DEPARTMENT OF TRANSPORTATION

FY-2015 ANNUAL PERFORMANCE REPORT / FY-2017 ANNUAL PERFORMANCE PLAN

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EXECUTIVE SUMMARY

INTRODUCTION

The U.S. Department of Transportation (DOT) is responsible for ensuring the movement of people and goods throughout the United States as well as to and from our Nation's borders. DOT has five main strategic goals:

Safety – Improve public health and safety by reducing transportation-related fatalities, injuries and crashes;

State of Good Repair – Ensure the U.S. proactively maintains critical transportation infrastructure in a state of good repair;

Economic Competitiveness – Promote transportation polices and investments that bring lasting and equitable economic benefits to the Nation and its citizens;

Quality of Life in Communities – Foster quality of life in communities by integrating transportation policies, plans, and investments with coordinated housing and economic development policies to increase transportation choices and access to transportation services for all; and

Environmental Sustainability – Advance environmentally sustainable policies and investments that reduce carbon and other harmful emissions from transportation sources.

This document reports DOT performance during FY 2015 by key objectives tied to the goals listed above. It also sets forth the performance plan for FY 2017, with goals and next steps that cover both FY 2016 and 2017.

PROGRESS REPORT

In April, 2015, DOT conducted its first Strategic Review. This was the culmination of the previous year's quarterly performance reviews and offered a chance for our Operating Administrations to discuss performance challenges and opportunities. This review provides the framework for assessing the progress made since the beginning of FY 2015 in DOT's key objectives.

SAFETY- IMPROVE THE SAFETY OF THE TRANSPORTATION SYSTEM

The U.S. is experiencing an unprecedented level of safety in all modes of transportation. Driving fatalities have been declining steadily for over two decades. U.S. commercial aviation is one of the safest in the world. Fatalities in all modes of transportation, including rail, transit and the movement of hazardous materials through pipelines, have decreased over the past decade.
The challenge for DOT is to maintain these historic levels of safety in the face of resource limitations, growth in travel and transport demand, new economic needs, and new technologies. Last year's strategic review highlighted a few emerging concerns:

- DOT needs better data in order to develop risk-based strategies;
- the growth of domestic oil production has challenged DOT to improve intermodal analysis and coordination; and
- Unmanned Aircraft Systems require complex regulatory and control responses.

In 2015, DOT met nine out of twelve safety goals.

- While highway fatalities decreased between 2013 and 2014, they did not decrease to the amount needed to meet the DOT goal set for 2014.
- Similarly, bicyclist and pedestrian fatalities decreased between 2013 and 2014, but not enough to meet the goal.
- Preliminary data indicate that we will not meet the goal for large truck and bus fatalities in FY 2014.

STATE OF GOOD REPAIR- MAINTAIN OR IMPROVE OPERATING CONDITIONS & SUSTAIN ASSETS

The most recently issued DOT Condition and Performance Report for surface transportation modes reported that the Nation continues to struggle with keeping its transportation infrastructure in good condition. Limited resources coupled with a lack of good information about inventories and conditions combined to make this effort extremely challenging.

In FY 2015, DOT met all of its goals for Maintaining and Improving Operating Conditions. FHWA and FTA made progress in developing tools and techniques for State and local transportation agencies to keep better track of their inventory and measure its condition.

ECONOMIC COMPETIVENESS - ENHANCE PRODUCTIVITY AND GROWTH

The Nation is experiencing growth in nearly every mode of transportation. As this growth increases, each mode is challenged to accommodate increased demand without increasing congestion and gridlock.

In this area, DOT met only five of its 11 goals in FY 2015. Namely,

- The travel time index rose for both urban areas and the top domestic trade corridors. The index measures extra travel time due to congestion.
- While transit ridership and market share have risen, they did not rise to meet DOT goals.
- St. Lawrence Seaway suffered some adverse weather conditions and three major vessel incidents that decreased availability.

QUALITY OF LIFE - ENHANCE QUALITY OF LIFE &EXPAND ACCESS AND CHOICE

More transportation modal choices and improved access to transportation is important to maintain the quality of life in our Nation's communities. Based on preliminary data, DOT met two out of five quality of life goals. DOT is awaiting final data for one remaining goal.

- DOT is helping State and local governments expand their pedestrian and bicycle networks.

- Intercity passenger rail ridership is increasing.
- More work needs to be done with States to develop plans for public right-of-way.
- There are still challenges in meeting targets associated with rail station disability access compliance.

ENVIRONMENTAL SUSTAINABILITY - PROMOTE ENERGY EFFICIENCY & MITIGATE ENVIRONMENTAL IMPACTS

While the transportation sector is a significant source of greenhouse gas (GHG) emissions, the Department is working to address and mitigate this challenge through strategies such as fuel economy standards for cars and trucks, more environmentally sound construction and operational practices, and by expanding opportunities for shifting freight from less fuel-efficient modes to more fuel-efficient modes.

DOT has met six out of thirteen targets for which current data is available. Key results include:

- Reductions in hazardous liquid pipeline spills;
- Continued reduction in airline greenhouse gas usage; and
- Continued progress with MARAD ship disposal.

"These priorities reflect the simple truth that transportation in this country should not be just about getting us to places better, it should make those places better, too."

Secretary Anthony R. Foxx
Transportation for a New Generation: DOT Strategic Plan, 2014-2018

Executive Summary

Summary Tables– Performance Report

ROADWAY SAFETY								
Performance Measure	**2010**	**2011**	**2012**	**2013**	**2014**	**2015 Target**	**2015 Actual**	**Target Met/Not Met**
Highway fatality rate per 100 million vehicle-miles traveled (VMT).	1.11	1.10 (r)	1.14	1.09 (r)	1.08*	1.02	N/A	Not Met (2014)
Passenger vehicle occupant fatality rate per 100 million VMT.	0.89	0.84	0.81	0.79	TBD	0.82	N/A	Met (2013)
Motorcyclist rider fatality rate per 100,000 motorcycle registrations	56.36	54.82	54.66	55.54	TBD	62	N/A	Met (2013)
Non-occupant fatality rate per 100 million VMT.	0.17	0.17	0.19	0.19	TBD	0.15	N/A	Not Met (2013)
Large truck and bus fatality rate per 100 million VMT.	0.122	0.133	0.142	0.142*	TBD	0.114	N/A	Potentially Not Met

AVIATION SAFETY								
Performance Measure	**2010**	**2011**	**2012**	**2013**	**2014**	**2015 Target**	**2015 Actual**	**Target Met/Not Met**
Number of U.S.-registered, commercial air carrier fatalities per 100 million persons on board.	0.3	0.0	0.0	0.1	0.6*	6.9	0.1*	Met
Number of fatal general aviation accidents per 100,000 flight hours.	1.104	1.12	1.09	1.11	1.09*	1.04	1.03*	Met
Category A&B runway incursions per million operations.	0.117	0.138	0.356	0.220	0.282	0.395	0.302	Potentially Met

RAIL, TRANSIT, PIPELINE, HAZMAT SAFETY AND SAFETY POLICY								
Performance Measure	**2010**	**2011**	**2012**	**2013**	**2014**	**2015 Target**	**2015 Actual**	**Target Met/Not Met**
Number of U.S.-registered, commercial air carrier fatalities per 100 million persons on board.	0.3	0.0	0.0	0.1	0.6*	6.9	0.1*	Met
Number of fatal general aviation accidents per 100,000 flight hours.	1.104	1.12	1.09	1.11	1.09*	1.04	1.03*	Met
Category A&B runway incursions per million operations.	0.117	0.138	0.356	0.220	0.282	0.395	0.302	Potentially Met
Rail-related accidents and incidents per million train-miles.	16.697	16.072	15.194	15.028	16.160	15.900	14.624 **	Met
Transit fatalities per 100 million passenger-miles traveled.	N/A ***	0.533	0.547	0.613	0.609*	0.543	0.487*	Potentially Met
Pipeline incidents involving death or major injury	38	34	31(r)	27(r)	29	36	34*	Met
Hazardous materials incidents involving death or major injury.	23	32	33(r)	27(r)	23	31	22*	Met
Number of States and localities that adopt roadway designs that	N/A	214(r)	246(r)	398(r)	652	270	N/A	Met

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Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
accommodate all road users.								

STATE OF GOOD REPAIR

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
Roadway: Percent of VMT on National Highway System (NHS) with good to vary good ride quality.	55% (r)	54.3% (r)	57.1% (r)	57.7% (r)	58.7%	60.3%	N/A	Potentially Met
Roadway: Percent of Deck Area on NHS Structurally Deficient Bridges.	8.3%	7.8%	7.1%	6.8% (r)	6.0%	5.9%	5.6%	Met
Transit: Backlog of transit capital assets in need of replacement or refurbishment. *Biennial measure.*	No data	$77.7 billion	No data	$85.9 billion	No data	$94 billion*	N/A	Potentially Met
Runways: Percent of runway pavement in excellent, good, or fair condition for paved runways in the National Plan of Integrated Airport Systems.	97.2%	97.4%	97.5%	97.5%	97.6%	93%	97.7%	Met

ECONOMIC COMPETITIVENESS

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
High Performance Passenger Rail: Number of individual construction projects that achieve initial construction	N/A	8	27	48	60	65	67	Met
High Performance Passenger Rail: Number of planning, preliminary engineering, environmental analysis, and construction projects that are substantially complete.	NA	N/A	N/A	36	51	74	74	Met
Modernizing Air Traffic Control Systems Cumulative number of continental U.S. En Route air traffic control centers achieving initial operating capability on ERAM.	2	2	9	16	17	20	20	Potentially Met
Runways: Percent of runway pavement in excellent, good, or fair condition for paved runways in the National Plan of Integrated Airport Systems.	97.2%	97.4%	97.5%	97.5%	97.6%	93%	97.7%	Met
Highway Congestion: Percent of Transportation Management Areas (TMAs) using Congestion Management Process (CMPs) in making programming and project decisions (Total of 181 TMAs).	N/A	N/A	N/A	N/A	10%	20%	90%	Met

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Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
Transit Ridership: Total number of urban boardings.	10.1 billion	10.3 billion	10.4 billion	10.6 billion	10.7 billion *	10.8 billion	TBD	Met (2014)
Transit Ridership: The transit market share among commuters to work in at least 10 of the top 50 urbanized areas by population.	0	1	4	3	N/A	5	TBD	TBD
International Commerce: Reach 3 or more new bilateral and multilateral aviation agreements to remove market-distorting barriers to transportation.	7	4	4	5	3	3	5	Met
Domestic Commerce: Number of Twenty Foot Equivalent (TEU) containers transported across America's Marine Highway routes.	N/A	5,901*	16,031*	16,191*	29,981*	30,000	29.318	Not Met
Domestic Commerce: Percent of time the U.S. portion of the St. Lawrence Seaway is available to commercial users.	99.8%	99.0%	99.7%	99.1%	97.2%	99.0%	97.2%	Not Met

QUALITY OF LIFE

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
Number of created and/or significantly improved pedestrian and bicycle transportation networks.	N/A	N/A	N/A	N/A	N/A	25	86*	Met
Number of intercity passenger rail miles traveled.	5.90 billion	6.33 billion	6.80 billion	6.80 billion	6.65 billion	6.90 billion	N/A	N/A
States that have developed an Americans with Disabilities Act (ADA) transition plan that is current	N/A	N/A	15(r)	17	24(r)	31	26	Not Met
Number of key rail stations verified as accessible and fully compliant.	513	522	567	567	607	605	607	Met
Percent of intercity passenger rail stations that comply with the requirements of the ADA (FRA).	N/A	N/A	< 1%	< 3%	N/A	17%	N/A	

ENVIRONMENTAL SUSTAINABILITY

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
Percent reduction in aviation fuel burned per revenue-ton-mile from the FY 2000 energy use baseline.	19.08%	22.28%	22.72%	21.66%	22.4%	20%	24.41 %	Met
Number of State DOTs, MPOs serving a TMA, and Federal land management agencies that have	N/A	N/A	N/A	N/A	65	69	71	Met

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Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
conducted vulnerability assessments of the highway system to climate change								
Percent of alternative-fuel and hybrid vehicles in the transit revenue service fleet.	44%	45%	47%	50%	50%	50%	N/A	N/A
Percent reduction in greenhouse gas emissions from DOT facilities and fleets.	7.9%	15.4%	29%	29.4%	23%	8%	N/A†	N/A†
Percent reduction in greenhouse gas emissions from DOT employee business travel and commuting.	N/A	(4.7%)	0.1%	27.3%	31%	6%	N/A†	N/A†
Percent reduction of DOT vehicle fleet petroleum use.	5%	4.9%	14.5%	22.1%	23.7%	20%	N/A†	N/A†
Cumulative number of ships MARAD safely removed from the Suisun Bay Reserve Fleet for disposal (2010–2017).	11	26	36	44	52	44	54	Met
Reduce risk of environmental contamination from disposal of Federally owned vessels by maintaining a 1:1 ratio of incoming vessels to vessels removed (MARAD)	N/A	N/A	N/A	N/A	1.0	1.0	1.0	Met
Hazardous liquid pipeline spills with environmental consequences (PHMSA)	94	117	124(r)	120(r)	142	104	130	Not Met
Impacts U.S. population exposed to significant aircraft noise around airports.	292,000	318,000	315,000	319,000	321,000	342,000	340,000	Met
Percent improvement in DOT water efficiency	(1.2%)	(9.7%)	0.9%	24.1%	19%	16%	N/A†	N/A†
Percent DOT recycling and waste diversion	N/A	N/A	11%	20%	31%	50%	N/A†	N/A†
Percent of all applicable DOT contracts that meet sustainability requirements	N/A	95%	95%	95%	95%	95%	N/A†	N/A†

NATIONAL SECURITY PREPAREDNESS AND OTHER

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
Total operating days U.S.-flagged, foreign commercial ships enrolled in the Maritime Security Program are available to meet DoD requirements	21,436	21,557	21,593	21,794	21,600	19,200	21,659	Met
Percentage of DoD-required shipping capacity complete with crews available within	N/A	N/A	N/A	N/A	96%	94%	97%	Met

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
mobilization timelines								
Percentage of DoD-designated commercial ports available for military use within DoD-established timelines	N/A	N/A	N/A	N/A	94%	87%	100%	Met
Number of U.S. Merchant Marine Academy graduates	198	205	219	189(r)	224	229	227	Not Met
Number of State Maritime Academy graduates	575	545	642(r)	658(r)	734	660	TBD	TBD
Percent of total dollar value of DOT direct contracts awarded to small, disadvantaged businesses.	14.50% (r)	19.45% (r)	17.98%	19.30%	20%*	5% (r)	TBD	TBD
Percent of total dollar value of DOT direct contracts awarded to women-owned businesses.	7.85%	11.14%	8.77% (r)	11.44%	12%*	5% (r)	TBD	TBD

ORGANIZATIONAL EXCELLENCE: IMPROPER PAYMENT PERCENTAGE

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met/Not Met
FAA Airport Improvement Program	0.03%	0.89%	0.64%	0.07%	0.20%	0.50%	0.04%	Met
FHWA Federal-Aid Highways	1.40%	0.94%	0.22%	0.20%	0.10%	0.25%	1.08%	Not Met
FRA High-Speed Intercity Passenger Rail Program	Not Tested	Not Tested	0.96%	0.00%	1.06%	0.25%	.03%	Met
FTA Capital Investment Grants	0.00%	0.00%	0.00%	0.04%	0.00%	0.25%	N/A	N/A
FTA Capital Investment Grants	0.00%	0.00%	0.00%	0.04%	0.00%	0.25%	N/A	N/A
FTA Formula Grants	0.16%	0.00%	0.44%	0.73%	2.91%	0.50%	0.05%	Met
FAA Facilities and Equipment—Disaster Relief Act	Not Tested	Not Tested	Not Tested	Not Tested	0.00%	N/A	.00%	Met
FHWA Emergency Relief Program—Disaster Relief Act (Hurricane Sandy-related only)	Not Tested	Not Tested	Not Tested	Not Tested	0.00%	N/A	N/A	N/A
FRA Grants to Amtrak—Disaster Relief Act	Not Tested	Not Tested	Not Tested	Not Tested	0.41%	N/A	N/A	N/A
FTA Public Transit Emergency Relief Program—Disaster Relief Act	Not Tested	Not Tested	Not Tested	Not Tested	0.02%	N/A	0.03%	Met

STRATEGIC GOAL 1: SAFETY

Improve public health and safety by reducing transportation-related fatalities and injuries for all users, working toward no fatalities across all modes of travel.

