHS bridges, the impact of any differences in reporting across States is minimized in the overall national analysis.

Verification and Validation: The NBIS requires annual submittal to FHWA of bridge inventory and inspection data collected and submitted by 50 States, the District of Columbia, and Puerto Rico in cooperation with local governments. In addition, 19 Federal agencies and a growing number of tribal governments submit data for Federally and tribally owned bridges. Through the NBI Program Oversight Process, FHWA division offices annually evaluate the quality of each State's and agency's bridge inspection program using 23 different metrics, two of which pertain to data quality and timely submission. The inspection programs are evaluated using comprehensive statistical sampling methods, file reviews, field reviews, and data analysis. A written annual evaluation is provided to each State and agency to document problems and require corrective actions. Upon submission of the NBI data to FHWA, additional safety and reasonableness checks are performed on the data prior to acceptance, including comparisons with previously reported data. Data re-submittal is required in cases where significant or safety-related problems are identified. Accuracy and reliability of the submitted NBI information are evaluated through data checks by both headquarters and division office personnel, and as part of FHWA's annual NBIS compliance reviews.

MAINTAIN ROADWAY PAVEMENT CONDITION

Performance Lead: FHWA

Measure: Percentage of Interstate Pavement in Good or Fair Condition

Scope: This measure serves as an indicator of trends in pavements in good or fair conditions on the interstate system. Effective May 2017, the Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program Final Rule established a new framework of national performance measures for pavement and bridge conditions. States are required to make significant progress towards achieving targets for their individual performance measures for pavements and bridges. Per the regulation, the performance of highway pavements is reported nationally as the percentage of the interstate system in good or poor condition.

The pavement condition measure is based on a classification system of good, fair, and poor. Data used to determine the measure include mainline lane-miles of interstate system and full-extent International Roughness Index and distress data (i.e., cracking percent, rutting, and faulting) that is reported by State DOTs in the HPMS. The information in the HPMS contains pavement condition and inventory data items for 0.1-mile sections of the entire NHS as required by the HPMS Field Manual. From the data provided, FHWA monitors the condition of the Nation's pavements, which includes identifying those pavements that are in good or fair condition.

Sources: Data used to determine if pavements are in Good and Fair condition are contained in the HPMS file assembled from annual data submissions from States. The percentage is then calculated from mileage and pavement condition data reported to the HPMS.

Statistical Issues: No statistical issues identified.

Completeness: States are required to report their data by April 15 each year. However, updates are accepted until June 15, after which the data are extracted and measures are calculated and published.

Reliability: To ensure reliability, FHWA provides guidelines for data collection in the HPMS Field Manual and 23 CFR § 490.309 - Data Requirements. Adherence to these guidelines varies by State; however, to help States improve data quality, they are required to develop data quality management plans that define the acceptable level of data quality and describes how the data collection process will ensure this level of quality in its deliverables and processes per 23 CFR § 490.319c.

Verification and Validation: An annual review of reported data is conducted by FHWA, both at headquarters and in the division offices in each State. The reported data are subject to comparisons with previously reported data and other reasonability checks. A written annual evaluation is provided to each State to document potential problems and to encourage corrective actions. Data resubmission is requested in cases where major problems are identified.

MAINTAIN GOOD RUNWAY CONDITION

Performance Lead: FAA

Measure: Percentage of Runway's in FAA's National Plan of Integrated Airport Systems in Excellent, Good, or Fair Condition

Scope: This measure covers all open and paved runways at Federally funded National Plan of Integrated Airport Systems airports.

Sources: Data and information are collected through visual inspection of runway pavement in accordance with existing FAA guidance, including FAA Advisory Circular 150/5320-17. Airfield Pavement Surface Evaluation and Rating Manuals provide uniformity to field observations made by individuals collecting data for the Airport Master Record (FAA Form 5010). The pavement condition is reported in the 5010 Airport Master Record database and results of the inspections are entered into FAA's NAS Resource.

Statistical Issues: No statistical issues identified.

Completeness: The inspection and reporting of conditions are conducted in accordance with existing FAA guidance. The data are publicly available and therefore can be examined and evaluated by any Federal auditor.

Reliability: Not applicable.

Verification and Validation: Runway pavement condition data are collected annually by FAA Airport Certification Safety Inspectors during their physical inspection of all certified airports in U.S. States and territories. Other public use airports are inspected by airports or airport safety data inspectors under an FAA contract ever three years. Information is collected through visual inspection of runway pavement in accordance with existing FAA guidance, resulting in a condition rating for each runway of excellent, good, fair, poor, or failed. FAA senior leadership reviews the data on a quarterly basis, with more frequent review at the line of business (LOB) level.

MONITOR CONDITION AND PERFORMANCE OF TRANSIT SYSTEMS

Performance Lead: FTA

Measure: State of Good Repair Backlog (Current-Year Dollars)[6]

Scope: This measure includes all capital assets of the U.S. transit industry and, as such, incorporates all transit systems in the country, both urban and rural. The replacement value of all U.S. transit assets is estimated at $894 billion.

Sources: The size of the national State of Good Repair (SGR) backlog is estimated by the Transit Economic Requirements Model (TERM) based on capital asset data from the NTD and other ad hoc capital asset surveys.

Statistical Issues: An inventory of revenue vehicles is reported to the NTD annually. Data on all other capital assets are based on ad hoc surveys that are updated periodically and on estimates created by TERM.

During FY 2016, FTA took substantial steps towards implementing the National Transit Asset Management System by issuing a Final Rule. The rule includes FTA's first-ever definition of SGR, requirements for each FTA grantee to establish a transit asset management plan, and a suite of SGR performance measures against which each of FTA's grantees are required to set targets. Concurrently, FTA also expanded the NTD to collect additional capital asset inventory information, as well as condition data towards the SGR performance measures in the rule. The expanded NTD data collection took effect in September 2018, with the data first becoming available in fall of FY 2019, and updated backlog estimates based on the new data are expected to be available in November 2020. Data results from TERM are only available once the Conditions and Performance Report is cleared by the Office of the Secretary (OST) and OMB. This can lead to long time delays before performance measures are publicly available. For example, as of October 2020, the most recent public edition of the Conditions an Performance Report is the 23rd edition, based on FY 2014 data.

FTA is planning to discontinue this measure in FY 2023 and replace it with another measure that is based on Transit Asset Management data which are reported directly to the NTD and that is not subject to delays from modeling and formal clearance.

[6] This measure includes the backlog of transit capital assets in need of replacement or refurbishment (as defined by an estimated condition rating of 2.5 or lower on a scale of five.

Completeness: Most of the large and many medium-sized agencies have provided asset inventory data to the database that are used for this calculation. Assets for smaller systems are estimated by the model. FTA is in the process of expanding the capital asset data collected by the NTD, see statistical issues, above.

Reliability: The transit agency's CEO certifies that the vehicle data reported to the NTD are accurate. These data are reviewed by analysts and compared to trend data for the transit system and to national benchmarks. The other three quarters of transit assets are updated on an ad hoc basis, and do not require a CEO certification. However, these are the best-available data inventories that transit agencies have available, and they are generally considered to be reliable.

Verification and Validation: Data reported to the NTD are subject to validation for consistency with the rest of the annual report, as well as comparison with the prior year's report. Other capital asset data are collected on an ad hoc basis, and are not able to validate against other sources. The parameters of TERM were developed based in part upon independent consultant work done in the transit industry. FTA periodically seeks outside review of TERM, including a recent review conducted by the National Academies of Sciences.

DECREASE AVERAGE WAIT TIME

Performance Lead: FAA

Measure: National Airspace System On-Time Arrival at Core Airports[7]

Scope: A flight is considered on time if it arrives no later than 15 minutes after its published, scheduled arrival time. This definition is used in both the DOT Airline Service Quality Performance (ASQP), and Aviation System Performance Metrics (ASPM) reporting systems. Air carriers, however, also file up-to-date flight plans for their services with FAA that may differ from their published flight schedules. This metric measures on-time performance against the carrier's filed flight plan, rather than what may be a dated published schedule.

The arrival time of completed passenger flights to and from the core airports is compared to their flight plan scheduled arrival time. For delayed flights, delay minutes attributable to extreme weather, carrier caused delay, security, and a prorated share of delay minutes due to a late arriving flight at the departure airport are subtracted from the total minutes of delay. If the flight is still late, it is counted as a delayed flight attributed to the NAS and FAA.

The core airports are those which have one percent or more of total U.S. enplanements (the DOT large hub airports) or 0.75% or more of total U.S. non-military itinerant operations.

Sources: The ASPM database, maintained by FAA's Office of Performance Analysis, in conjunction with DOT's ASQP causation database, provides the data for this metric. By agreement with the Department, certain major U.S. carriers file ASQP flight data for flights to and from most large and medium hubs. Flight records contained in the Traffic Flow Management System supplement the flight data.

Statistical Issues: Data are not reported for all carriers; at present, 23 operating carriers report monthly into the ASQP reporting system.

Completeness: Fiscal year data are finalized approximately 90 days after the close of the fiscal year.

Reliability: Further research is needed to determine the reliability the data.

Verification and Validation: Airline Service Quality Performance data are verified daily by the execution of multiple audit checks, comparison to other published data metrics, and through the use of ASPM by over 1,500 active users. Each month, FAA senior leadership reviews ASQP data under 14 CFR § 234 - Airline Service Quality Performance Reports, which separately requires reporting by major U.S. air carriers on domestic flights to and from reportable airports.

[7] FAA's goal is to achieve a NAS on-time arrival rate of 88% at core airports. NAS on-time arrival rate is the percentage of all flights with less than 15 minutes of delay with NAS assigned as the cause.

MAINTAIN AIRPORT CAPACITY

Performance Lead: FAA

Measure: Average Daily Capacity of Arrivals and Departures at Core Airports[8]

Scope: Core airports are those which have one percent or more of total U.S. enplanements (the DOT large hub airports) or 0.75% or more of total U.S. non-military itinerant operations. Reportable hours are based on a review of called rates and actual flight counts for each of the core airports.

- *15 Reportable Hours:* Dallas/Fort Worth International Airport, George Bush Intercontinental Airport, LaGuardia Airport, Orlando International Airport, Phoenix Sky Harbor International Airport, and Salt Lake City International Airport
- *16 Reportable Hours:* Hartsfield-Jackson Atlanta International Airport, Boston Logan International Airport, Charlotte Douglass International Airport, Ronald Reagan Washington National Airport, Denver International Airport, Fort Lauderdale-Hollywood International Airport, Dulles International Airport, McCarran International Airport, Chicago Midway International Airport, Miami International Airport, Minneapolis-Saint Paul International Airport, O'Hare International Airport, Philadelphia International Airport, San Francisco International Airport, and Tampa International Airport
- *17 Reportable Hours:* Baltimore/Washington International Thurgood Marshall Airport, Detroit Metropolitan Wayne County Airport, Newark Liberty International Airport, Daniel K. Inouye International Airport, Los Angeles International Airport, and San Diego International Airport
- *18 Reportable Hours:* John F. Kennedy International Airport
- *24 Reportable Hours:* Memphis International Airport

Each airport facility determines the number of arrivals and departures it can handle for each hour of each day depending on various conditions, including weather. These numbers are the called arrival and departure rates of the airport for that hour. The average daily capacity is calculated on a daily, monthly, and annual basis.

Sources: The ASPM database, maintained by FAA's Office of Performance Analysis, provides the data for this metric. The individual air traffic facilities for the core airports provide arrival and departure rates through the use of the National Traffic Management Log. The ASPM obtains the capacity rates from the National Traffic Management Log system.

Statistical Issues: No statistical issues identified.

Completeness: Data are finalized approximately 10 days after the close of the fiscal year.

Reliability: Data are verified daily by the execution of multiple audit checks, comparison to other published data metrics, and through the use of ASPM by over 1,300 active users.

Verification and Validation: FAA leadership reviews the data each month. Data are reviewed at the LOB level on a weekly basis. This metric is part of a core group of goals which the FAA uses to establish employee performance-based pay.

[8] FAA's goal is to maintain an average daily capacity (hourly throughput that an airport's runways are able to sustain) for core airports of 59,303 or higher of arrivals and departures during reportable hours.

INCREASE THE INTEGRATION OF DRONES INTO THE AIRSPACE WITHOUT SACRIFICING SAFETY

Performance Lead: FAA

Measure: Percent of Manual Part 107 Airspace Authorizations Processed within the 90-Day Timeline Mandated by Congress

Scope: An average of the total number of processing days for Part 107.41 Airspace Authorizations completed since the beginning of FY 2020. Processing days are calculated as the number of days from when a Part 107.41 Airspace Authorization is received to when it is completed in DroneZone.

Sources: For applications submitted through DroneZone, an application is generated through the system and the system tracks how long it takes to process an authorization. For applications submitted through the Low Altitude Authorization and Notification Capability, requests are approved in near-real time whenever those operations occur within the Unmanned Aircraft System (UAS) Facility Map altitude limitations. If outside of those altitude limitations, applicants will go through DroneZone to be worked manually.

Statistical Issues: No statistical issues identified.

Completeness: The lead office (UAS Policy Team) tracked Part 107.41 applications from submission to disposition through various sources discussed above. These sources were interacted with assigned staff on a daily basis. The staff followed a standard operating procedure to process applications to ensure continuity and accuracy. The data were collected via DroneZone to provide the reporting metric, which is the existing manual process.

Reliability: This is a process requiring queries from DroneZone to provide a unified response.

Verification and Validation: This metric was mandated by Congress and was set to effectively monitor the approval time to process and disposition controlled airspace authorization applications as identified in 14 CFR § 107.41 - Operation in Certain Airspace. Data are collected and reviewed each month. This is a high-priority activity to enable UAS integration into the NAS.

Performance Lead: FAA

Measure: Average Time to Process Unmanned Aircraft System Part 107 Operational Waivers[9]

Scope: Airspace authorizations are permissions given by air traffic control to use a specific airspace in a specific time frame. If the UAS operator intends to fly in controlled airspace, the operator will need an authorization in addition to a waiver (for example, if operator wants to fly over people within five miles of an airport). The authorization process ensures the specific use of that aircraft in the NAS does not endanger other users of the NAS. Part 107 waivers are requested when the operator wants to operate in a manner that is not currently allowed by regulation. The UAS operator is asking for a particular portion of a regulation to be waived (for examples, flying over people).

Sources: Tracking data are obtained from the operational waiver portal of FAA Drone Zone. The FAA Drone Zone is an enterprise IT solution to consolidate several UAS systems into a central and fully functional environment. This platform is the foundation for the next generation of UAS support applications, including those to support operational waivers.