Strategic Objective 1—Improve the Safety of the Transportation System

Improve the safety of the transportation system by addressing behavioral, vehicular, and infrastructure safety issues through prevention, mitigation, and response using innovative and effective partnerships, programs, and resources.

PERFORMANCE SUMMARY

DOT's top priority is to make the U.S. transportation system the safest in the world. The Nation has made good progress in reducing overall transportation-related fatalities and injuries during the past two decades even though the U.S. population and travel increased significantly. The U.S. Department of Transportation (DOT) must continue to promote safer behaviors, vehicle and equipment designs, and infrastructure that will further reduce risks and minimize injury for all travelers.

DOT will work with its stakeholders—including transportation agencies, elected officials, law enforcement, industry representatives, bicycle and pedestrian groups, safety advocates, drivers, the disability and older adult communities, and the public—to keep the transportation system safe. The Department will use its safety regulatory authority over automobiles, aviation, rail, trucks, motorcoaches, pipelines, and hazardous materials as cost-effectively as possible to reduce crashes and injuries, and implement our expanded regulatory authority for public transit.

DOT will continue to direct federal resources to the highest safety risks and implement program reforms that will advance our safety mission. DOT will address these challenges through multimodal and mode specific strategies targeted toward identified risks, and work to ensure transportation systems are safe for all users.

All DOT Operating Administrations (OAs) contribute to the department's safety goals.

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

Roadway Safety (FHWA, FMCSA, NHTSA)

DOT- Priority Goal

- **Reduce roadway fatalities by the end of calendar year 2016 to 1.02 per 100 million vehicle miles traveled.**

OVERVIEW

Over the past 10 years, the number of fatalities on the Nation's roadways have dropped by 25 percent. During 2014, 32,675 people died in crashes on the Nation's roadways. The projected fatality rate in 2014 of 1.07 fatalities per 100 million vehicle miles traveled (VMT) represents the lowest rate ever achieved.

The safety of our Nation's transportation system is a top priority of DOT. Within DOT, FHWA, FMCSA, and NHTSA work together to address multiple dimensions of roadway safety. Roadway crashes represent 94 percent of all transportation-related fatalities in the United States. Each DOT OA plays a specific role in addressing pre-crash, crash, and post-crash factors that contribute to injuries and fatalities:

- FHWA improves safe mobility and infrastructure of our Nation's roadways through national leadership and innovation.
- FMCSA aims to reduce commercial motor vehicle (CMV) transportation crashes, injuries and fatalities through education, innovation, regulation, enforcement and partnerships.
- NHTSA develops motor vehicle safety standards and evidence-based safety campaigns and programs. It also conducts advanced vehicle and behavioral safety research, and vehicle defects investigations and enforcement.

These OAs support outreach, education, enforcement, and demonstration programs aimed at the public and specific transportation industries to reduce roadway crashes, injuries, and fatalities, reduce the severity of crashes that do occur; and transport crash survivors as quickly as possible to the appropriate medical facility. The OAs also make extensive use of safety-related data to evaluate the impact of new vehicle and infrastructure technologies, focus inspection activities, prioritize and address risks, and assess enforcement techniques.

In the first 14 years of the 21st century, more than 575,000 people died on the Nation's roadways. While motor vehicle fatalities declined by 25 percent overall during the past decade, among certain age groups, motor vehicle crashes are still the leading cause of death. According to 2011 mortality data from the CDC, this is particularly the case, predominantly for young people between the ages of 8-25. The total economic and social cost of highway crashes is $871 billion per year, according to NHTSA estimates, an indication of the economic magnitude of highway crashes. DOT's goal is to reduce roadway fatalities by the end of CY 2017 to 1.02 per 100 million vehicle miles traveled (VMT). Only the Federal Government has the authority to establish national safety standards for vehicles, regulate motor carriers, and mandate roadway safety features. However, most of the activities done to address roadway and vehicle safety issues are a partnership between the Federal, State and local governments.

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

A number of challenges could slow down or even reverse positive trends. Some States continue to face budget shortfalls and are under tremendous pressure to reduce services, resulting in cut backs to roadway safety programs. This could reduce budgets for road repair and maintenance, and programs that improve the roadway safety infrastructure. Cutbacks in State, Tribal, and local law enforcement agency budgets could weaken national enforcement campaigns and local traffic safety enforcement efforts.

PERFORMANCE REPORT

Roadway Safety (FHWA, NHTSA, FMCSA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
DOT PRIORITY GOAL: Highway fatality rate per 100 million vehicle-miles traveled (VMT)	1.11	1.10 (r)	1.14	1.09 (r)	1.07 **	1.02		**Not Met (2014)** 
Passenger vehicle occupant fatality rate per 100 million VMT	0.89	0.84	0.81	0.79	0.69-0.80**	0.82	N/A	Met (2013) 
Motorcyclist rider fatality rate per 100,000 motorcycle registrations	56.36	54.82	54.66	55.54	51.31-56.3 1**	62	N/A	Met (2013) 
Non-occupant (pedestrian and bicycle) fatality rate per 100 million VMT	0.17	0.17	0.19	0.19	0.18	0.15	N/A	Not Met (2013) 
Large truck and bus fatality rate per 100 million total VMT	0.122	0.137	0.142	0.142*	TBD	0.114	N/A	Potentially Not Met (2014) 

Notes: (r) – revised, *-Projected, **-Projected range,

Progress Update-Results

The 2014 fatality rate of 1.07 per 100 vehicle million miles traveled (VMT) is the lowest since NHTSA began collecting this information. The Department attributes the overall decline in roadway fatalities over the last several years to a variety of factors including:

- High visibility enforcement campaigns (HVE) such as *Click It or Ticket* to increase seatbelt use along with other HVE efforts to reduce drunk driving and distracted driving.
- An increase in the spending rate of the Highway Safety Improvement Program (HSIP) and roadway infrastructure improvements such as Safety Edge, Innovative Intersection and Interchange Geometrics, and High Friction Surface Treatments, which are some of

the innovative technologies being deployed as part of the Federal Highway Administration's (FHWA's) *Every Day Counts* (EDC) initiative.
- Enactment of effective traffic safety laws at the State level on seat belts, child passenger safety, impaired driving, distracted driving, and Graduate Driving Licensing (GDL).
- Better oversight of licensing for young drivers and commercial operators.

Safer vehicles also played an important role in reducing crashes, injuries, and fatalities. Electronic stability control systems (ESC) alone saved an estimated 3,900 lives between 2008 and 2012. This will likely increase each year as more of the overall vehicle fleet is equipped with ESC. Advanced new crash avoidance technology, such as automatic emergency braking systems and vehicle-to-vehicle communications hold great promise and represent the next generation of vehicle safety technology.

The DOT recently adopted the *Towards Zero Death* (TZD) vision as a significant step toward eliminating traffic fatalities across all modes of travel. Rather than accepting a certain number of crashes as unavoidable, a TZD approach commits to working across sectors and using every tool available to systemically analyze and eliminate fatal traffic crashes among all who use the roadways. FHWA, NHTSA and FMCSA provided technical support to a group of organizations that represent professionals with an active role in highway safety that developed National Strategy on Highway Safety Towards Zero Deaths which identifies a platform of options for state agencies, private industry, national organizations, and others to use in developing safety plans that prioritize traffic safety culture and promote the national TZD vision.

The Secretary launched a new pedestrian and bicycle initiative to promote design improvements to ensure safe and efficient routes for pedestrians and bicycles, promote safe behavior, and provide education to help individuals make safer travel choices. This new initiative, "*Safer People, Safer Streets*," has two key components:

- The Mayors' Challenge; and
- Road Safety Assessments.

Over 200 cities signed up for the Mayors' Challenge and a portion of these cities participated in a Mayors' Summit at USDOT in March. Over the next year, these cities aim to make improvements in one or more of seven Challenge Activities. By June 1st, 2015 every State completed a pedestrian/bicyclist safety assessment. DOT field offices are collaborating to convene and lead the assessments. The Office of the Secretary (OST) also established a multi-modal Pedestrian and Bicycle Safety Action Team of the Safety Council that meets regularly to support these two activities and coordinate other efforts to improve pedestrian and bicyclist safety.

FHWA

FHWA continues to construct the MAP-21 performance framework which will allow States to invest resources in projects that achieve State-wide targets. Collectively, the progress all States make toward their goals will help us achieve national goals. FHWA is incorporating these requirements into various performance management and planning regulations. FHWA is also implementing the recommendations from the U.S. Government Accountability Office (GAO)

and Office of Inspector General (OIG) evaluations of the Highway Safety Improvement Program (HSIP) to improve a State's ability to meet targets. As part of this effort, FHWA is working with States to adopt and use a common set of fundamental data elements (i.e., Model Inventory of Roadway Elements). In addition, FHWA worked with NHTSA and the Roadway Safety Foundation to launch the Clearinghouse on Older Road User Safety (ChORUS) as a resource for sustaining mobility and safety.

NHTSA

As new vehicle technologies develop and mature, NHTSA will continue to keep raising the bar on safety, and accelerate its push on innovation to reduce the toll of motor vehicle crashes through the development of new motor vehicle safety standards, and guidance to the industry and the public. In 2015, NHTSA secured a commitment from ten major vehicle manufacturers to make automatic emergency braking (AEB) a standard feature on all new vehicles built; the agency will also add AEB systems to its New Car Assessment Program (NCAP) 5-star rating system program. NHTSA actively enforces vehicle safety as well. In 2014 alone, NHTSA issued more than $126 million in civil penalties to auto manufacturers, exceeding the total amount collected by the agency during its 43-year history. NHTSA is also taking steps to strengthen its Office of Defects Investigations (ODI) that addresses OIG recommendations from its June 2015 Audit Report. The agency has created a blueprint, *NHTSA's Path Forward* that lays out lessons learned from recent challenges, and ways to improve performance. To help implement these changes, NHTSA also has created a Safety Systems Team of outside experts

FMCSA

FMCSA regulates approximately 532, 000 active interstate (including approximately 12,000 passenger carriers) and hazardous materials motor carriers and 6 million active commercial driver's license (CDL) holders. In 2013, DOT estimated that these companies operated 11 million large trucks and buses, traveling over 290 billion vehicle miles. Over a ten-year period, 2004 through 2013, the number of large trucks involved in fatal crashes decreased from 4,902 to 3,906, a drop of 20 percent. Also, the rate of buses involved in fatal crashes decreased from 4.10 per 100 million VMT to 1.85 per 100 million VMT. Major agency initiatives include the Safety Management System to prioritize motor carriers for interventions and to evaluate a carrier's safety performance; Enhanced Investigative Techniques to improve enforcement rates; and the launch of the National Registry of Certified Medical Examiners (NRCME) in 2014 to provide consistent, standardized medical examinations for all commercial drivers. More than 11,000 examiners are currently listed under the NRCME.

Actions taken in 2015 included:

- **Safety Management System (SMS):** FMCSA's SMS is a tool used by FMCSA and State partners to prioritize motor carriers for interventions and to evaluate a carrier's safety performance. FMCSA updated the SMS by realigning all of the Serious Violations in the safety regulations to better target high-risk carriers. These changes took effect in the SMS as of February 1, 2015. Motor carriers cited with any of these violations saw them reflected in the March SMS data release. FMCSA's June 30,

2015, Motor Carrier Safety Progress Report shows that the Agency transmitted 20,480 Warning Letters in FY 2013 and 20,546 in FY 2014. A total of 14,862 Warning Letters were sent out during the first three quarters of FY2015 (10/01/2014 - 06/30/2015). 10,963 investigations were performed and 10,849 serious violations were cited through the 3rd quarter of FY 2015.

- **Enhanced Investigative Techniques (EIT):** EIT training was initially developed for the Motorcoach Safety Initiative known as Quick Strike. All FMCSA field personnel completed EIT training in 2014. FMCSA State partners completed EIT training in FY 2015. Last year, 14 Imminent Hazard, Out of Service orders were served to motor carriers investigated under this initiative. Among all motor carriers that have received this enhanced scrutiny, 26 percent were declared Out of Service and 14 were served Imminent Hazard, Out of Service (OOS) orders.
- **National Registry of Certified Medical Examiners (NRCME):** In 2014, FMCSA successfully launched the National Registry of Certified Medical Examiners (http://nationalregistry.fmcsa.dot.gov). All commercial drivers whose current medical certificate expires on or after May 21, 2014, must be examined by a medical professional listed on the National Registry of Certified Medical Examiners. Over 41,000 commercial driver medical examiners are currently registered on the NRCME. More than 4.2 million examinations were completed between May 2014 and May 21, 2015, the first full year of implementation. The Agency will oversee the registry, monitoring medical examiner qualifications and performance. The program sets baseline training and testing standards to equip medical examiners with a thorough understanding of DOT fitness standards to ensure that truck and bus drivers meet the health requirements to operate safely on the Nation's highways and roads.