Statistical Issues: Average processing time is measured in calendar days, which includes weekends and government holidays. FAA does not process waiver applications on weekends or government holidays, which negatively skews the statistics. Additionally, on applications where the applicant includes at least 50% of the information required for approval, a request for information is sent to the responsible person listed on the waiver application. An applicant is provided 30 calendar days to provide a response. The time the applicant has to respond to the request for information adds additional processing days to the processing day average but is not reflective of the team's adjudication performance.

Completeness: This metric includes applications submitted to the General Aviation and Commercial Division Waiver Team via the online portal and manual (paper) submissions.

Reliability: FAA DroneZone provides an improved external user experience on a modernized platform and a design that is easy to understand and navigate. Although

[9] Maintain the average time for processing Part 107 waivers at 50 days in FY 2018 with a five-day reduction each following year to FY 2022. Part 107 UAS waiver processing time is calculated as the number of days between receipt of request and delivery of a response (either approval or denial).

confidence is high the data are reflective of number of applications and days in process, data are subject to human error during the application process. Scheduled user experience and functionality enhancements are in place to enhance waiver application completeness and reliability, limit erroneous waiver applications, and reduce duplicate waiver applications.

Verification and Validation: FAA verifies and validates the accuracy of the data through quality assurance/quality control reviews of DroneZone waiver applications. Data are reviewed and reconciled as needed, predominantly on a weekly basis. Potential errors identified in these reviews are explored and resolved.

To verify that performance plan metrics are being met, the waiver team posts weekly and monthly operational waiver performance reports two distinct Knowledge Services Network SharePoint sites. Once posted, the performance information is available for all parties with specific SharePoint access to review, validate, and address abnormalities. Staffing levels and processes are monitored as the average processing time target is reduced to ensure the appropriate level of resources are available to maintain performance.

ALLEVIATE URBAN CONGESTION

Performance Lead: FHWA

Measure: Interstate Travel Time Reliability, as the Percentage of Person-Miles Traveled that are Reliable

Scope: The interstate travel time reliability measure examines the reliability of travel (i.e., consistency from day to day and/or hour to hour) on the interstate system from the perspective of the user as reported as the percent of person-miles traveled that are reliable. National targets may be adjusted in early FY 2021 after the Mid-Performance Period reports are reviewed.

Sources: Data sources include average travel time data for interstates from the National Performance Management Research Data Set (NPMRDS). The data reflect actual, observed travel times on the interstates, reported as an average every five minutes. Data are collected by INRIX and provided by the Center for Advanced Transportation Technology Laboratory at the University of Maryland to FHWA as the NPMRDS. The vehicle probe data can be from cell phones, in-vehicle navigation units, and/or fleet (e.g., truck, delivery vehicles, taxi) management systems. Related volume data for weighting the measure are from the HPMS.

Statistical Issues: The person-miles traveled estimation requires information on the number of vehicle occupants that is not available in the monthly travel data. Additionally, the monthly VMT data does not distinguish between passenger and freight VMT.

Completeness: Missing data points in the NPMRDS do exist, where there are low volumes and no probe vehicles traveling through during a five-minute period especially overnight and in some rural areas. FHWA accounts for missing data, in part, by using average travel times for every 15 minutes.

Reliability: Reliability for this measure is excellent. All metric submissions, as well as all targets and other reporting, are reviewed by FHWA. Data resubmission is requested in cases where major problems are identified. As many as 35 States have access to an analysis tool developed as part of the Transportation Performance Management Capacity Building pooled fund study which provides consistent and reliable results.

Verification and Validation: Data are validated quarterly in limited locations by comparing to ground truth travel time data. Results are within specifications of the contract. Recently available volume data from HPMS are used to calculate the results. Typically, there is a lag in data availability and of conflation to the NPMRDS location referencing network. The FY 2019 travel time was conflated with FY 2017 HPMS data.

IMPROVE PASSENGER RAIL ON-TIME PERFORMANCE

Performance Lead: FHWA

Measure: Interstate Travel Time Reliability, as the Percentage of Person-Miles Traveled that are Reliable

Scope: The interstate travel time reliability measure examines the reliability of travel (i.e., consistency from day to day and/or hour to hour) on the interstate system from the perspective of the user as reported as the percent of person-miles traveled that are reliable. national targets may be adjusted in early FY 2021 after the Mid-Performance Period reports are reviewed.

Sources: Data sources include average travel time data for interstates from the National Performance Management Research Data Set (NPMRDS). The data reflect actual, observed travel times on the interstates, reported as an average every five minutes. Data are collected by INRIX and provided by the Center for Advanced Transportation Technology Laboratory at the University of Maryland to FHWA as the NPMRDS. The vehicle probe data can be from cell phones, in-vehicle navigation units, and/or fleet (e.g., truck, delivery vehicles, taxi) management systems. Related volume data for weighting the measure are from the HPMS.

Statistical Issues: The person-miles traveled estimation requires information on the number of vehicle occupants that is not available in the monthly travel data. Additionally, the monthly VMT data does not distinguish between passenger and freight VMT.

Completeness: Missing data points in the NPMRDS do exist, where there are low volumes and no probe vehicles traveling through during a five-minute period especially overnight and in some rural areas. FHWA accounts for missing data, in part, by using average travel times for every 15 minutes.

Reliability: Reliability for this measure is excellent. All metric submissions, as well as all targets and other reporting, are reviewed by FHWA. Data resubmission is requested in cases where major problems are identified. As many as 35 States have access to an analysis tool developed as part of the Transportation Performance Management Capacity Building pooled fund study which provides consistent and reliable results.

Verification and Validation: Data are validated quarterly in limited locations by comparing to ground truth travel time data. Results are within specifications of the contract. Recently available volume data from HPMS are used to calculate the results. Typically, there is a lag in data availability and of conflation to the NPMRDS location referencing network. The FY 2019 travel time data was conflated with FY 2017 HPMS data.

Performance Lead: FRA

Measures:

- On-Time Performance System-Wide
- On-Time Performance for the Northeast Corridor
- On-Time Performance for State-Supported Routes
- On-Time Performance for Long-Distance Routes

Scope: On-time performance (OTP) is the percentage of total train arrivals on-time at each station, weighted by ridership. An Acela train is late when it arrives at a station more than 10 minutes after its scheduled time and a Northeast Regional or State-supported train is late when it arrives more than 15 minutes after its scheduled time. Northeast Corridor (NEC) routes are those which operate predominantly on the 457-mile Northeast Corridor (Connecticut, Delaware, District of Columbia, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Rhode Island). State-supported routes are those which operate short-distance corridors of not more than 750 miles between endpoints (not including NEC routes). Long-distance routes are more than 750 miles between endpoints operated by Amtrak as of the date of enactment of the Passenger Rail Investment and Improvement Act of 2008 (49 U.S. Code § 24102).

Sources: Amtrak captures the data for each service and provides reports to FRA with annual, quarterly, and monthly measures. FRA publishes the quarterly Service Quality Report for Amtrak Services each quarter using the data.

Statistical Issues: No statistical issues identified.

Completeness: FRA and stakeholder groups, including the NEC Commission and State-Amtrak Intercity Passenger Rail Committee, monitor and evaluate Amtrak OTP closely. FRA receives adequate information from Amtrak to monitor OTP.

Reliability: No issues in terms of OTP data integrity. Actual Amtrak performance varies depending on the degree of delays caused by Amtrak's host freight railroads, Amtrak's own causes of delay, and third-party issues such as extreme weather and accidents.