Information Gaps

Measurement of the safety objective does not currently include serious injury data. FHWA has published an NPRM that would establish a single national definition and coding convention for serious injuries and require States to report the number and rate of serious injuries from the state motor vehicle crash database. This rule would allow FHWA to standardize and collect valuable data and obtain a better understanding of serious injuries on a national level.

PERFORMANCE PLAN

Roadway Safety (FHWA, NHTSA, FMCSA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
DOT Priority Goal: Reduce the Roadway Fatality Rate Per 100 Million VMT.	**Roadway Fatalities per 100 Million Vehicle Miles Traveled**	**1.02**	**1.02**
Supporting Performance Goal: Reduce the Passenger Vehicle Occupant Fatality Rate Per 100 Million Passenger VMT	Passenger Vehicle Occupant Fatalities per 100 Million Passenger Vehicle Miles Traveled	0.82	0.81

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

Goal	Indicator	FY 2016 Target	FY 2017 Target
Supporting Performance Goal: Reduce the Non-Occupant (pedestrian and bicycle) Fatality Rate Per 100,000 population.	the Non-Occupant (pedestrian and bicycle) Fatality Rate Per 100,000 population.	1.78	1.78
Supporting Performance Goal: Reduce the Large Truck and Bus Fatality Rate Per 100 Million total VMT	Large Truck and Bus Fatalities per 100 Million total VMT	0.144	0.144
Reduce Motorcycle Rider Fatalities per 100,000 Motorcycle Registrations	Motorcycle Rider Fatalities per 100,000 Motorcycle Registrations.	62	58

Key Strategies

DOT emphasizes a data-driven approach to prioritize and determine the most effective ways to reduce crashes and fatalities. Data collection provides the foundation to better understand and quantify the nature of the problem and to develop evidence-based countermeasures as well as develop safer vehicles. Recognizing its importance, DOT will pursue data improvement initiatives in FY 2017 to further enhance and link existing systems. Modernizing and consolidating data programs enables not only DOT to make better traffic safety programming decisions, but allows State and local communities to do the same.

The Fixing America's Surface Transportation Act (FAST Act), which authorizes DOT's oversight of surface transportation, was signed into law by President Obama on December 4, 2015. The FAST Act covers five fiscal years through 2020, and is the first law in over ten years that offers long-term funding certainty to the Federal surface transportation program. States and local governments can now move forward with critical transportation projects, like new highways and transit lines, with the confidence that they will have a Federal partner over the long term. The Act also makes changes and reforms to many Federal transportation programs, including streamlining the approval processes for new transportation projects, providing new safety tools, and establishing new programs to advance critical freight projects. The FAST Act also includes additional motor vehicle safety measures, such as the authority to prohibit rental car companies from knowingly renting vehicles that are subject to safety recalls; increased maximum fines against non-compliant auto manufactures from $35 million to $105 million; and streamlines the Federal truck and bus safety grant programs, giving more flexibility to States to improve safety in these areas.

FHWA

FHWA provides Federal, State, and local partners the tools, resources and information necessary to make sound safety investment decisions and coordinates with States to develop Strategic Highway Safety Plans (SHSPs) and implement and improve the safety of roadway infrastructure on all public roads. FHWA continues to implement and oversee the Highway Safety Improvement Program (HSIP), a $2.4 billion core Federal-aid program. The goal of the program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads by

using a data-driven, performance-based strategic approach to improve highway safety and assists the States in improving their roadway safety data. This includes the following efforts:

- Providing States with guidance for the implementation of safety programs and reporting (including HSIP, Older Driver and Pedestrian Special Rule Interim Guidance, High Risk Rural Roads, and State Safety Data Systems);
- Working with State DOTs to improve the State's obligation of their HSIP funds;
- Providing technical assistance and expertise to research, design, and implement roadway infrastructure improvements; and to modernize highway geometric features and safety hardware as part of road and bridge construction, rehabilitation and restoration projects;
- Managing the Focused Approach to Safety to better address critical infrastructure safety challenges, specifically for roadway departure, intersection-related, and pedestrian crashes;
- Implementing the new regulatory requirements on safety performance management and the updated requirements for HSIP to help States improving roadway and safety data;
- Promoting the latest innovative safety tools and countermeasures as part of Every Day Counts (EDC) initiative, such as Data Driven Safety Analysis (DDSA); and
- Supporting the Secretary's "*Safer People, Safer Streets*" initiative through activities that promotes safe non-motorized transportation. These include: supporting flexible design of pedestrian and bicycle facilities; initiation and implementation of the Bicycle-Pedestrian Count Technology Pilot Program; development of a Handbook for MPO Pedestrian and Bicycle Planning; development of a Decentralized, Public, and Mobile-Based Sidewalk Inventory Tool; and updating pedestrian and bicycle guidance and regulations.

NHTSA

NHTSA develops safety standards for new motor vehicles and related safety equipment, investigates safety defects in vehicles and oversees recalls, conducts research on advanced vehicle safety systems and on driver behavior, and partners with State Highway Safety Offices and other safety groups to implement evidence-based safety programs. Key highlights include: Implementing an ambitious vehicle research plan to accelerate the enormous potential benefits of connected automated vehicles on U.S. roadways.

- This includes in-vehicle technologies, such as automatic emergency braking, the use of radar, cameras and navigation as well as communications between vehicles;
- Launching a major initiative to strengthen its vehicle defects investigations program to ensure that the agency can better address vehicle safety defects today and into the future;
- Maintaining a comprehensive series of programs to address unsafe driver behaviors particularly through high visibility enforcement (HVE) campaigns. These proven campaigns combine public outreach and intensified enforcement to both catch illegal behavior and serve as a deterrent to others. More than 10,000 State and local law enforcement agencies participate in HVE campaigns each year;
- Engaging stakeholders in developing new and innovative strategies to address traffic injury prevention in the future through a series of events nationwide in 2016;

- Mobilizing a cadre of peer law enforcement liaisons (LELs) to provide ongoing technical assistance to law enforcement agencies at the State and local level, and to support the Data-Driven Approaches to Crime and Traffic Safety (DDACTS) program, conducted in partnership with the Department of Justice;
- Supporting a national network of more than 5,000 child safety seat inspection stations, and over 8,000 certified safety seat technicians and instructors;
- Continuing to implement the *DOT Blueprint for Ending Distracted Driving* and vehicle and behavioral safety research on reducing distracted driving;
- Providing program guidance and technical assistance to States to implement their Highway Safety Plans, which detail how States will use their highway safety grant funds;
- Ongoing data modernization efforts to strengthen the collection and analysis of vehicle crash data through the development of more robust data systems; and
- Providing national leadership to promote and develop effective emergency medical services in all 50 States, and develop a Next Generation 911 system that will improve post-crash care and survival rates by upgrading the capacity of emergency response systems to utilize new forms of electronic communication.

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

FMCSA

FMCSA regulates all registered CMVs that operate interstate or that carry hazardous materials. There are approximately 532,000 active interstate motor carriers and intrastate hazardous materials motor carriers operating in the United States. FMCSA also regulates all drivers involved in interstate commerce or intrastate transportation of hazardous materials, as well as all Commercial Driver's License drivers both interstate and intrastate. Approximately 6 million CMV drivers operate in the United States.

Over the past 10 years, registrations for large trucks and intercity buses increased 27 percent. Despite this growth in commercial vehicles the number of large trucks involved in fatal crashes decreased from 4,902 in 2004 to 3,906 in 2013, a drop of 20 percent. The rate of buses involved in fatal crashes decreased from 4.10 to 1.85 per 100 million VMT between 2004 and 2014.

FMCSA expects the fatality rate for large trucks and buses to fall as changes in enforcement processes ensure motor carriers are fit, willing and able to comply with all safety regulations. The Agency is modernizing safety programs led by the Compliance, Safety, and Accountability (CSA) initiative. CSA will enhance the efficiency and effectiveness of enforcement activities through early contact with a greater number of motor carriers. FMCSA is implementing Phase III of CSA. Upon completion, all States will be trained and able to use all of the interventions developed for the CSA program to take appropriate enforcement action against unsafe motor carriers and drivers.

Other efforts include:

- Completing a rulemaking to revise 49 CFR Part 385, Safety Fitness Procedures. FMCSA would establish safety fitness determinations based on safety data from inspections and violation history rather than just an investigation;
- Revising the new entrant safety audit program to allow offsite safety audits for new motor carriers that have evidence of compliance, helping States to complete more safety audits in the mandated timeframes;
- Improved information technology used to identify high-risk carriers; and
- Providing safety grant funding opportunities to State and local government agencies.

Next Steps

- Establishing safety performance measures in each State (including number of fatalities and serious injuries and rate of fatalities and serious injuries per 100 million VMT);
- Improved coordination of departmental programs in the implementation of State SHSPs;
- Improved use of the Systemic Approach to Safety to implement safety improvements based on high-risk roadway features correlated with specific severe crash types;
- Analysis and evaluation of the HSIP through review of online reports;
- Support the Secretary's Safety Initiative by developing resources and providing technical assistance to address the safe use of non-motorized transportation;
- Promote EDC Data-Driven Safety Analysis tools and resources to State and local agencies;
- Increase States use of HSIP to implement live-saving infrastructure safety countermeasures;

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

- Refine and expand technical resources, guidelines and training to State and local organizations seeking to develop or expand highway safety programs and initiatives, working with researchers, associations, and other stakeholders to develop and distribute technical materials;
- Implement the modernized and more robust crash data collection system that will enhance all aspects of motor vehicle and roadway safety research, program development and education;
- Crash test 85 percent of the new model year fleet to provide consumers with more information on the relative safety of new vehicles through its 5-star rating program;
- Conduct four national HVE campaigns in FY 2017 to promote seat belt use, and deter impaired driving, and distracted driving;
- Convene five traffic safety stakeholder summits across the country in early 2016 leading to a national safety summit in Washington, DC in March 2016;
- Develop concrete actions that States and other safety advocates can take to address drowsy driving by holding stakeholder meetings and conducting research to help develop measures of drowsy driving, analyze existing data sources, and examine the potential of new State policies to change awareness and attitudes towards drowsy driving;
- Publish proposals to require vehicle-to-vehicle (V2V) devices on all light new vehicles, and on distraction guidelines that apply to nomadic devices in vehicles;
- Publish the Final Rule on Electronic Logging Devices (ELD) to establish minimum performance and design standards for ELDs; requirements for the mandatory use of these devices by drivers currently required to prepare hours of service (HOS) records of duty status; requirements concerning HOS supporting documents; and measures to address concerns about harassment resulting from the mandatory use of ELDs.

Goal Leaders

Gregory G. Nadeau, Administrator, Federal Highway Administration
Scott Darling, Acting Administrator, Federal Motor Carrier Safety Administration
Mark R. Rosekind, Ph.D., Administrator, National Highway Traffic Safety Administration

Aviation Safety

OVERVIEW

DOT- Priority Goals

- **Reduce U.S. commercial aviation air carrier fatalities by 24 percent over a 9-year period (2010–2018), to no more than 6.2 per 100 million persons on board in FY 2018.**

- **Reduce the general aviation fatal accident rate per 100,000 flight hours to no more than one in FY 2018.**

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

- **Reduce category A&B runway incursions in all airports to a rate of no more than 0.395 per million operations in FY 2016.**

Aviation fatality rates are at historic lows and continue to drop over time. The Federal Aviation Administration (FAA) has an imperative to be smarter about how it assures safety as the aviation industry grows more complex. FAA has more safety data than it has ever had before. This provides an opportunity to be more proactive about safety and use safety management principles to make smarter, risk-based decisions.

FAA focuses on three areas of aviation safety:

- Commercial Aviation;
- General Aviation; and
- Runway Safety.

To continue to improve the current level of safety in the national airspace FAA recognizes the need to address precursors to accidents. In the past, FAA focused on actual incidents and accidents to identify risk within the aviation system. The number of accidents has now dropped to a level in which this is a more difficult activity to asses risk.

FAA is developing alternate methods to identify and address emerging safety risks and accident precursors to reduce the likelihood of such events. The Aviation Safety Information Analysis and Sharing (ASIAS) initiative is one of the key programs maintained by FAA, and frequently partners with the Commercial Aviation Safety Team (CAST) to monitor known risk, evaluate the effectiveness of deployed mitigations, and detect emerging risk. ASIAS has access to multiple data sources across Government and industry, including voluntarily provided safety data, through the participation of 46 Part 121 member air carriers and nine corporate operators. ASIAS has matured to the point that FAA and industry can leverage voluntarily provided safety data from operators
that represent 96 percent of U.S. air carrier commercial operations. ASIAS retains access to a wide variety of both public and proprietary data sources, each of which provides information from different parts of the National Airspace System (NAS). CAST leverages data from ASIAS to understand the underlying contributing factors and develop mitigation strategies.

PERFORMANCE REPORT

Aviation Safety (FAA)								
Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met or Not Met
DOT PRIORITY GOAL: Number of U.S.-registered, commercial air carrier fatalities per 100 million persons onboard	0.3	0.0	0.0	1.1	0.6*	6.9	0.1*	Met 

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met or Not Met
DOT PRIORITY GOAL: Number of fatal general aviation accidents per 100,000 flight hours	1.104	1.12	1.09	1.11	1.09*	1.04	1.03*	**Met** 
DOT PRIORITY GOAL: Category A&B runway incursions per million operations	0.117	0.138	0.356	0.220	0.282	0.395	0.302*	**Potentially Met** 

Progress Update -Results

Commercial Aviation Safety Team (CAST)

Commercial aviation continues to be one of the safest forms of transportation. While rare, however, commercial aviation accidents have the potential to result in large loss of life. In FY 2015, with a result of 0.1 fatalities per 100 million persons on board, the FAA achieved its target of not exceeding 7.2 fatalities per 100 million persons on board.

The FAA and the aviation industry agree that partnership is critical to aviation safety. The agency and industry must work together to address risks. Otherwise, safety cannot advance. CAST is a joint industry/government group committed to improving aviation safety, focusing on detecting risk and implementing mitigation strategies before accidents or serious incidents occur.

CAST has evolved and the group is moving beyond the historic approach of examining past accident data to a more proactive approach that focuses on detecting risk and implementing mitigation strategies before accidents or serious incidents occur. The goal over the next decade is to transition to prognostic safety analysis. CAST aims to reduce the U.S. commercial fatality risk by 50 percent from 2007 to 2025.

CAST has developed an integrated, data-driven strategy to reduce the commercial aviation fatality risk in the United States. CAST currently uses 96 safety enhancements to improve safety.

To learn more about CAST, please visit https://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=18178.

General Aviation (GA)

With a result of 1.03 fatal accidents per 100,000 flight hours in FY 2015, FAA was also successful in achieving its goal related to the general aviation (GA) fatal accident rate. The method of setting targets involved using the three safest years in GA history (Fiscal Years 2006 - 2008) as the baseline. Government and industry agreed to a goal of reducing the GA fatal accident rate by 10 percent over a 10-year period from this baseline. Each year's annual target rate has been set in order to achieve the overall 10-percent reduction in 10 years.

Efforts have been intensified to reduce the GA fatal accident rate. The FAA has partnered with industry in the General Aviation Joint Steering Committee (GAJSC) to use a non-regulatory, proactive, and data-driven strategy to get results. To date, the GAJSC has adopted 33 losses of control and engine-related safety enhancements (SE). The GAJSC is evaluating additional SEs for system and component failures related to engines.

The GAJSC is reaching out to the general aviation community to educate pilots and other stakeholders on the benefits of sharing (in a protected, non-punitive manner) collected safety data through our Aviation Safety Information Analysis and Sharing (ASIAS) program. The goal of the program is to assist the GA community in reducing the number of fatal accidents by looking for systemic risks that could potentially lead to fatal accidents. Data submitted to ASIAS is confidential, de-identified, and will not be used for enforcement purposes.

We are taking steps to help improve safety in small aircraft by simplifying design approval requirements for safety systems like Angle of Attack (AOA) indicators. AOA indicators provide the pilot with a visual aid to prevent loss of control of the aircraft in the critical phases of flight. Previously, cost and complexity of indicators limited their use to the military and commercial aircraft. Under the new guidelines, AOA devices can be added to small airplanes to supplement airspeed indicators and stall warning systems, giving pilots an additional tool to avoid a dangerous aerodynamic stall and subsequent loss of control.

To spread safety awareness throughout the aviation community, we conduct live safety seminars, and send email notifications, airmen notices, and FAA Safety Team (FAAST) blasts. Additionally, FAAST has Twitter and Facebook pages as well as airman counseling, and presentations/booths at aviation events. For more information on FAAST, please visit www.FAASafety.gov.

Runway Safety

FAA's top priority is maintaining safety in the NAS. Safety in the NAS hinges on maintaining integrity, security, and efficiency where multiple safety responsibilities converge—the Nation's airports. FAA's runway safety efforts focus on preventing and decreasing the severity of runway incursions and serious surface incidents. In FY 2015, with a result of 302 Category A and B runway incursions per million operations, FAA continued its success in achieving the target for serious runway incursions at a rate of no more than 0.395 per million operations.

Aligned with the FAA Administrator's Priority Initiatives, Runway Safety is building on past successes by migrating from event-based safety to risk-based safety using multiple data sources and stakeholder subject matter experts to assess current risk, predict future risk, and establish relevant metrics that measure the reduction in risk. The risk-based approach incorporates the rapidly expanding availability of FAA data, analytical capabilities and training applications within a robust SMS.

On June 24, 2015, the FAA held a Runway Safety Call to Action to address an increase in the number of runway incursions. The meeting was attended by 108 representatives from industry, labor, and government. The event focused on mitigating visual, communication, and procedural

challenges that occur on the surface environment. There were a total of 32 recommendations received at the end of the day which included efforts that require an FAA, union and industry partnership to complete. A summary of the event, along with the recommendations, were published in a report on July 31, 2015 as Phase 1 - Runway Safety Call to Action. FAA and industry partners used the recommendations to develop implementation plans detailing short, medium and long-term corrective actions including dates for implementation. A Phase 2 – Runway Safety Call to Action report will be available by the end of 2015.

PERFORMANCE PLAN

Aviation Safety (FAA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
DOT Priority Goal: Reduce US commercial aviation air carrier fatalities by 50 percent over an 18-year period (2008-2025) to no more than 6.2 per 100 million persons on board in FY 2018.	Number of US commercial aviation air carrier fatalities per 100 million persons on board.	6.7	6.4
DOT Priority Goal: Reduce the general aviation fatal accident rate per 100,000 flight hours to no more than 1 in FY 2018.	Number of general aviation fatalities per 100,000 flight hours.	1.02	1.01
DOT Priority Goal: Reduce category A&B runway incursions in all airports to a rate of no more than 0.395 per million operations in FY 2014.	Category A&B runway incursions per million operations (takeoffs and landings).	1.78	1.78

Key Strategies

Safety Management System Rule: In January 2015 a final FAA rule was published that requires a Safety Management System (SMS) for U.S. air carriers operating under 14 Code of Federal Regulations (CFR) part 121. SMS is the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety risk controls. The rule requires airlines to implement an SMS within three years. They were required to submit their implementation plans to the FAA within six months. The rule also requires a single accountable executive to oversee SMS. In making this rule, the FAA reviewed more than 100 accidents of U.S. commercial carriers between 2001 and 2010 and determined that if SMS had been in place, many of these tragedies may have been prevented.

An SMS is a set of processes and procedures that everyone follows so safety can be enhanced. This happens by having a structured approach to collect and analyze data from airline operations. This data can help identify patterns and trends that could possibly lead to a problem. Having this information enables the industry to take action before there is a problem. In the past, the focus to improve safety was to identify and address the causes of accidents after they occur. As a result,

aviation safety has continuously improved and, fortunately, today U.S. air carriers have very few accidents. However, the ultimate goal is to prevent accidents from happening at all.

An SMS includes processes to collect and analyze data systematically to identify hazards, assess the risk associated with those hazards, and take actions to mitigate that risk before an incident or accident occurs. An SMS can be scaled to the size of an airline's operation. It is NOT one size fits all. The FAA encourages airlines to create the system that best fits their operations. An SMS does NOT replace FAA oversight or inspections, but it DOES help foster a stronger safety culture within an airline and it ensures that the airline has the necessary processes and procedures to manage the safety of its operations.

To learn more about SMS, please visit https://www.faa.gov/about/initiatives/sms/.

Risk-Based Decision Making: The aviation landscape has changed dramatically over the last decade. Several factors are increasing the complexity of the industry and introducing different types of safety risk into the aerospace system. These factors include new aerospace designs and technologies (e.g., Unmanned Aircraft Systems), changes in FAA's surveillance and oversight model (e.g., designee management programs), and different business models for the design and manufacture of aircraft and products (e.g., supply chains).

The FAA has built the foundation to address the challenges created by this complexity and diversity by developing and implementing an SMS. Risk-Based Decision Making is one of four Strategic Initiatives identified by the FAA Administrator as a top priority. The initiative contains activities to help to further safety management in the FAA.

The Risk-Based Decision Making initiative will enable the FAA to make smarter decisions to improve safety in the aerospace system. Safety data will be shared among FAA organizations, industry, and international peers, leading to a broader spectrum of available data. The data will be analyzed using safety management principles to identify emerging hazards and predict the associated safety risk. The resulting information will be coordinated and shared with the people who are in the best position to manage the safety risk and make the aerospace system even safer. The Risk-Based Decision Making initiative includes the implementation of tools and processes that will enable the FAA to proactively address emerging safety risks using consistent, data-informed approaches to support system-level decisions.

In order to do this, FAA needs to establish data taxonomies to allow better sharing of safety data across the agency and with industry constituents and international peers. This will enhance cross-organizational communication and collaboration and prevent duplication of efforts, as well as allow the FAA to expand its sources of safety data. By working together across the FAA, combined safety data will be analyzed to identify emerging crosscutting hazards, predict the risk associated with those hazards, and develop mitigations to address the risk. The focus will be to look across the system rather than in individual segments in order to get a more comprehensive view. Decisions will be based on safety risk information and responses will be measured, coordinated, and focused on reducing safety risk. The FAA will also evolve its oversight model

to be more efficient and effective using safety management principles and leveraging industry's implementation of SMS to target the application of resources to the areas of greatest safety risk.

Next Steps

Transitioning to a Compliance Philosophy: As aviation evolves, the FAA's oversight model must evolve with it. The FAA's new philosophy on compliance is one of the key activities under the Risk-Based Decision Making initiative. This new approach ensures that FAA decisions affecting industry are made with safety risk fully considered and that oversight models are properly aligned with SMS in industry organizations. It is fully understood that the revised model will require a cultural change in how the FAA views and conducts oversight. In support of this change, the FAA Administrator signed the FAA Compliance Philosophy Order in June 2015. FAA organizations are currently updating their internal policies and training their workforce to align with the Compliance Philosophy.

In 2016, an FAA level oversight policy will be developed to enable a consistent, proactive, and collaborative regulatory approach that is aligned with safety management principles. Using this approach, the FAA and industry will cooperate to actively manage safety risk in the aerospace system. FAA oversight decisions (frequency, depth, and focus) will be based on safety risk and the performance of industry organizations, and oversight resources will be focused on areas of highest safety risk.

Identifying and Addressing Significant Safety Issues: The FAA has established processes to identify and prioritize cross-organizational Significant Safety Issues (SSIs). It is expected that each FAA Line of Business (LOB) will identify SSIs within their area of responsibility and submit a subset of those issues for FAA-level consideration. These issues are consolidated and prioritized into an FAA SSI List. The purpose of the FAA SSI list is to create a decision-making tool for FAA executives and assist them in prioritizing the application of FAA resources based on safety risk.

The FAA SSI List contains crosscutting issues, which means that the issues are potentially systemic and would be most effectively treated by cross-organizational teams. An issue is considered crosscutting if it could affect more than one FAA organization, or if its mitigations require more than one FAA organization to implement. SSIs can indicate ineffective performance and their identification and prioritization will support management's decision making to implement necessary improvements in the system. This process will also increase cross-organizational communication and awareness.

The FAA SSI List will be updated annually. Once the list is finalized, safety assessment teams will be established to conduct Safety Risk Management (SRM) on the issues in the priority established by the list. In 2016, SRM will be applied to at least two FAA level SSIs. Since this is a new process, it is expected that the FAA will become more efficient at conducting these agency-level assessments. So it is expected that the number of FAA-level safety assessments that are conducted will increase in future years.

Hazard Identification, Risk Management & Tracking Tool: With the increasing complexity and interconnectivity of the National Airspace System (NAS), the FAA identified the need for a single integrated tool that provides a consistent and standardized methodology to manage and track hazards. Development of the Hazard Identification, Risk Management and Tracking

(HIRMT) web-based tool was an activity under the Risk-Based Decision Making initiative. The initial capability of the HIRMT tool is scheduled for agency-wide deployment in January 2016.

While many organizations have hazard tracking systems in place, there has not been such a system at the FAA level. HIRMT is not intended to track every hazard across the entire FAA and will not replace existing organizational systems and processes. Instead, FAA will use HIRMT to track safety management efforts for the agency's most complex, critical, and/or cross-organizational safety concerns. These Aerospace System Level (ASL) safety issues will be managed in HIRMT in accordance with the FAA's Safety Risk Management Policy.

FAA personnel are currently being trained on the use of the HIRMT tool. The plan is to evolve the tool, with successive releases after the initial launch, to increase its functionality, as well as the information that it captures. Three such releases are planned for 2016, with a similar schedule expected in the coming years.

Ongoing Air Traffic System Modernization: FAA will continue to develop and deploy technologies to use U.S. airspace in safer, more efficient, and more environmentally sound ways. NextGen is a comprehensive overhaul of our NAS to make air travel more convenient and dependable. NextGen is providing air traffic managers and pilots with the tools to proactively identify and mitigate weather and other potential flight conflicts. Automatic Dependent Surveillance-Broadcast, or ADS-B, moves air traffic control from ground-based radar surveillance to a point-to-point broadcast surveillance.

Runway Safety

In alignment with RBDM, FAA uses safety data from multiple sources, including voluntary safety reports, to proactively identify safety topics to be incorporated into mandatory, semi-annual Recurrent Training that reaches all FAA air traffic controllers. The training implements a dynamic curriculum via web-based and instructor led courses. Past runway incursion prevention topics include risks of using runways as taxiways and hearback and readback error mitigation. In January 2016, a web based course will be delivered focusing on the top errors made by controllers and runway incursion hot spots.

In addition, FAA gathered a full fiscal year of runway safety data using the Surface Risk Analysis Process such as, but not limited to, the safety barriers that were in place during the time of the event and the rate of closure between two aircraft or vehicles. FAA will analyze the gathered data and develop a risk based metric by July 31, 2016. The metric will allow the FAA to set a baseline target to meet every fiscal year by October 1, 2016 and monitor the effectiveness of the programs, processes, and procedures related to surface safety.

Finally, FAA has undertaken a new Compliance Philosophy that includes a Runway Incursion Remedial Training (RT) program for pilots. RT was implemented in October 2015 and uses education to allow airmen who have committed an inadvertent deviation from regulatory standards to enhance their knowledge and skills. FAA intends that the RT program will bring an aviation safety incident to the attention of the airman and encourage future compliance thereby enhancing safety in the NAS.

Goal Leaders

Michael P. Huerta, Administrator, Federal Aviation Administration

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

Margaret Gilligan, Associate Administrator for Aviation Safety, Federal Aviation Administration

Teri Bristol, Chief Operating Officer Air Traffic Organization, Federal Aviation Administration

Railroad Safety

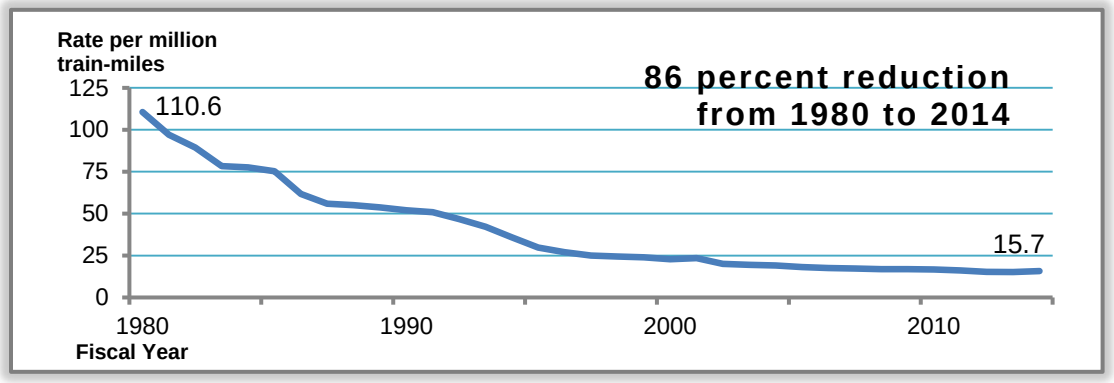
OVERVIEW

FRA's mission is to enable the safe, reliable, and efficient movement of people and goods for a strong America, now and in the future. FRA executes this mission through development and enforcement of safety regulations, investment in passenger and freight rail services and infrastructure, and research and technology development. FRA's activities, and those of the rail industry, have resulted in one of the safest decades ever.