Verification and Validation: FRA tracks Amtrak OTP data, matches it against other performance data, and conducts monthly meetings with Amtrak and host railroads to better understand the nature of Amtrak delays.

PROVIDE SUSTAINMENT SEALIFT TO THE U.S. ARMED FORCES

Performance Lead: MARAD

Measure: Number of U.S. Flag Vessels

Scope: MARAD tracks the number of large, internationally trading, ocean-going commercial vessels (1,600 gross tons or more) operating under U.S. flag to help ensure an adequate U.S. flag fleet, crewed by U.S. qualified Merchant Mariners, to meet U.S. Department of Defense (DoD) requirements for sealift support during national contingency operations. Most of the ships that MARAD tracks participate in the Voluntary Intermodal Sealift Agreement (VISA) program, including those participating in the Maritime Security Program (MSP).

MARAD estimates that at least 125 large, internationally trading U.S. flag commercial cargo carrying ships of 1,600 gross tons and over are required to maintain a sufficient force of unlimited credentialed mariners to meet sustainment sealift needs in a major contingency situation exceeding four to six months in duration.

Sources: MARAD relies on both commercial and private data sources to maintain an accurate list of ships. This ship list is based on an extract of ship data from IHS Markit, which is a commercial vendor of vessel registry data, and is the trusted and widely used source for such data across the maritime shipping industry.

MARAD also validates data against ship information received from the U.S. Transportation Command and the Military Sealift Command. Additionally, MARAD oversees the MSP, and receives data on these vessels directly from participants operating in the program. MARAD also uses the Sea Web online database provided by IHS Markit to track the actual movements of MSP vessels worldwide to ensure they are meeting program requirements.

Statistical Issues: The list of ships includes the population of ships meeting the vessel criteria outlined above for the measure. Accordingly, no statistical methods are used to create the list. Basic trend analysis is done to identify any anomalies in terms of number and type of ships. MARAD has constructed an annual time series of the number of cargo-carrying commercial ships of 1,600 tons or more operating in international trade back to 2000. MARAD does not have records of ships lists before that time that would allow discernment between vessels in domestic and international trade.

Completeness: The internationally sailing vessel list produced by MARAD is the complete list of large, U.S. flag self-propelled, privately-owned merchant vessels carrying cargo from port to port that are not eligible to serve in U.S. domestic trade. It is relatively easy to keep a good handle on the number of such ships because of the limiting criteria. All ships of this type have an official and unique International Maritime Organization number, which allows MARAD to identify and track them with certainty.

Reliability: The number of vessels MARAD tracks is highly reliable. The ships tracked are among the largest in the world fleet, all cataloged in international databases and subject to tracking via established online services. The commercial data vendor is considered the trusted source in the maritime industry.

Verification and Validation: MARAD can ensure validation and verification through data collected directly from vessel operators and other Federal resources. MARAD conducts monthly data assurance checks to account for and resolve any discrepancies in the data.

Performance Lead: MARAD

Measure: Percentage of DoD-Required Shipping Capacity Complete with Crews Available within Mobilization Timelines

Scope: This measure is based upon the number of available ships in MARAD's Ready Reserve Force (RRF), and ships enrolled in the VISA program that can be fully crewed within the established readiness timelines. The VISA program is MARAD's emergency preparedness program for dry cargo ships and provides DoD with assured access to critical sealift capability for national security contingency requirements. It includes 60 ships enrolled in the MSP. Crewing of the RRF vessels is accomplished by commercial mariners employed by private sector companies under contract to the government.

Sources: Each month, the RRF, VISA, and MSP fleet readiness are monitored by MARAD to ensure availability of sufficient capacity and U.S. mariners. MARAD also maintains records of the sealift ships enrolled in the VISA and MSP and their crew requirements.

Statistical Issues: No statistical issues identified.

Completeness: MARAD's measure for shipping capacity and crew availability is to ensure that the level of both commercial and government-owned sealift is sufficient to meet current and projected DoD requirements to transport cargo to support U.S. military and during times of national emergency.

Reliability: The data collected are from the program offices and is considered reliable and useful in managing the readiness programs.

Verification and Validation: MARAD can ensure validation and verification through its direct oversight of the RRF and the activities of contracted vessel managers, as well its administration of the VISA and MSP programs and data collected from other sources. MARAD conducts monthly data assurance checks to account for and resolve any discrepancies in the data on both the government-owned and commercial fleets.

ALLEVIATE FREIGHT CONGESTION

Performance Lead: FHWA

Measure: Interstate Truck Travel Time Reliability Index

Scope: Travel time reliability (TTTR) is a key indicator of transportation system performance. The TTTR index measures the reliability or consistency of truck travel times on the interstate from day to day over the course of a year. The TTTR index is the ratio of the 95th percentile truck travel time to the 50th percentile truck travel time for each roadway segment, which is then averaged for the entire interstate system to provide national TTTR Index.

The TTTR Index represents a system-wide average of extra time or cushion that needs to be added to typical or average travel time to ensure on-time arrival 95% of the time. The TTTR Index is reported as 1.0 or greater. The higher the value above 1.0, the less reliable is the roadway, while TTTR Index values closer to 1.0 indicate a more reliable roadway. This gives a system-wide indication of how much extra time a motor carrier needs to budget for freight travel on the interstate to account for traffic delays. This additional time results in extra shipping and carrying costs for businesses. national targets may be adjusted in early FY 2021 after the Mid-Performance Period reports are reviewed.

Sources: The NPMRDS provides vehicle probe-based travel time data for passenger vehicles and trucks and is used by FHWA and State DOTs to calculate the TTTR Index. Real-time probe data are collected from a variety of sources including mobile devices, connected autos, portable navigation devices, commercial fleets, and sensors. The NPMRDS includes historical average travel times in five-minute increments daily covering the entire NHS.

Statistical Issues: The key concerns are the sample size of commercial vehicle probes and frequency of the sampling time and position sampling. The reported results provide nationwide coverage using data from 700,000 freight vehicles operating in North America. Most data are from medium to large fleets that operate tractor-trailer combination trucks in every sector of the industry and every region of the U.S. and Canada.

Completeness: The NPMRDS provides average travel times in five-minute increments daily covering the entire NHS. Data completeness for the interstate system has been at least 90%.

Reliability: To provide reliable roadway performance estimates, a large enough number of freight vehicles must be equipped with GPS to provide a valid and reliable measure of roadway performance, and to provide the temporal and geographic diversity desired by the performance measurement system. Through use of the NPMRDS, FHWA has made progress in increasing sample size and the frequency of sampling

by increasing the sources of the probe data and the number of vehicles providing position information. The NPMRDS travel times are produced using path processing. In path processing, a space mean speed is calculated for each individual probe vehicle from the points along its trajectory path. This provides more accurate average vehicle speed data. Probe vehicle performance systems, such as the NPMRDS, are designed to provide travel time and speed or delay information without traditional fixed-location traffic monitoring and data collection systems. Analysis of the GPS location data allow for very accurate roadway measurements.

Verification and Validation: The NPMRDS includes a measurement of the density of data used to generate each average travel time. There are quarterly validations conducted that compare deployed Bluetooth sensor travel-time data to NPMRDS data.