To make further gains, FRA is focused on continuous safety improvement, which requires a comprehensive strategy based on:

- A strong, data-driven oversight and inspection program.
- Proactive approaches for early identification and mitigation of risk.
- Strategic capital investments and a robust research and development program.

Train Accidents and Incidents (1980 to 2014)



PERFORMANCE REPORT

Rail Safety (FRA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Rail-related accidents and incidents per million train-miles	16.697	16.072	15.194	15.028	16.160	15.900	14.624*	Met

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

The effectiveness of FRA's and the rail industry's activities is demonstrated by the following statistics—the number of rail-related accidents and incidents declined by 16 percent between FY 2005 and FY 2014; train accidents dropped by 46 percent; casualties fell by 8 percent; and highway-rail grade crossing incidents decreased by 24 percent.

These results are especially noteworthy because more Americans are choosing rail transportation every day. Amtrak ridership reached 31 million passengers in FY 2014, almost 29 percent higher than in FY 2005. In addition, U.S. rail intermodal freight traffic in FY 2014 exceeded 13 million containers and trailers—5 percent more than FY 2013, the previous peak year.

Although safety performance has improved, significant risks remain in the rail transportation system. The rate of safety improvement has slowed and current safety strategies are approaching their effectiveness limits.

Priority rail safety activities for FRA in 2015 included:

- Leading a multimodal, DOT campaign to strengthen safety awareness and enforcement at highway-rail grade crossings.
    - Phase 1: called on local law enforcement agencies to increase their presence at grade crossings, issue citations to drivers that violate crossing rules, and rapidly adopt best practices.
    - Phase 2: asked railroads, state departments of transportation, and rail authorities to use the U.S. DOT National Highway-Rail Crossing Inventory to identify crossings that would benefit greatly from safety improvement, focus their efforts on grade crossings with the highest likelihoods of collisions, and implement education and enforcement initiatives.
    - Subsequent phases will focus on smart use of technology; awareness about the most dangerous crossings in each state; improved signage, and partnerships with States and local safety agencies.
- Taking more than two dozen actions to ensure the safe transportation of energy products by rail, including issuing emergency orders and safety advisories, voluntary agreements with industry, and improving regulations.

On May 1, 2015, DOT issued the high-hazard flammable train rule, which institutes requirements to reduce accident risks for trains carrying large amounts of flammable liquids and to mitigate consequences of accidents that occur.

PERFORMANCE PLAN

Rail Safety (FRA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Performance Goal: Reduce Rail-related accidents and incidents.	Rail-related accidents and incidents per million train-miles.	15.890	15.880

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

Key Strategies and Next Steps

While maintaining ongoing safety programs, FRA is targeting today's most pressing rail transportation safety challenges:

- Passenger Rail: Commuter and intercity passenger railroads lack capital to deploy life-saving positive train control (PTC) technology and other safety improvements;
- Grade Crossings and Pedestrian Safety: Motor vehicle drivers and pedestrians continue to face significant risks at highway-rail grade crossings and around railroad rights of way;
- Critical Assets: Aging major infrastructure, including bridges and tunnels, on the Northeast Corridor; and
- Energy Products: Hazards from large volumes of crude oil and other energy products, including ethanol and liquefied natural gas, moving by rail.

Passenger Railroad Safety: While railroads have made remarkable safety progress in recent decades, an accident like the May 12, 2015 Amtrak derailment makes clear that hard work remains. The good news is that technology exists today that can prevent some catastrophic accidents on passenger routes Positive train control (PTC) would have prevented the 2013 Metro-North derailment that killed four people when an engineer operated a train too quickly around a curve.[1]

The *Rail Safety Improvement Act of 2008* (RSIA) mandated that certain railroads implement the technology.[2] FRA estimates that the mandate applies to about 68,000 route miles. Most major freight railroads do not expect to implement PTC systems fully until 2017 or later, according to public statements. Most Amtrak-owned routes are already equipped with functional PTC systems. Commuter railroads vary widely in their implementation status.

FRA regulations are the framework for the national PTC deployment. Before using PTC technologies in revenue service, each implementing railroad must submit its PTC safety plan to FRA and then receive FRA system certification. The certification process focuses on ensuring that railroads have (1) the capability to deploy the technology correctly, (2) established adequate training and maintenance programs, and (3) implemented technology that performs mandated functions safely and reliably.

Both before and since this derailment, FRA worked to help railroads plan and implement this critical, Congressionally mandated, life-saving technology. FRA issued a $967 million loan to the New York Metropolitan Transportation Authority, the nation's largest commuter rail service provider, for PTC deployment.

Highway-Rail Grade Crossing and Pedestrian Safety: Improving safety at the almost 130,000 public highway-rail grade crossings is one of FRA's top priorities. Each crossing is the

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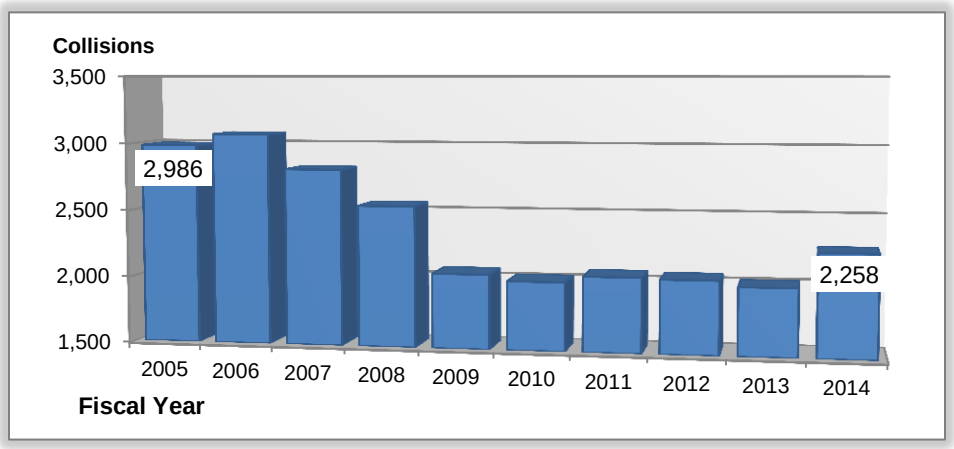
[1] Metro-North is the second largest commuter railroad in the United States, serving New York, Connecticut, and New Jersey, with an annual ridership of almost 83 million people.

[2] All Class I railroad lines that carry poisonous by inhalation hazardous material and 5 million gross tons or more of annual traffic, and on any railroad's main line tracks over which intercity or commuter rail passenger train service is regularly provided. A main line is a line over which 5 million or more gross tons are transported annually.

location of a potential collision between a train and motor vehicle. In fiscal year 2014, the number of grade crossing incidents increased by 12 percent from the previous year, while the number of fatalities was unchanged. The risk of highway-rail grade crossing incidents will likely grow with future train and highway traffic increases.

Highway-Rail Grade Crossing Collisions (2005 to 2014)



The safest crossing is a closed crossing; therefore, increased funding for capital investment is critical. FRA would dedicate funds to local communities for safer highway-rail grade crossings, mitigation of adverse impacts of rail operations. FRA also would provide capital assistance to help resource-constrained short line railroads improve their infrastructure. In addition, FRA is exploring options for delivering effective highway-rail grade crossing grants. Combining DOT's grade crossing resources will increase their effectiveness. FRA proposes new research, development, and technology, including field testing new technologies and developing an intelligent rail systems proof-of-concept for passively protected grade crossings. Additional money will fund a study of blocked highway-rail grade crossings and development of technologies other than conventional inductive loops to detect blocked crossings

Critical Assets: The Northeast Corridor (NEC) is the 457-mile rail backbone of the Northeastern United States that connects the Washington, D.C.; Baltimore, Maryland; Philadelphia, Pennsylvania; New York, New York; and Boston, Massachusetts, metropolitan areas. These areas collectively—

- Generate about 20 percent of U.S. economic output (gross domestic product).
- Have 51 million residents and will likely have 58 million residents by 2040.
- Choose rail for nearly 70 percent of combined air and rail travel in the Washington –New York market; and more than 50 percent of combined air and rail travel in the NewYork - Boston market.
- Support 2,200 passenger trains with approximately 720,000 intercity and commuter riders, every day on average.
- Average 70 freight trains daily.

STRATEGIC GOAL 1: SAFETY

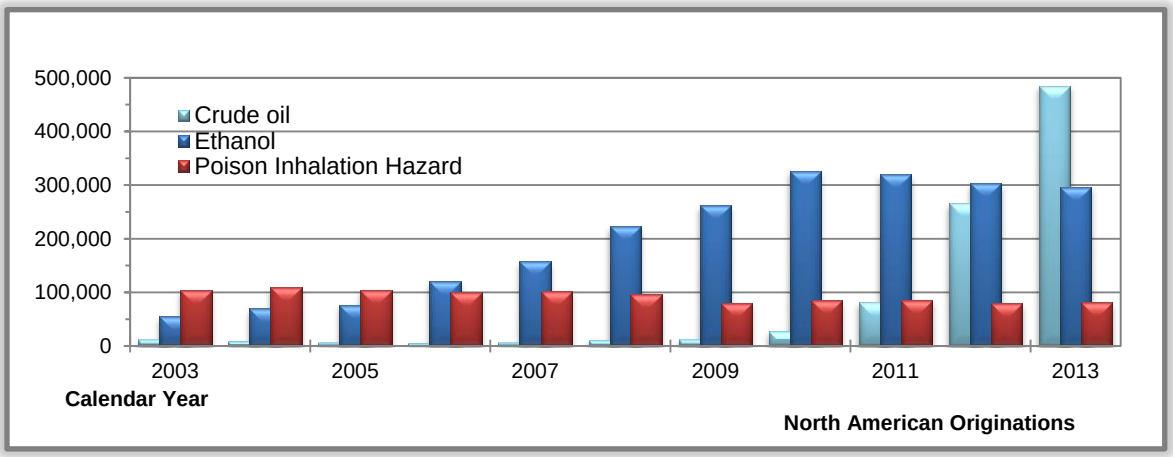
Strategic Objective 1: Improve Safety of System

In April 2015, the multi-party Northeast Corridor Infrastructure and Operations Advisory Commission released the first joint 5-year capital plan for investing in the corridor. The plan identified a nearly $14 billion backlog of major infrastructure assets (primarily bridges and tunnels) that have remained in service well beyond their expected useful life, require extensive maintenance and rehabilitation, and are major sources of corridor delays. The average age of these bridges and tunnels is over 100 years and failure of these infrastructure assets could cripple travel on the NEC. The Commission's 5-year plan identified $366 million in unfunded work for FY 2017.

Movement of Crude Oil and Other Energy Products: Rail transportation of crude oil increased significantly and rapidly, driven by new production from the North Dakota Bakken oil fields and imports from Canada. Ethanol and liquefied natural gas transportation by rail also increased significantly during the last decade. This is a national transportation phenomenon as energy products move from production areas to refineries on the East, West, and Gulf Coasts.

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

Crude Oil, Ethanol, and Poison Inhalation Hazardous Materials Incidents 2003-2013



Source: Association of American Railroads, *Annual Report of Hazmat Transported by Rail*, 2014.

An accident involving large volumes of crude oil can be catastrophic. The 2013 Lac-Mégantic derailment killed 47 people. Since then, trains carrying crude oil have had 22 major accidents in the United States. As the safety and environmental risks grow with increasing shipments of energy products, Congress and the public are demanding rapid and effective remedies.

FRA will use new resources to expand FRA's Automated Track Inspection Program, which complements and extend humans inspection capabilities to locate problems before they lead to derailments. FRA plans to use these resources to increase automated inspection mileage with existing systems, rehabilitate some equipment, and invest in a new platform with integrated track inspection technologies and rail defect detection systems. The funds will also help FRA advance its analytical capability and increase the flow of actionable information for targeted inspections.

FRA also will fund new research, development, and technology to mitigate rail transportation risks of crude oil and other energy products. Focus areas include tank car and rail integrity and developing the scientific and engineering foundation to continue revamping of FRA's track safety regulations. These funds will also help the Short Line Safety Institute develop and expand, with an executive director and training director. Insurance companies, vendors, and shippers will also provide resources. FRA's partnership with the Institute's sponsor, the American Short Line and Regional Railroad Association, will increase our understanding of small railroads' unique safety challenges and options for resolving them. FRA also plans to investigate the use of unmanned aircraft systems (UAS) to inspect railroad assets, anticipating that railroads intend to use UAS technologies in variety ways including inspecting tracks and bridges.

Goal Leaders

Robert C. Lauby, Associate Administrator for Railroad Safety and Chief Safety Officer, Federal Railroad Administration

Paul Nissenbaum, Associate Administrator for Railroad Policy and Development, Federal Railroad Administration

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

John Tunna, Director of Research and Development, Federal Railroad Administration

Transit Safety

OVERVIEW

According to the National Safety Council, passengers on the Nation's bus, rail and commuter rail systems are 40 times less likely to be involved in a fatal accident than passengers in cars and trucks. Despite this record of safety, each year there are more than 200 fatalities related to public transportation. We can do better. In 2013, 266 fatalities were reported on public transportation, an increase from 2009 to 2012 when fatalities totaled between 220 and 260. FTA is committed to pursuing a flexible SMS approach in order to help a safe industry become even safer, by fostering sound safety policy, more efficient practices for risk management and safety assurance, and a strong safety culture at every transit system, whatever its size or mode of operation.

PERFORMANCE REPORT

Transit Safety (FTA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Transit fatalities per 100 million passenger-miles traveled	0.533	0.535	0.604	0.609	0.523*	0.52	0.518*	Potentially Met 

**Preliminary data*

Progress Update – Results

Over the past year, the Federal Transit Administration (FTA) has made great strides in carrying out the new Moving Ahead for Progress in the 21st Century Act (MAP-21) safety responsibilities, reflecting the most significant program change in the agency's history. Since passage of MAP-21, FTA has established its new Office of Transit Safety and Oversight, and hired its first Associate Administrator for Safety and has increased staffing to more than 25 total employees.

FTA also embarked on substantial rulemaking and program guidance. The cornerstone is the National Public Transportation Safety Program, which was published for notice-and-comment in August 2015. The National Public Transportation Safety Program establishes a Safety Management Systems approach as the framework for continuous improvement in transit safety. FTA also published a Notice of Proposed Rulemaking (NPRM) enhancing its State Safety Oversight Program as well as interim provisions for safety training certification in February 2015. The interim provisions created the first-ever Federal training requirements for Federal and State personnel who conduct safety audits and examinations. In June 2015, FTA also released a safety advisory for inspections of tunnel ventilation systems and tunnel evacuation procedures, in light of the tragic fatality that occurred on the Washington (DC) Metro after smoke filled a tunnel. FTA continues to develop additional supporting rules, including those for the National Public Transportation Safety Plan and for the Public Transportation Agency Safety Plans.

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

Finally, FTA has successfully aided 29 States in developing work plans to achieve MAP-21 safety compliance. FTA has published a final apportionment notice making approximately $66 million in grants available to those States and awarded 27 State Safety Oversight Formula Grants.

PERFORMANCE PLAN

Transit Safety (FTA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Performance Goal: Reduce transit fatalities to 0.491 per 100 million passenger miles traveled by FY 2018.	Transit fatalities per 100 million passenger miles traveled.	0.51	0.50

Key Strategies

FTA is working diligently to stand up the National Public Transportation Safety Program under MAP-21. To fulfill our commitment to developing an effective regulatory safety oversight program for the transit industry, FTA continues to strengthen the State Safety Oversight Program, develop a comprehensive SMS-focused training program, broaden the charter for the Transit Advisory Committee for Safety and kick-off the study of fatigue and operator assault prevention measures that will inform future safety rulemakings. FTA also issued three safety advisories covering vintage trolley operation, right-of-way worker protection and safe stopping distances for rail transit. In addition, FTA published a very comprehensive Advanced Notice of Proposed Rulemaking (ANPRM) for public comment on safety and transit asset management in October 2013. FTA also initiated a first-of-its kind safety examination that will help provide a path forward for highlighting best practices using SMS.

Next Steps

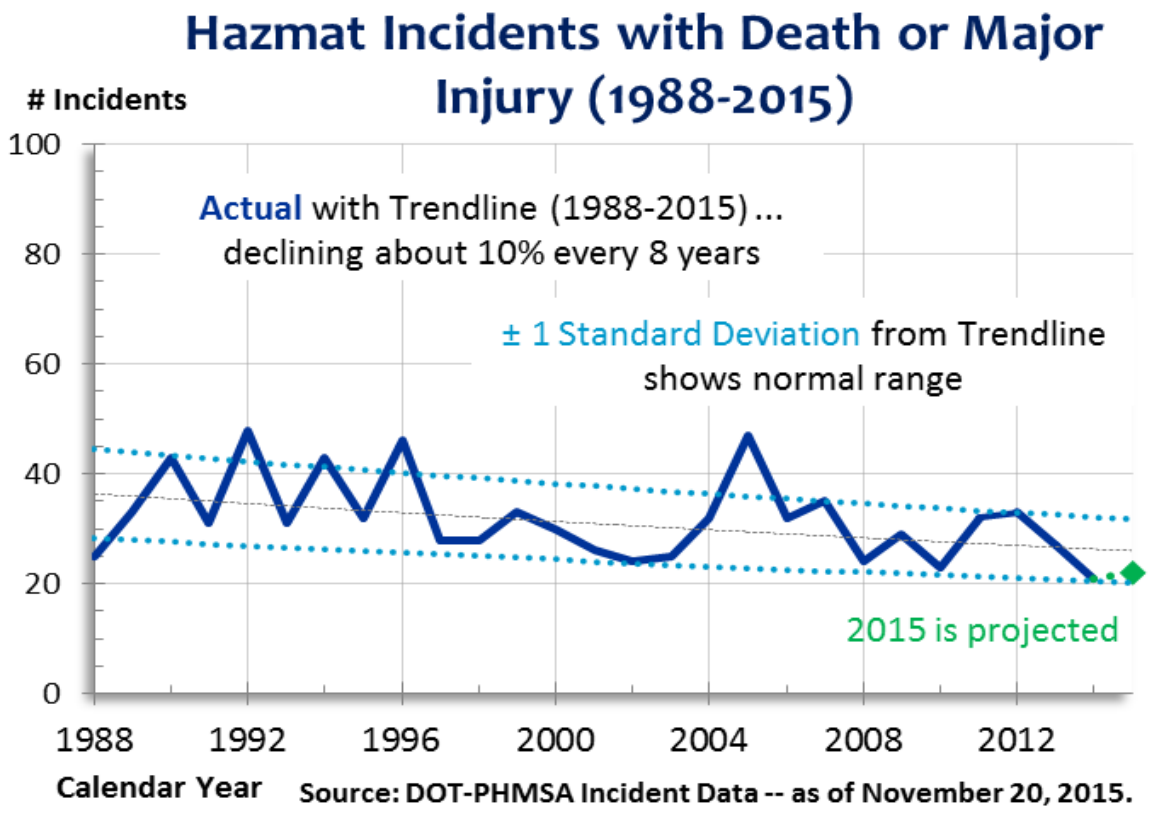
In 2015, FTA plans to publish rules for comment for a stronger, more effective State Safety Oversight Program and a Public Transportation Safety Certification Training Program to prepare qualified safety experts for audits and examinations. FTA will issue a National Public Transportation Safety Plan, subject to public notice and comment, to set forth FTA's vision and intensions for a National Public Transportation Safety Program. In the first quarter of 2015, FTA will initiate an SMS pilot program for transit agency implementation.

Goal Leader

Thomas Littleton, Assistant Administrator, Office of Safety, Federal Transit Administration

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

Hazardous Materials Safety



Overview

PHMSA's mission is to protect people and the environment from the risks of hazardous materials transportation. Every year, more than 2.5 billion tons of regulated hazardous materials—including explosive, poisonous, corrosive, flammable, and radioactive materials—valued at about $2.3 trillion are moved 307 billion miles on the nation's transportation network.[3] These shipments move through densely populated or sensitive areas where the consequences of an incident could be loss of life or serious environmental damage.

Despite the risk, transporting hazardous materials underpins the United States' economy and quality of life. Oil and natural gas are used to heat and cool homes and businesses, transport commercial products and people, and produce electricity. Hazardous materials are also used in processes like water purification, fertilizing crops, producing medicines, and manufacturing many other products. Therefore, it is critical that the work PHMSA does to keep the public,

[3] 2012 Commodity Flow Survey, Research and Innovative Technology Administration (RITA), Bureau of Transportation Statistics (BTS). See http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=CFS_2012_00H01&prodType=table

property, and the environment safe from hazardous materials during transport also ensures that these products can move easily through the marketplace to meet public demands.
PHMSA's hazardous materials strategic goal is "to improve public health and safety by reducing transportation-related deaths and injuries." This goal is aligned with PHMSA's mission of protecting people and the environment from the risks of hazardous materials transportation. Accordingly, PHMSA measures the number of incidents with death or major injury involving the transport of hazardous materials against annual performance targets.

PERFORMANCE REPORT

Hazardous Materials Safety (PHMSA)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	**Performance**
Hazardous materials incidents involving death or major injury	23	32	33(r)	27(r)	23	31	22*	Met

(r) revised

Progress Update

Based on preliminary data, PHMSA is projected to beat its target of 31 hazardous materials incidents involving death or major injury in 2015, with 22 incidents projected by the end of the year. PHMSA has implemented a risk-based systems approach that uses data to help drive program priorities, improve its ability to direct emerging risks and target its resources toward prevention activities. This approach has contributed to an overall downward trend in the number of incidents involving death or major injury, which have declined an average of approximately 10 percent every eight years over the long term (1988-2015). The relatively low number of annual deaths and injuries is due to PHMSA's mission effectiveness, particularly considering that the number of hazardous materials shipments have increased dramatically in recent years.

PHMSA uses risk management principles and data visualization technologies to identify potential incidents. By using new and existing data in new ways, PHMSA is identifying emerging trends and enhancing its understanding of the hazardous materials transportation system. Leveraging data and risk management principles allows PHMSA to allocate resources based on acuity, and better to support programs that promote the safe transportation of hazardous materials. Additionally, using measurable results guides PHMSA's actions in a more meaningful way.

For instance, PHMSA applies this data-driven, risk-based approach when:

- Evaluating policy and regulations;
- Developing risk models for areas of future interest;
- Establishing training curricula and outreach programs based on high consequence events; and
- Identifying safety and budgetary priorities.

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

The success in reducing the number of hazardous materials incidents involving death or major injury is a result of PHMSA's commitment to its safety mission. To reflect that commitment, PHMSA established the following priorities in its Office of Hazardous Materials Safety (OHMS) strategic plan:[4]

- **Streamline and Improve our Regulatory System** − Focus on modernizing and streamlining our internal processes and harmonizing regulations to reduce the burden of regulatory actions.
- **Enhance Risk Management Principles and Encourage the Use of Safety Management Systems** − Continue to build a risk assessment methodology based on a multidisciplinary approach, including developing better commodity flow data; improving incident report data and damage estimates (particularly environmental damages); and applying statistical analysis, data modeling, and predictive analytics.
- **Increase Compliance, Training, and Outreach** − Remain vigilant through ongoing inspections, investigations and enforcement efforts to ensure that carriers/shippers of hazardous materials understand, prioritize and address their safety risks. PHMSA will continue to educate and empower its stakeholders, the American public, and first responders.
- **Improve Preparedness and Response** − Take a focused approach to increasing community awareness and preparedness regarding hazardous materials in transportation. This would include utilizing the grants program to the fullest extent.
- **Foster Robust Research and Development, and Innovation** − Improve Information Technology (IT) functionality and web-based accessibility through an ongoing effort within IT Modernization. This would focus on implementing innovative safety solutions that are data-driven, forward looking, and transparent.

Information Gaps

PHMSA reports on its Strategic Performance Indicators on a calendar year cycle for consistency with a wide array of stakeholders, which creates a three month delay in completing reporting. Additionally, the number of hazardous materials incidents with death or major injury for 2015 is estimated due to data lags. Title 49 of the Code of Federal Regulations (49 CFR Parts 171-180) requires that certain types of hazardous materials incidents be reported to PHMSA. Section 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 incident, based on certain circumstances. Incident reports for all hazardous materials incidents with death or major injury in 2015 will not be received until the end of January 2016. There are also reporting delays in practice, as many companies do not file incident reports on time.

[4] The current plan runs through 2013-2016 and is available at http://www.phmsa.dot.gov/pv_obj_cache/pv_obj_id_831686A536E88748B9AF7F73F8EFD39FAB5E1700/filename/PHMSA_Strategic_Plan_2013_2016Final.pdf.

STRATEGIC GOAL 1: SAFETY
Strategic Objective 1: Improve Safety of System

PERFORMANCE PLAN

Hazardous Materials Safety (PHMSA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Performance Goal: Reduce natural gas and hazardous materials pipeline incidents involving death or major injury..	Hazardous materials incidents involving death or major injury.	20-31	20-31

Key Strategies and Next Steps

PHMSA works to protect people and the environment throughout the transportation system. Accurate and sufficient incident data is necessary to overcome challenges identified in PHMSA's OHMS strategic plan.These include:

1. *Safe transportation of energy products by rail*. The emergence of the United States as a leading energy producer has changed our transportation system and presented new challenges for PHMSA. The growing reliance on trains to transport large volumes of flammable liquids poses a significant risk to life, property, and the environment. In recent years, rail incidents involving flammable liquid releases and resulting fires with severe consequences have occurred with increasing frequency (e.g., Arcadia, OH; Plevna, MT; Casselton, ND; Aliceville, AL; Lynchburg, VA; Mount Carbon, WV, and Galena, IL). To lessen the frequency and consequences of train incidents, PHMSA has promulgated regulations that:
   - Implement new operational requirements for certain trains transporting a large volume of Class 3 flammable liquids such as routing requirements, speed restrictions, and information for local government agencies;
   - Adopt new tank car standards that 1) Improve puncture resistance; 2) Improve thermal protection and survivability; and 3) Protect equipment;
   - Require enhanced tank car standards and an aggressive, risk-based retrofitting schedule for older tank cars transporting large volumes of flammable liquids; and
   - Revise the general requirements for offerors to ensure proper classification and characterization of mined gases and liquids.

PHMSA continues to address the risks associated with the rail transport of energy products and improve emergency preparedness and communication through outreach efforts and further future regulation.

2. *Bulk Transportation of Hazardous Materials that are Toxic by Inhalation (TIH)* presents a very low-probability, very high-consequence risk in many modes of transportation. PHMSA's strategy for addressing these issues is to:
   - Develop standards for loading and unloading of bulk hazardous materials, including TIH;
   - Advance rail tank car design; and

3. Assess the risks associated with railroad transportation of hazardous chemicals through urban centers.
   Hazardous Materials that Present a Risk of Fire Aboard Aircraft: An aircraft in flight is particularly vulnerable to the risk of fire, and the consequences can be catastrophic. PHMSA's strategy for dealing with this challenge is to:

   - Strengthen rules/standards for transporting lithium batteries and other hazardous materials by air;
   - Stay in touch with advances in technology through outreach, research, and applications for permits and approvals; and

4. Continue to work with modal partners and international regulatory bodies to strengthen global requirements.
   Rollover Crashes Involving Tank Trucks Carrying Gasoline and Other Flammable Liquids are the leading cause of injuries and deaths from hazardous materials transportation incidents. PHMSA's strategy for dealing with this challenge is to:

   - Develop new standards for electronic stability control for trucks; and
   - Work with other DOT operating administrations to improve driver training and to reduce driver fatigue.

Goal Leaders

Magdy El-Sibaie, Associate Administrator for Hazardous Materials Safety (PHMSA).

Pipeline Safety

Overview

Natural gas and hazardous liquid pipelines supply more than two-thirds of the fuel used to heat, cool, and operate American homes, cars, and businesses—including most of the energy for transportation—through a network of 2.7 million miles of pipelines. While pipelines are by many measures the safest mode of transportation for these materials, the nature of the cargo is inherently dangerous, and because of the large volumes transported, it presents a risk of low-probability, high-consequence failure.