REDUCE TIME TO ISSUE HAZARDOUS MATERIALS TRANSPORTATION PERMITS

Performance Lead: PHMSA

Measure: Number of Days to Resolution of Hazardous Materials Special Permit Applications

Scope: Permits vary in both political and technical complexity. PHMSA has found that by averaging the number of days to evaluate applications, the range of complexity is accounted for and efficiency of the Special Permit evaluation processes is better reflected.

Sources: Data are retrieved from the PHMSA Portal and Special Permits tool and collated in the PHMSA Data Mart (formerly the Hazmat Information Portal).

Statistical Issues: When there is a particularly low number of Special Permit applications, results will be skewed.

Completeness: Data are only available beginning in FY 2017, following the transition to conducting Special Permit evaluations on the portal application.

Reliability: Software issues impacting the flow of data from the portal application to the Data Mart impacted reliability of results in the past. PHMSA has since corrected these issues.

Verification and Validation: Anecdotal review and observation of trends to determine if results fall within reasonable variation.

PROVIDE A SAFE, RELIABLE, AND EFFICIENT U.S. PORTION OF THE SAINT LAWRENCE SEAWAY TO ITS COMMERCIAL USERS

Performance Lead: GLS

Measure: Percentage of Time the U.S. Portion of the Saint Lawrence Seaway is Available to Commercial Users

Scope: The reliability of the U.S. sectors of the Saint Lawrence Seaway (including the two U.S. Seaway locks in Massena, New York) are critical to continuous commercial shipping during the navigation season from late March to late December.

System downtime due to any condition (weather, vessel incidents, malfunctioning equipment) causes delays to ships, which affects international trade to and from the Great Lakes region of North America. Downtime is measured by:

- Hours/minutes of delay for weather (visibility, fog, snow, ice);
- Vessel incidents (human error, electrical and/or mechanical failure);
- Water level and rate of flow regulation; and
- Lock equipment malfunction.

Sources: Data come from the GLS Office of Lock Operations and Marine Services.

Statistical Issues: No statistical issues identified.

Completeness: The GLS is the Federal agency responsible for the operation and maintenance of the United States portion of the Saint Lawrence Seaway. Furthermore, GLS' lock operations unit gathers primary data for all vessel transits through the United States Seaway sectors and locks, including any downtime in operations.

Data are collected on-site at the United States locks, as vessels are transiting or as operations are suspended. This information measuring the system's reliability is compiled and delivered to GLS senior staff and stakeholders each month.

Reliability: The GLS compiles annual system reliability data for comparison purposes. As the GLS gathers data directly from observation, there are no limitations. The GLS historically reports this performance metric for its navigation season (typically late March to late December).

Verification and Validation: The GLS verifies and validates the accuracy of the data through review of 24-hour vessel traffic control computer records, radio communication between the two seaway entities and vessel operators, and video and audiotapes of vessel incidents.

STRATEGIC GOAL 3: INNOVATION

INCREASE THE DEVELOPMENT OF INNOVATIONS IN TRANSPORTATION

Performance Lead: OST-R

Measures:

- Research Outcomes Made Publicly Available in Research Hub
- Reports Made Publicly Available in the National Transportation Library

Scope: The Department and the Office of the Assistant Secretary for Research (OST-R) are committed to increasing the efficiency and influence of its research investments by collaborating with external stakeholders early in the research and development (R&D) process. The Department is making research results (i.e., software, data, and all other DOT-sponsored information) easy to locate to increase visibility and utility. To expand information accessibility, the Department is committed to identifying stakeholders and aligning technology transfer activities early in the process of formulating R&D agreements. This alignment may increase the impact of societal benefits attributed to DOT's R&D investment. The Department plans to increase the visibility of its research results with stakeholders by connecting them to the National Transportation Library (NTL) and Research Hub.

Sources: Data come from the NTL.

Statistical Issues: The NTL provides the number of total publications made available to the public and results of DOT-sponsored research through the Research Hub. The NTL has capability of producing statistical analysis of its archived items.

Completeness: OST-R is coordinating with the OAs to help ensure that all DOT-sponsored reports and outcomes are made publicly available.

Reliability: Further research is needed to determine reliability of data.

Verification and Validation: No verification and validation issues identified.

INCREASE EFFECTIVENESS OF TECHNOLOGY TRANSFER

Performance Lead: OST-R

Measures:

- Technologies Toward Implementation
- Success Stories (Evidence of Societal Benefits)[10]

Scope: The Department will coordinate with technology deployment experts within the OAs and leverage internal and external expertise and resources to identify whether DOT-sponsored activities led to the use of technologies through pilots, demonstrations, or related activities. These measures monitor the effectiveness of DOT's technology transfer activities, which can lead to the identification of societal benefits through formal evaluations.

Sources: OST-R is implementing a process throughout the Department to increase the level of visibility of post-R&D activities through evaluations. OST-R monitors progress through quarterly reviews.

Statistical Issues: No statistical issues identified.

Completeness: OST-R is coordinating with all OAs to ensure that the entire R&D portfolio is included.

Reliability: OST-R is leading the effort and collecting the data directly from the R&D sources.

Verification and Validation: OST-R is implementing a process that reviews key performance indicators to verify and validate information on a quarterly basis.

[16] These measures track the number of times DOT-sponsored activities led to the actual use of technologies and the number of success stories. The term technology is used broadly to describe the R&D results of DOT-sponsored activities.

MONITOR SAFETY OF AUTOMATED DRIVING SYSTEMS

Performance Lead: NHTSA

Measure: Automated Driving Systems Safety

Scope: NHTSA is responsible for monitoring this measure. No data collection is involved.

Sources: Not applicable.

Statistical Issues: Not applicable.

Completeness: Not applicable.

Reliability: Not applicable.

Verification and Validation: Not applicable.

COMPLETE ANNUAL NEXTGEN ADVISORY COMMITTEE RECOMMENDATIONS FOR THE NORTHEAST CORRIDOR

Performance Lead: FAA

Measures:

- Percentage of NextGen Projects Completed On-Time and On Budget
- Percentage of Completed Nextgen Priorities for the Northeast Corridor[11]

Scope: These measures relate to the Next Generation Air Transportation System's (NextGen) success in completing the identified milestones in five areas:

- Surface Operations and Data Sharing (Surface);
- Multiple Runway Operations;
- Data Communications;
- Performance-Based Navigation; and
- NEC.

Sources: Completion of the commitments are closely tracked, monitored, and coordinated across NextGen, Aviation Safety (AVS), and ATO LOB. The agency will continue to monitor progress by conducting internal meetings at least monthly to oversee implementation status. Senior FAA and industry leadership will provide quarterly updates to the NextGen Advisory Committee's (NAC) subcommittee. Progress reports will be provided publicly through the NAC with advance notice available to the public in the Federal Register. FAA will also report on progress against the milestones for each focus area of the NextGen Performance Snapshots website.

Statistical Issues: No statistical issues identified.

Completeness: The decision to declare a commitment complete is as follows:

- Implement a functioning capability at a specific location or finish an assessment/study;
- Hold the monthly NextGen Integration Working Group meeting where Subject Matter Experts share recent accomplishments with Office of NextGen, ATO, and AVS leadership; and
- Office of NextGen, ATO, and AVS leadership jointly determine if the commitments are complete. If so, the commitment's status is changed from "on track" to "complete" on the public NextGen Performance Snapshot website.

Reliability: The metric has no reliability issues. The NAC recommended commitments are either complete or they are not.

Verification and Validation: Verification and validation are inherent in the processes described above.