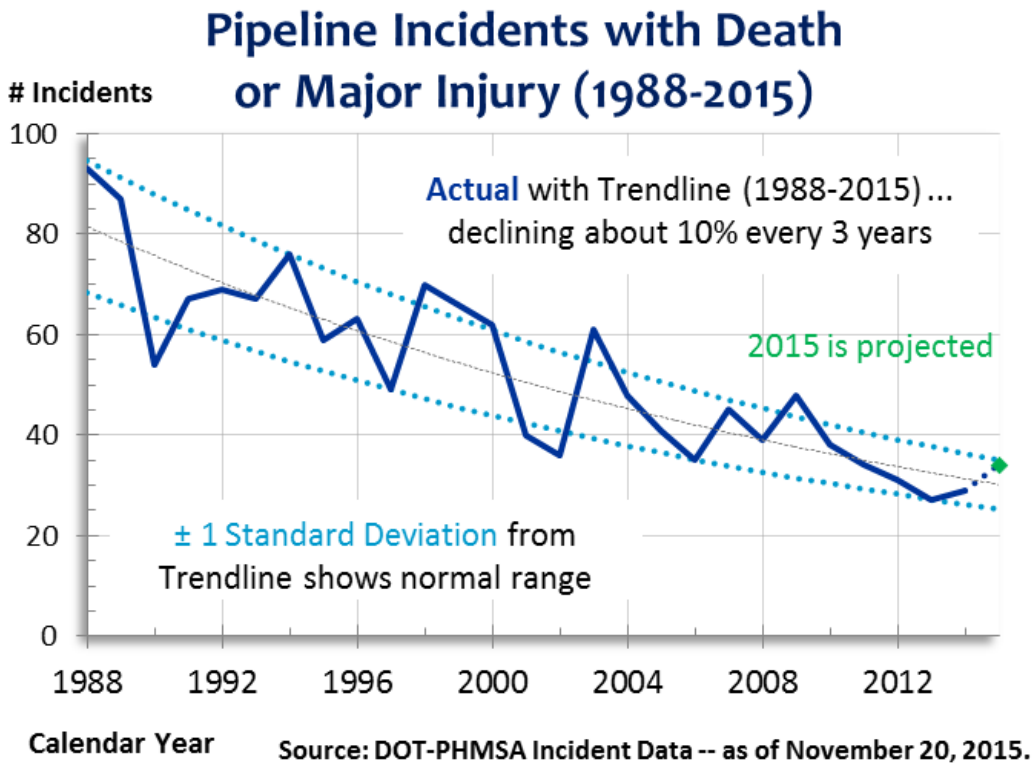
Pipeline incidents with death or major injury (serious incidents) have declined an average of 10 percent every three years between 1988 and 2015. At the same time, most measures of risk exposure—U.S. population, pipeline mileage, and pipeline ton-miles—have increased.

Most of the risk (about 80 percent of the incidents with death or major injury) occurs on natural gas distribution systems, which provide direct services to over 67 million households and businesses. Since 1988, this risk has dropped from about 1.5 serious incidents per million services to 0.5 per million services.

PHMSA oversees the safety and environmental protection of pipelines through the execution of the following key priority areas:

- Analysis of data;
- Damage prevention;
- Education and training;

- Rulemaking;
- Enforcement of regulations and standards;
- Research and development;
- Grants for States' pipeline safety programs and communities;
- Pipeline mapping;
- Community assistance and outreach; and
- Emergency planning for response to accidents.



PERFORMANCE REPORT

Pipeline Safety (PHMSA)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	**Performance**
Pipeline incidents involving death or major injury	38	34	31(r)	27(r)	29	36	34*	Met

*(r) revised, * projected*

Progress Update

Based on preliminary 2015 data, PHMSA projects that there will have been 34 pipeline incidents involving death or major injury, which is below the target of 36. While pipelines are by many

measures the safest mode for transporting hazardous liquid and natural gas, the nature of their products is inherently dangerous. To address this hazard, PHMSA has designed and implemented a strong, risk-based, systems approach to protect the safety, security, and reliability of the Nation's pipeline infrastructure. PHMSA also recognizes the importance of strong engagement with stakeholders and the continued focus on excavation or construction-related damage. Coordination with State pipeline agencies and execution of these critical programs have played an important role in reducing the number of deaths and injuries resulting from pipeline incidents.

Pipeline corrosion and material failure are the two leading causes of transmission pipeline incidents. PHMSA's ongoing efforts to address these challenges are to integrate, target, and expand safety inspections based on the most serious risks and focus pipeline safety research on methods that might be used to improve identification of defects.

Excavation damage is the leading cause of distribution pipeline reportable incidents and the leading cause of harm to people and property for all pipeline incidents. For more than a decade, PHMSA has been an active participant in national, regional, and State efforts to improve excavation damage prevention. PHMSA continues to advance the "811—Call Before You Dig" public awareness campaign, expand geospatial data collection and analysis to help identify high-risk areas, and will gradually expand the risk-based inspection program to address the risk of excavation damage. Furthermore, PHMSA's final rule on excavation damage enforcement issued in 2015 directly

targets improved performance and the reduction of excavation damage to pipelines through the enforcement of damage prevention laws. PHMSA is developing proposed rules to strengthen the hazardous liquids and gas transmission regulations to positively impact the safety of all pipelines from these risks.

Additionally, PHMSA is working to promote Safety Management Systems (SMS) and safety culture in the pipeline industry. This requires a commitment to safety on every level of an organization, and integrity management plays a role. Specifically, PHMSA helped develop the American Petroleum Institute's new pipeline SMS standard—Recommended Practice (RP) 1173 published in July 2015. PHMSA also held a series of workshops to review RP 1173 and discuss successful aspects and best practices of SMS and safety culture in multiple industries.

PHMSA will remain vigilant through ongoing inspections, investigations and enforcement efforts to ensure that operators understand, prioritize and address their safety risks, and build a national safety culture. PHMSA will continue its efforts to enhance outreach presence among the public and communities by engaging, educating and empowering the public and first responders to become more involved in pipeline safety.

PHMSA learns from past incidents while also using preventive practices to mitigate future risk. We are developing and providing key performance indicators for individual pipeline companies. PHMSA also looks to address shortcomings in pipeline safety technologies by promoting and expanding research and development within the pipeline industry and academia.

Information Gaps

PHMSA reports on its Strategic Performance Indicators on a calendar year cycle for consistency with a wide array of stakeholders, which creates a 3-month delay in completing reporting. Additionally, the number of pipeline incidents with death or major injury for 2015 is estimated

due to data lags. Title 49 of the Code of Federal Regulations (49 CFR Parts 191, 195) requires pipeline operators to submit incident reports within 30 days of a pipeline incident or accident. Based on the 30 day lag for reports in December, accident/incident reports for all pipeline incidents with death or major injury in 2015 will not be received until the end of January 2016.

PERFORMANCE PLAN

Pipeline Safety (PHMSA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Performance Goal: Reduce natural gas and hazardous liquid pipeline incidents involving death or major injury.	Pipeline incidents involving death or major injury.	24-33	23-32

Key Strategies and Next Steps

High risk, aging and obsolete pipeline infrastructure: Over 700,000 miles of pipelines were installed before 1970. Some of these pipelines were built with bare steel, iron, copper, or "other" materials that are more vulnerable to deterioration and failure than the materials commonly used today. Our strategy for dealing with this challenge is to:

- Work with State pipeline safety programs and pipeline operators to assure that the identification, repair, rehabilitation, requalification, or replacement of the highest risk pipelines is accelerated;
- Enhance pipeline integrity management programs to cover more miles of gas transmission and hazardous liquid pipeline systems;
- Inspect gas distribution integrity management programs to ensure the integrity requirements in PHMSA regulations are being implemented; and
- Investigate new technologies for improving the assessment, detection and control of pipeline risks.

Excavation and other outside force damage that compromises pipeline integrity remain the two leading causes of incidents involving gas transmission and gas distribution systems resulting in death or major injury. Our strategy for dealing with these challenges is to:

- Enhance the "811—Call Before You Dig" program at the State and local levels to prevent pipeline damage from excavation;
- Promote awareness and use of recommended practices for land use planning and development near transmission pipelines;
- Support state damage prevention legislative initiatives; and
- Promote awareness and use of the national pipeline mapping system.

Goal Leaders

Jeff Wiese, Associate Administrator for Pipeline Safety (PHMSA).

STRATEGIC GOAL 2: STATE OF GOOD REPAIR

Ensure the US proactively maintains critical transportation infrastructure in a state of good repair.

Strategic Objective 2.1—Maintain or Improve Operating Conditions

Maintain or improve the availability, reliability, and performance of the Nation's transportation infrastructure, equipment, and facilities by ensuring that they are functioning as designed within their useful lives.

PERFORMANCE SUMMARY

Recent reports on the condition of our highways, bridges, transit assets, and passenger rail facilities reveal that many fall short of a state of good repair. As a result, the performance of the U.S. transportation network is compromised in terms of its safety, capacity, and efficiency.

DOT's role in achieving state of good repair varies from mode to mode. The Department can significantly influence the condition of federally funded highway, transit, and airport infrastructure through regulation, program guidance, and technical assistance to State departments of transportation, transit agencies, and airport authorities; as well as through research and development to produce the knowledge, guidance and innovations needed to more effectively address the Nation's infrastructure challenges. While DOT has influence on state of good repair for highways, transit, and airports, federal influence over the level of state of good repair investment in other modes like railroads, seaports, and pipelines is limited to primarily safety concerns. Much of these infrastructure facilities are funded and maintained by the private sector.

DOT Operating Administrations (OAs): The following OAs contribute to DOT's strategic objective of maintaining the Nation's transportation infrastructure: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Aviation Administration (FAA), Pipeline and Hazardous Materials Safety Administration (PHMSA), and Federal Railroad Administration (FRA).

STRATEGIC GOAL 2: STATE OF GOOD REPAIR
Strategic Objective 2.1: Maintaining or Improving Operating Conditions

Roadway Conditions (FHWA)

Overview

The condition of pavement, bridges, and tunnels across the country varies considerably and many States are struggling to maintain current conditions. DOT will continue to make state-of-good repair a top priority in its ongoing commitment to advance strategies and initiatives to improve the condition and performance of the Nation's roadways. The National Highway System (NHS), which includes the Interstate system, principal arterial routes, the Strategic Highway Network and connectors, and intermodal connectors, comprises most major routes with the largest bridges, greatest amounts of traffic, and most important linkages between ports and cities. While the NHS represents only 5.4 percent of highway mileage and 8.9 percent of lane mileage, 55 percent of the Nation's vehicle miles traveled (VMT) occurred on the NHS during 2012. Likewise, about 83 percent of truck travel, including most of the heavy truck movement across multiple state lines, occurred on the NHS. While representing only about 23 percent of the more than 611,000 bridges in the Nation, NHS bridges comprise about 213.5 square meters, or 58 percent of the total bridge deck area, and carry 79 percent of annual daily traffic. In MAP-21, the NHS was expanded by over 50,000 miles and the addition of nearly 23,000 bridges with approximately 30 million square meter of deck area.

Working with the States, DOT monitors and reports the condition of pavement on the NHS by measuring ride quality. In 2014, the latest year for which data are available, the percent of VMT on the NHS with good to very good ride quality was 58.7 percent. A large increase in Federal highway capital investment under the Recovery Act, combined with a decrease in construction material prices, contributed to the significant improvement in the smoothness of pavements between 2010 and 2014. DOT currently measures bridge condition as the percent of deck area on NHS bridges considered structurally deficient. In 2014, DOT met its original long-term target to decrease the percent of deck area of structurally deficient bridges on the NHS to 6.0 percent or lower by 2018. Structurally deficient deck area continues to steadily decrease. In 2015, it decreased to 5.6 percent, which was below the target of 5.9 percent, in 2015. Targets for FY 2016-17 have been revised further.

PERFORMANCE REPORT

Roadway Conditions (FHWA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Percent VMT on NHS with good to very good ride quality	55.0 %(r)	54.3 % (r)	57.1% (r)	57.7% (r)	58.7%	60.3%	N/A	Potentially Met 
Percent of Deck Area on NHS Structurally Deficient Bridges	8.3%	7.8%	7.1%	6.8% (r)	6.0%	5.9%	5.6%	Met 

Notes: (r) – revised,

STRATEGIC GOAL 2: STATE OF GOOD REPAIR
Strategic Objective 2.1: Maintaining or Improving Operating Conditions

Progress Update- Results

Properly maintained roads that meet the standard of a good or very good rated ride are safer because drivers are less likely to lose control of the vehicle, saving money for both the user and taxpayers. Deficient bridge conditions can impact the movement of people and goods through reduced load carrying capacity and geometric constraints. With an increase in funding through the National Highway Performance Program (NHPP), pavement ride quality rated good or very good on the NHS is forecast to improve to 64.3 percent by 2018. FHWA reports conditions on structurally deficient bridges on the NHS, a subset of all publicly owned deficient bridges that are most critical to efforts to move the overall number. At the end of 2015, the total deck area on 5,481 structurally deficient bridges on the NHS was estimated at 5.6 percent and is forecast to decrease to 5.4 percent by 2018. Despite the positive trends in bridge condition, the challenge of continuing the improvement trends and preserving existing assets remains.

In January 2015, DOT issued a Notice of Proposed Rulemaking (NPRM) that would establish a new regime of national performance measures for pavement and bridge conditions in the coming years. As part of a national performance management framework called for in MAP-21, States will be required to make significant progress towards achieving targets for these performance measures, with the state-by-state results being aggregated and reported nationally.5 The proposed measures are

- Percent of pavements in Good condition on the Interstate and on the NHS portion excluding the Interstate and
- Percent of pavements in Poor condition on the Interstate and on the NHS portion excluding the Interstate.

DOT proposes to establish two bridge condition measures using a classification system of Good, Fair, and Poor. The two proposed measures are

- Percent of NHS bridges classified as in Good condition and
- Percent of NHS bridges classified as in Poor condition.

The proposed condition measures will reflect the lowest National Bridge Inspection component (i.e., Deck, Superstructure, Substructure, and Culvert) rating for a bridge, weighted by the deck area.

During FY 2015, DOT continued to develop, update and/or deploy elements of bridge and tunnel design, inspection and rating programs that address structural, geotechnical and hydraulic features. Several circulars that provide practioners the most current technical guidance and information related to hydraulic and geotechnical transportation engineering were issued. FHWA continued to work with States to complete plans of corrective actions needed to return to compliance with the National Bridge Inspection Standards (NBIS). Assistance was provided to

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[5] The current pavement condition measure is based on a single metric, which is the International Roughness Index, weighted by VMT. The proposed measures are based on multiple pavement metrics (e.g., International Roughness Index, rutting, Cracking Percent, faulting) and system mileage.

several States on all aspects of the program, with a focus to improve bridge load ratings and scour practices per their plans of corrective action.