[15] FAA's goal is to achieve 80% of the NAC Recommendations and 80% of NextGen Priorities Joint Implementation Plan commitments, excluding industry-controlled milestones, within a calendar quarter of their scheduled dates and within 10% of the planned cost (OSI target).

MAINTAIN MAJOR SYSTEM INVESTMENT EFFICIENCY

Performance Lead: FAA

Measure: Percentage of Major System Investments Completed On-Time and On Budget[12]

Scope: Programs classified as Acquisition Category 1, 2, or 3 considered strategic or part of NextGen are considered "major" programs and included in this measure. For FY 2020, twenty major acquisition programs will be tracked and monitored. This measure is consistent with the Federal Aviation Reauthorization Act of 1996 (Public Law 104-264), which requires the FAA Administrator to consider termination of a program if the program is breaching the cost, schedule, or technical performance baseline by more than 10%.

Sources: FAA LOBs report monthly status of their Acquisition Program Baselines using the Simplified Program Information, Reporting, and Evaluation tool, an automated database. FAA LOBs provide a monthly status of Estimated Cost at Completion, Estimated Schedule at Completion, and technical performance including an analysis of the risks in maintaining program baselines. Performance indicators and commentary are provided monthly that details problems, issues, and corrective actions, to ensure baselines are maintained within the established acquisition baseline parameters. The performance status is reported monthly to the senior-level managers via the monthly Performance Committee Meetings.

Statistical Issues: The programs selected each fiscal year represent a cross section of programs within FAA. They include Automation, Communication, Facility, NextGen, Navigation, Weather, and Surveillance programs that have an Acquisition Category 1, 2, 3, or are of strategic importance to the agency.

Completeness: This measure is current with no missing data. Reporting will begin 30 days after the list of programs is finalized.

Reliability: Each organization having major acquisitions uses the data during periodic acquisition program reviews. The monthly status is reported through the Simplified Program Information, Reporting, and Evaluation tool and included in monthly high-level management reviews. Detailed status is reported each month, supported by Red, Yellow, or Green measures for cost, schedule, and performance parameters. These detailed reports are reviewed with the appropriate LOB and Executive levels.

Verification and Validation: Verification and validation are inherent in the processes described above.

[12] FAA's goal is to maintain 90% of major baselined acquisition programs within 10% of their current acquisition cost, schedule, and performance baseline as of the end of FY 2020.

STRATEGIC GOAL 4: ACCOUNTABILITY

REDUCE THE REGULATORY BURDEN ON THE TRANSPORTATION INDUSTRY AND PUBLIC WHILE STILL ACHIEVING SAFETY STANDARDS

Performance Lead: Office of General Counsel

Measure: Economic Impact of Regulations

Scope: This measure is expressed in terms of total cost savings (annualized, adjusted at a seven percent discount rate). It is calculated as the sum of regulatory costs imposed by significant DOT rules less the sum of deregulatory cost savings for all DOT deregulatory actions for the fiscal year. All final DOT rulemakings completed within the fiscal year, except for non-significant regulatory actions.

Sources: Data come from regulatory impact analyses and other economic analyses produced in support of the rulemakings.

Statistical Issues: Not applicable, as this is not a statistical data collection.

Completeness: This measure applies to 100 percent of rulemakings completed by the Department.

Reliability: Not applicable, as this is purely an accounting exercise.

Verification and Validation: Reviews are conducted by OAs and OST. The data are then reviewed, audited, and approved by OIRA at the end of the fiscal year.

Performance Lead: Office of General Counsel

Measure: Compliance with Executive Order to Reduce Two Regulations for Each New Regulation

Scope: This is measured as the number of DOT regulatory actions classified as "deregulatory" divided by the number of significant regulatory actions classified as "regulatory." The "deregulatory" and "regulatory" categorizations are determined through negotiations with the Office of Information and Regulatory Affairs (OIRA). This includes all DOT rulemakings completed within the fiscal year.

Sources: Data come from regulatory impact analyses and other economic analyses produced in support of the rulemakings. These classifications also are published in the Federal Register.

Statistical Issues: Not applicable, as this is not a statistical data collection.

Completeness: This measure applies to 100% of rulemakings completed by the Department.

Reliability: Not applicable, as this is purely an accounting exercise.

Verification and Validation: Reviews are conducted by OAs and OST. The data are then reviewed, audited, and approved by OIRA at the end of the fiscal year.

INCREASE IT SHARED SERVICE UTILIZATION PERCENTAGE

Performance Lead: OCIO

Measure: Shared Service Utilization Percentage of Total IT Budget[13]

Scope: The Office of the Chief Information Officer (OCIO) tracks all IT spending for the department, including whether the IT spending was used to pay for IT shared services through the Working Capital Fund.

Sources: Data are collected in the Department's Corporate Investment Management System as part of OMB IT Investment data requirements.

Statistical Issues: Not applicable.

Completeness: Not applicable.

Reliability: Not applicable.

Verification and Validation: Not applicable.

[13] OCIO's goal is to increase the adoption of IT shared services being funded through the DOT Working Capital Fund as a percentage of total IT spending.

IMPROVE DOT'S CYBERSECURITY

Performance Lead: OCIO

Measures:

- Percentage of Systems with Proper Security Authorizations
- Percentage of Systems Converted to an Ongoing Authorization Process

Scope: This measure includes all DOT systems.

Sources: Data come from the Department's Cybersecurity Assessment and Management tool.

Statistical Issues: Not applicable.

Completeness: Further research is needed to determine completeness of data.

Reliability: Further research is needed to determine reliability of data.

Verification and Validation: Not applicable.

DECREASE IMPROPER PAYMENTS

Performance Lead: OST-Budget

Measure: Improper Payment Percentage for Activities Identified as Susceptible

Scope: Improper payment legislation defines a program as susceptible to significant improper payments when annual improper payments exceed 1.5% and $10 million of outlays, or $100 million of outlays regardless of the error rate. The legislation requires agencies to obtain a statistically valid estimate and report an annual amount of improper payments in programs that were identified, by risk assessment, as susceptible to significant improper payments. In FY 2020, one DOT program, FHWA Highway Planning and Construction, was identified as being susceptible to significant improper payments and subject to annual reporting requirements. A risk assessment, statutory law, OMB, or management may identify additional programs as susceptible to significant improper payments and require the Department to report annual estimates. For FY 2021 and beyond, the Department expects to report additional improper payment estimates related to disaster relief funding received from the Bipartisan Budget Act of 2018 (Public Law 115-123).

Sources: The population of payment data are extracted from Delphi, the Department's financial system of record. A program office or grant recipient could be the source of detailed supporting documentation on the payment requirements.

Statistical Issues: The Department derives improper payment estimates rates based on probability samples with estimates for sampling error in accordance with OMB Circular A-123, Appendix C, Requirements for Payment Integrity Improvement. Improper payment estimates represent the results of programs susceptible to significant improper payments and are not a statistical estimate for all of the Department's programs.

Completeness: The Enterprise Service Center, the Department's financial management service provider, reconciles the data extracts to the OAs' financial statements to ensure completeness. Next, the statistician and Departmental officials collaborate to identify the final payment populations for sampling.

Reliability: The results of improper payments are used to demonstrate effective stewardship of taxpayer funds. A structured approach to analyzing improper payments helps the Department identify the root cause of errors made within our internal control systems, implement targeted corrective actions, and reduce improper payments.

Verification and Validation: A statistician prepares and an agency official certifies that the Department's sampling and estimation plans are in accordance with OMB Circular A-123, Appendix C requirements. The statistician designs and refines the sampling plans considering the nature and distribution of payments made by our programs. For grant-related programs, the Department typically employs a multi-stage random selection methodology. The first stage involves generating a sample from DOT payments to grant recipients. At the second stage, the statistician develops a sample from the list of invoices the grant recipient applied to the DOT payment. Next, the Department samples and tests line items from the grant recipient's invoice to determine if the expenditures are proper. After Departmental officials confirm improper payments within the samples, the statistician extrapolates the results to arrive at the estimate.

IMPROVE EFFECTIVENESS AND EFFICIENCY OF SUPPORT SERVICES

Performance Lead: OST-Administration

Measure: Percentage Accomplished Against Shared Services (Human Resources, IT, and Acquisition) Implementation Plan

Scope: This measure aligns to Cross-Agency Priority (CAP) Goal 5: Sharing Quality Services within the President's Management Agenda. Currently, the Department delivers mission support services, including Human Resources (HR), IT, and Acquisitions, to each of the 11 OAs, resulting in duplicative, costly technology, redundant staff roles, and the proliferation of inconsistent, manual processes. With anticipated budget cuts and an administration mandate to reorganize, the Department must find a way to improve mission support operations, cut costs, and increase accountability and oversight. The Department has outlined management reforms including a shared services model to consolidate similar work performed across OAs and ensure policies and practices are applied consistently.

Sources: As the single authoritative repository for Federal procurement award data, the Federal Procurement Data System (FPDS) is the primary data source for the IT Contract Spend. Data are provided via the General Services Administration's (GSA) Data to Decisions (D2D) dashboards, which are endorsed by OMB and encouraged for use by agencies in managing and overseeing their category management program implementation. The data provided in the D2D dashboards are based on contract data entered into Federal Procurement Data System-Next Generation. In FY 2014, the Department began a major systems integration effort called DP2 to link the Delphi financial management system to a single instance of Performance and Registration Information Systems Management (PRISM), the Department's standard contract writing system. This initiative eliminates the individual versions of PRISM that had been in use at each OA. The integration with Delphi supports the linkage of real-time fund commitments to requisitions and the financial recording of obligations when contract records are executed in PRISM.

Human Resources workload at the Department is measured by three indicators: number of transactions, recruitment cases, and staff-to-customer ratio. The final workload indicator is the staff-to-customer ratio. Per the Office of Personnel Management (OPM), the median Federal agency HR servicing ratio is 60 employees per HR staff, with a range of 46 to 100. The HR life cycle at the Department is supported by the IT systems described in the table on the following page. Two of these systems are owned and operated by the U.S. Department of the Interior (DOI) Business Center, one of several HR LOB organizations approved by OPM to provide services to customer agencies throughout the Federal government.

Statistical Issues: Not applicable.

Completeness: Information collected to assess the Department's performance against this goal is based on data entered into FPDS by individual contracting officers within OAs. Federal regulation and DOT acquisition policy require contracting officers to ensure all records for contracting actions are entered and finalized in FPDS within three days of award.

Reliability: Not applicable.

Verification and Validation: There may be instances when it is not apparent to OMB and GSA when a requirement is not a common requirement, but more mission specific and should not be included in the addressable spend. Therefore, it is incumbent upon the agencies to cleanse the data prior to utilizing it for any significant decision-making. The data are initially entered into FPDS via interface between DOT's contract writing system, PRISM, and then validated by individual contracting officers. Since there is a data validation step prior to finalization in FPDS, the Department is satisfied that the data are primarily accurate; however, since human error is possible, there may be mistakes in minor pieces of the data pulled from FPDS.

As an additional verification of FPDS data accuracy, OA contracting offices perform an annual review of FPDS data to ensure accuracy and completeness in accordance with FAR 4.604 and provide assurance Statements to the Office of the Senior Procurement Officer (OSPE) as to their results. Using the OA responses, OSPE provides a consolidated report to GSA each fiscal year on behalf of the Department. Hiring and recruitment actions are entered into Monster Government Solutions via the Executive Agent. Once a selection has been made, a hiring action is entered to FPPS/Workforce Transformation and Tracking System by the hiring manager or administrative support. The hiring action is validated by the Budget and HR operations offices before final approval is granted.

The Department's HR offices (both the Executive Agent and the OAs) follow legislative, OPM, and OMB guidance. Regarding hiring from outside the government, all OAs follow the guidance, processes and procedures set out in the Department's Personnel Manual and implemented by the Executive Agent. Each OA has its own merit promotion plan that dictates policies for filling jobs from within the government.

SYSTEM	OWNERSHIP	DESCRIPTION AND USE
USA JOBS	OPM	Interfaces with Federal job seekers as the government's official recruiting site.
Monster Government Solutions	Commercially available	Used by many Federal agencies to manage the staffing function. Used by HR specialists to rate and rank applications, build certificates of eligible candidates, share certificates and application materials with hiring managers, document selections, and maintain selection case files.
Federal Personnel/ Payroll System (FPPS)	DOI Business Center	Used as the official system of records for position management and employee records, as well as the pay agent for DOT.
Consolidated Automated System for Time and Labor Entry	DOT (FAA)	Interfaces with employees, timekeepers, and FPPS to account for and process time and leave.
Workforce Transformation and Tracking System	DOI Business Center	Integrates as an overlay system with FPPS, Monster Government Solutions, security clearance processing, and several other systems.

INCREASE FACILITY CONSOLIDATION

Performance Lead: OST-Administration

Measure: Net Change in Office and Warehouse Square Footage[14]

Scope: Nationally, the Department manages 31.3 million square footage of building space. With approximately 56,100 real property assets of which 498,000 (89%) are owned and 6,400 (11%) are leased. While leased assets include 280 GSA leases, the majority are direct leases. Owned assets have an estimated replacement value of $13 billion. Annually, the Department spends approximately $315 billion for 11.4 million square footage of leased assets.

Although the DOT portfolio contains 16 different GSA building categories, the space reductions are focused on the categories of 9.4 million square footage (30.1%) as Office and 2.8 million square footage (nine percent) as warehouse. The remaining 19.0 million square footage (60.8%), is tied to unique mission or functional requirements. These specialized facilities include:

- Schools/training (2.8%);
- Labs (4.2%);
- Navigation and traffic aids (34.8%); and
- Other types (18.7%).

Sources: Real Property data used to calculate reductions for owned and direct lease information is from the DOT Real Estate Management System (REMS). GSA's Federal Real Property Program (FRPP) provides information on Occupancy Agreements where GSA provides space for the Department.

Statistical Issues: No statistical issues identified.

Completeness: To ensure accuracy of the Department's real property assets in REMS, personnel confirm information that includes: verifying lease records and land ownership documents, validating square footage, confirming against operational databases, and contacting maintenance personnel. FAA is developing a system to support a new triennial inventory process with automated cross-checks with other FAA systems and program office information to align with real property information. A major challenge to implement these features is alignment of REMS and FRPP assets with information from the operating office.

Reliability: The Department looks at trends based on prior FRPP submissions to ensure changes can be supported by specific real property activities, general real property strategies, or data quality improvement efforts.

FAA's Bureau Variance Report is produced from the FRPP submission and supports this review while also identifying obvious anomalies. As the Department reports on roughly 57,000 assets, this review is completed at a portfolio level and focuses on quantifiable measures such as total number of assets by type, acreage, square footage, replacement value, repair needs, and operating costs.

With data from prior FRPP submission, the Department checks the trend of major indicators going back several years. Since the establishment of the Reduce the Footprint initiative, the Department has conducted an asset-level review of office and warehouse facilities, with sensitivity to any reported changes year over year.

Verification and Validation: The Department is focused to ensure accurate REMS data through several processes. One method is the REMS "Invalid Data Module" that checks asset information against a set of business rules. When data errors are identified, they are corrected immediately. Inaccuracies are reported monthly and made available for investigation.

FAA assigns the Invalid Data report to regional personnel to validate and correct. Additionally, the Real Property Management Office performs periodic checks, such as reviewing high-level square footage totals reported against a subset of facility types. While this approach may not indicate a specific issue, it can identify inconsistencies that require further data review. In some instances, comparing data may identify miscoding in one of the systems. Using this approach revealed that square footage at one facility was overstated and research identified several building improvements erroneously entered as new buildings. These assets were corrected in the system.

High-level metrics are produced monthly, quarterly, and annually to identify portfolio-wide trends and verify that changes are a result of real property initiatives.

[14] Square footage reduced year over year based on the Reduce the Footprint base line established by GSA.

INCREASE USE OF BEST-IN-CLASS CONTRACTS

Performance Lead: OSPE

Measure: Best-In-Class Performance

Scope: Calculation of Best-in-Class (BIC) is the percentage of all DOT-obligated contract dollars on common spend (goods and services) that are committed on a BIC contract vehicle as defined by OMB and GSA. Category Management encompasses spending in ten common categories of goods and services: facilities and construction; professional services; IT; medical; transportation and logistics; industrial products and services; security and protection; human capital; office management; and travel.

Sources: As the single authoritative repository for Federal procurement award data, FPDS is the primary data source for BIC data. The data from FPDS is then populated in GSA's D2D dashboards. The dashboards are then used by agencies in managing and overseeing their category management program implementation.

Statistical Issues: To calculate BIC utilization, the GSA Program Management Office must populate the current information from FPDS into the D2D dashboard. OSPE does not anticipate technical issues from the data transfer impacting the statistics. Some statistical issues are caused by the fluctuation of spend by OAs, which makes it difficult to accurately pinpoint progress. Utilizing the Department's category management annual plan, OSPE will better be able to track OAs' planned-to-actual progress.

Completeness: Information collected to assess the Department's performance against this goal is based on data entered into FPDS by individual contracting officers within OAs. Federal regulation and DOT acquisition policy requires contracting officers to ensure all records for contracting actions are entered and finalized in FPDS within three days of award.

Reliability: Not applicable.

Verification and Validation: Data are initially entered into FPDS via interface between the Department's contract writing system, PRISM, and then validated by individual contracting officers. As there is a data validation step prior to finalizing the contract action reports in FPDS, OSPE is satisfied that the data are primarily accurate; however, since human error is possible, there may be mistakes in minor pieces of the data pulled from beta.SAM.gov.

As an additional verification of FPDS data accuracy, OA contracting offices perform an annual review of FPDS data to ensure accuracy and completeness in accordance with FAR 4.604 and provide assurance statements to OSPE as to their results. Using the OA responses, OSPE provides a consolidated report to GSA each fiscal year on behalf of the Department.

REDUCE THE NUMBER OF UNESSENTIAL FEDERAL ADVISORY COMMITTEES

Performance Lead: OST-S-10

Measure: Federal Advisory Committees Reduced

Scope: This measure includes all Federal Advisory Committees at the Department.

Sources: Data come from the Federal Advisory Committees Act database maintained by the Office of the Executive Secretariat (OST-S-10).

Statistical Issues: Not applicable, as this is not a statistical data collection.

Completeness: This measure applies to 100% of the Department's Federal Advisory Committees.

Reliability: Reliability depends upon OST-S-10 coordination with the OAs.

Verification and Validation: Data are reviewed and approved by OAs and by OST. GSA reviews and approves the termination of committees at the end of each fiscal year.

ACRONYMS & ABBREVIATIONS

AADT	Annual Average Daily Traffic
AAR	Association of American Railroads
ASPM	Aviation System Performance Metrics
ASQP	Airline Service Quality Performance
ATO	Air Traffic Organization
ATR	Automated traffic recorder
AVS	Aviation Safety
BASIC	Behavior Analysis and Safety Improvement Category
BIC	Best-in-Class
BTS	Bureau of Transportation Statistics
CEO	Chief Executive Officer
CFR	Code of Federal Regulations
CIF$	Center for Innovative Finance Support
CO_2	Carbon dioxide
CY	Calendar year
D2D	Data to Decisions
DoD	U.S. Department of Defense
DOI	U.S. Department of the Interior
DOT	Department of Transportation
EA	Environmental assessment
EIS	Environmental Impact Statements
EMS	Emergency medical services
FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulation
FARS	Fatality Analysis Reporting System
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FPDS	Federal Procurement Data System
FPPS	Federal Personnel/Payroll System
FRA	Federal Railroad Administration
FRPP	Federal Real Property Program
FTA	Federal Transit Administration
FY	Fiscal year
GAJSC	General Aviation Joint Steering Committee

GARVEE	Grant Anticipation Revenue Vehicle
GPS	Global Positioning System
GSA	General Services Administration
HPMS	Highway Performance Monitoring System
HR	Human Resources
IT	Information technology
LOB	Line of business
MADT	Monthly average daily traffic
MARAD	Maritime Administration
MCMIS	Motor Carrier Management Information System
MSP	Maritime Security Program
MY	Model year
NAC	NextGen Advisory Committee
NAR	Non-accident release
NAS	National Airspace System
NBI	National Bridge Inventory
NBIS	National Bridge Inspection Standards
NEC	Northeast Corridor
NEMSIS	National Emergency Medical Services Information System
NextGen	Next Generation Air Transportation System
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
NPMRDS	National Performance Management Research Data Set
NRC	National Response Center
NTD	National Transit Database
NTL	National Transportation Library
NTSB	National Transportation Safety Board
OA	Operating Administration
OCIO	Office of the Chief Information Officer
OIRA	Office of Information and Regulatory Affairs
OMB	Office of Management and Budget
OPM	Office of Personnel Management
OSPE	Office of the Senior Procurement Executive
OST	Office of the Secretary of Transportation
OST-P	Office of the Assistant Secretary for Policy
OST-R	Office of the Assistant Secretary for Research

OST-S-10	Office of the Executive Secretariat
OTP	On-time performance
PAB	Private Activity Bond
PCR	Police Crash Report *(also referred to as a Police Accident Report)*
PHMSA	Pipeline and Hazardous Materials Safety Administration
PRISM	Performance and Registration Information Systems Management
QA/QC	Quality Assurance/Quality Control
R&D	Research and development
REMS	Real Estate Management System
RRF	Ready Reserve Force
SGR	State of Good Repair
SIB	State Infrastructure Bank
SLSDC	Saint Lawrence Seaway Development Corporation
SSO	State Safety Oversight
STB	Surface Transportation Board
TAC	Technical Assistance Center
TERM	Transit Economic Requirements Model
TIFIA	Transportation Infrastructure Finance and Innovation Act
TrAMS	Transit Award Management System
TTTR	Truck Travel Time Reliability
TVT	Traffic Volume Trends
UAS	Unmanned Aircraft System
VISA	Voluntary Intermodal Sealift Agreement
VMT	Vehicle miles traveled

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