DOT published a *Final Rule* effective August 2015 that will ensure uniform standards for inspecting tunnels on all public roads, on and off Federal-aid highways, including Tribal and Federally owned tunnels. The regulation requires the creation of a reliable national tunnel inventory that can be used to determine the condition of tunnels and prioritize repairs, rehabilitation, or replacement to ensure public safety. Pursuant to establishing a National Tunnel Inspection Standards (NTIS) as called for in *MAP-21*, DOT began developing an oversight program that will focus on compliance and assessment of tunnels.

Information Gaps

Continued support for two of FHWA research programs, Long Term Pavement Performance (LTPP) and Long Term Bridge Performance (LTBP), is critical to advancing our understanding and prediction of infrastructure performance. In a continuing partnership with American Association of State Highway and Transportation Officials (AASHTO), Transportation Research Board, and the State transportation agencies that own the LTPP test sections, FHWA continues to perform research to identify the factors that influence pavement performance and develop products which highway engineers can apply to make decisions concerning pavement management, design, and rehabilitation. As part of its LTBP program, FHWA is working with its partners to advance the understanding of bridge performance. This work includes state-of-the-art condition assessment of concrete bridge decks, joints, bearings, prestressed concrete girders, and coatings for steel girders. The LTBP data are collected using traditional bridge inspection methods, as well as automated methods using advanced technologies. The data will be used to create beneficial tools for bridge owners, who must make decisions for planning and operations, and for prioritizing maintenance, rehabilitation, repair, and replacement of their assets.

The issue of asphalt durability has reemerged as material suppliers have adapted to the ever-changing marketplace for petroleum products and recycled materials (e.g., reclaimed asphalt pavement, recycled engine oil bottoms, and recycled asphalt shingles. FHWA is conducting research to form the basis of expanded guidance to support effective evaluation and use of these materials in the construction of truly sustainable highway pavements.

Through the Every Day Counts (EDC) initiative, FHWA has a number of projects under way to accelerate infrastructure construction and preservation. For example, research is under way to test the use of precast concrete bridge deck elements with steel beam superstructures in order to accelerate bridge construction. The results of the research will assist engineers and other transportation decision makers to utilize precast elements more effectively and efficiently, leading to improved bridge safety, integrity, and performance, as well as reduced construction delays.

Transportation agencies must use quality assurance standards to control, monitor, and assess the construction quality of bridges, pavements, and other highway infrastructure. FHWA is developing best practices and standards to strengthen and improve core areas of agencies' quality assurance programs, such as independent assurance, dispute resolution, data validation, and acceptance procedures.

STRATEGIC GOAL 2: STATE OF GOOD REPAIR
Strategic Objective 2.1: Maintaining or Improving Operating Conditions

PERFORMANCE PLAN

Roadway Conditions (FHWA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Increase the percent VMT on the National Highway System (NHS) meeting pavement performance standards for good to very good rated ride quality to 64.3 percent or higher by 2018.	Percent VMT on NHS with good to very good ride quality.	61.4%	62.7%
Decrease the percentage of deck area NHS structurally deficient bridges to less than 6.0% by 2018.	Percent of Deck Area on NHS Structurally Deficient Bridges	5.5%	5.4%

Key Strategies

Past research efforts have provided a wide array of tools, technologies, guidance and specifications to support effective management of highway infrastructure. FHWA-sponsored RT&E has:

- Enabled the development of the AASHTO's Mechanistic Empirical Pavement Design Guide (MEPDG) and accompanying AASHTOWARE Pavement ME™ software.
- Improved specifications and test methods for paving materials to achieve greater durability and sustainability including improvements to SuperPave specifications and a test method for a coefficient of thermal expansion that is key to concrete pavement performance.
- Provided analytical tools such as the RealCost and CA4PRS software to support agency pavement design and construction sequencing decisions.
- Provided improved standards for design and structural evaluation of bridges, such as more complete guidance for design and evaluation of gusset plates in the wake of the I-35 bridge collapse in Minneapolis research that resulted in newly revised specifications adopted by AASHTO.

Next Steps

In FY 2016, NHPP will support important activities associated with further implementing MAP-21 and FAST including:

- Dedicated funding for maintaining and improving the condition and performance of the NHS;
- Inspection and evaluation of bridges, tunnels, and other highway assets, as well as the provision of training for bridge and tunnel inspectors; and
- Support for State and local transportation agencies as they work to apply innovative revenue generation, procurement, and project finance strategies to support major infrastructure enhancements.

STRATEGIC GOAL 2: STATE OF GOOD REPAIR
Strategic Objective 2.1: Maintaining or Improving Operating Conditions

Surface Transportation Block Grant Program will improve highway infrastructure condition and performance, on and off the NHS by:

- Demonstrating innovative practices to extend life, improve performance, speed construction; and
- Providing physical improvements to highways, including designated routes of the Appalachian Development Highway System and local access roads.

Highway RT&E programs will improve knowledge, specifications, design methods, guidance, tools, technologies, and other products that will enable:

- Improvement in the safety-related attributes and characteristics of highway infrastructure.
- Demonstration of innovative practices to extend infrastructure life, improve performance, speed construction.
- Construction of more durable highway infrastructure that minimizes: the duration and frequency of lane closures for both initial construction and future maintenance and rehabilitation measures; and the life-cycle costs of the infrastructure from both an economic and environmental perspective.
- Improved connection technologies for prefabricated bridge systems and updated cost-effective design and construction methods that integrate bridge spans with roadway approaches.
- Increased compliance with established plans of corrective actions and improvement plans under the National Bridge Inspection Program (NBIP) oversight process.
- Development of guidelines for the expanded use of reclaimed asphalt pavement and fly ash in infrastructure materials.

The Federal Lands Tribal and Transportation Program (FLTTP) will complete construction and engineering projects that will improve multimodal access, support increasing visitation, and improve visitor experiences at recreational areas on public lands; and expand economic development in and around Federal lands, while preserving the environment and reducing congestion at our national treasures. The FLTTP will support transportation planning, research, maintenance, engineering, rehabilitation, and construction of transportation facilities that provide access to, are within, or are adjacent to Tribal lands.

Goal Leaders

Walter Waidelich, Associate Administrator for Infrastructure, Federal Highway Administration
Michael Trentacoste, Associate Administrator for Research, Development and Technology, Federal Highway Administration
Timothy Hess, Associate Administrator for Federal Lands Highway, Federal Highway Administration

STRATEGIC GOAL 2: STATE OF GOOD REPAIR
Strategic Objective 2.1: Maintaining or Improving Operating Conditions

Runway Conditions (FAA)

Overview

The FAA works closely with the Nation's airports[6] to ensure a good state of repair for runways. This requires careful attention to pavement condition and strategic timing of rehabilitation, resurfacing or reconstruction projects, which can create operational impacts if the timing is not carefully considered.

Airports are generally responsible for funding periodic and ongoing maintenance. Periodic maintenance of runways, particularly resurfacing, is a cost-effective way to delay the need for major runway rehabilitation. Deferred or delayed maintenance creates an increased risk of damage to aircraft and is a safety concern for the travelling public; and increases both the scope and cost of eventual rehabilitation or reconstruction.

Airports of all sizes rely on FAA's financial assistance for significant rehabilitation, resurfacing, and reconstruction of runways and major taxiways. Smaller commercial service airports and particularly general aviation airports often lack sufficient revenue sources to finance routine maintenance in a timely manner.

FAA helps fund a broad range of capital infrastructure development at most airports in NPIAS including more significant rehabilitation, resurfacing or reconstruction projects. FAA's goal is to maintain at least 93 percent of the Nation's paved runways in excellent, good, or fair condition. This level is important because it is intended to limit the number of runways undergoing significant reconstruction at the same time. In recent years, the FAA has been able to exceed its goal; in FY 2015, 97.7 percent of runways were maintained in excellent, good, or fair condition.

PERFORMANCE REPORT

Runway Conditions (FAA)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Percent of runway pavement in excellent, good, or fair condition for paved runways in the National Plan of Integrated Airport Systems.	97.2%	97.4%	97.5%	97.5%	97.6%	93%	97.7%	Met 

Progress Update

FY 2015 performance results indicate our Nation's airports continue to remain in a state of good repair. FAA has been able to meet the FY 2015 and prior fiscal year targets due to the success of multiple efforts by the agency and our Nation's airports. FAA prioritizes investments to preserve

[6] In this context, this refers to airports included in the National Plan of Integrated Airport Systems (NPIAS)—a capital development plan that DOT is required to update and publish biennially.

existing infrastructure in a state of good repair. Federally obligated airport sponsors are required to maintain a systematic approach to preventive pavement maintenance. All airports provide capital needs data included in the National Plan of Integrated Airport Systems (NPIAS) on a biennial basis. High-priority capital projects (including runway pavement rehabilitation and/or reconstruction projects) are prioritized and considered for Airport Improvement Program funding as part of the annual update of the 3-year Airports Capital Improvement Plan process. Funding runway pavement projects directly contributes to the goal of maintaining a certain level of runways in excellent, good, or fair condition.

PERFORMANCE PLAN

Runway Conditions (FAA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Maintain runway pavement in excellent, good, or fair condition for at least 93 percent of the open, paved runways in the NPIAS.	Percentage of NPIAS airports with runway pavement in excellent, good, or fair condition.	93%	93%

Key Strategies

- Assessing pavement condition via scheduled and surveillance safety inspections of certificated airports.
- Collect safety and pavement condition data under a contract program to inspect non-certificated public use airports every 3 years.
- Maintain a 5-year, forward-looking analysis of airport capital requirements that includes runway rehabilitation requirements, published in the biennial NPIAS report.
- Enforce requirements to have pavement preventive maintenance programs at Federally obligated airports.

FAA's Office of Airports (through its Regional Offices and Airports District Offices) partners with state aeronautical agencies and individual airports to monitor pavement condition. Three other FAA offices support this effort: the Air Traffic Organization, which helps evaluate and minimize the capacity and delay impacts resulting from runway reconstruction projects and helps communicate temporary closures; the Aircraft Certification Service, which helps quantify the relationship between aircraft performance requirements and characteristics and airfield pavement engineering; and the William J. Hughes Technical Center, which assists with a broad range of pavement research. External partners include State aeronautical agencies and other aeronautical and airfield pavement associations.

Our Airport Technology Research Program is integral to FAA's ability to achieve performance goals for runway pavement condition. Several concentrated pavement-related research programs help address the continued need to improve FAA airport design, construction, and maintenance standards. The majority of pavement research is conducted at FAA's William J. Hughes Technical Center (Tech Center) in Atlantic City. The Tech Center houses the National Airport Pavement Test Facility (NAPTF), a 1,200-foot building with 900 feet of full-scale airport test

pavement. The NAPTF allows FAA and industry to validate new design standards for existing and proposed multiple wheel landing gear configurations.

Advisory Circular (AC) 150/5320-6E, Airport Pavement Design and Evaluation, includes interactive advance pavement design software that develops state-of-the-art airfield pavement design standards using results from full-scale testing programs and other industry research. Enhancements to the design software continue. FAA will continue to update the AC, which includes addressing recycled and sustainable material design criteria and new aircraft main gear with 8- and 10-wheel arrangements.

Two independent airfield pavement research foundations have contributed to airfield pavement knowledge through applied research. The Innovative Pavement Research Foundation (IPRF) focused primarily on improving rigid concrete airfield pavement performance: http://www.iprf.org. The Airfield Asphalt Pavement Technology Program (AAPTP) focused on improving the quality of hot mix asphalt pavements: http://www.aaptp.us. Collaborative efforts between IPRF and AAPTP resulted in improved understanding of airport pavement marking practices and life cycle cost analysis and contributed directly to improvements in FAA guidance.

Next Steps

- Maintain an effective pavement research program. FAA will complete construction of a high-temperature pavement test facility at the Tech Center by August 2015.
- Continue to monitor airport pavement condition on an annual basis for certificated airports and on a 3-year basis for other public use airports.
- Continue identifying and prioritizing capital reinvestment requirements by providing technical support for planning, environmental and engineering processes, including airspace reviews and construction safety phasing plans.
- Issue FY 2016 grants (and review/approve Passenger Facility Charge (PFC) applications) to support pavement improvement projects.

Goal Leaders

Michael P. Huerta, Administrator, Federal Aviation Administration

Eduardo Angeles, Associate Administrator for Airports, Federal Aviation Administration

Transit Conditions (FTA)

Overview

The Nation needs to meet an increasing demand for public transportation while bringing transit infrastructure into a state of good repair. More than one-quarter of the Nation's bus and rail assets are in marginal or poor condition. The proportion of assets in marginal or poor condition jumps to one-third in the largest and oldest rail transit agencies, many of which suffer from a legacy of chronic underinvestment. This backlog of state of good repair needs has direct impacts in the form of heightened safety risks, decreased system reliability, increased

maintenance costs, and overall decreased performance. According to the 2013 Conditions and Performance Report, the Nation's transit systems maintenance backlog now exceeds $86 billion and all other things being equal, an additional $2.5 billion in spending from both Federal and local sources would be needed each year just to keep it from growing.

PERFORMANCE REPORT

Transit Conditions (FTA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Keep the nation's state of good repair backlog to less than $100 billion (current-year dollars) through 2018. (Biennial measure.)	N/A	$77.7 billion	N/A	$85.9 billion	N/A	$94 billion	N/A	N/A 

Progress Update - Results

In the most recent Conditions and Performance Report, FTA estimated that there is an $86 billion state of good repair backlog at the Nation's transit systems with an anticipated need of $2.5 billion per year in funding from all sources of government (State, local, and Federal) to keep the backlog from growing. FTA updates the state of good repair backlog estimate with the publication of each Conditions and Performance Report. An updated estimate will be provided in 2016 with publication of a new edition of this report using 2012 data.

During FY 2015, FTA took substantial steps towards implementing the National Transit Asset Management System. In September, FTA published a Notice of Proposed Rulemaking (NPRM) that proposed FTA's first-ever definition of *state of good repair*, requirements for each FTA grantee to establish a transit asset management plan, and a suite of state of good repair performance measures against which each of our grantees would be required to set targets. Concurrently, FTA also published in the Federal Register a proposal to expand the National Transit Database to collect additional capital asset inventory information, as well as condition data towards the state of good repair performance measures proposed in the NPRM. Once implemented, this rule will change "business as usual" for much of the public transportation industry by requiring a systematic and strategic approach across the industry towards measuring and prioritizing *state of good repair*.

During FY 2015, FTA also expanded its technical assistance efforts to prepare the transit industry for implementation of the National Transit Asset Management System. Earlier this year, FTA began publishing a quarterly newsletter to share best practices in asset management among our stakeholders in the transit industry. In June 2015, FTA also reconvened its State of Good Repair Roundtable to help build a community of practice among asset management practitioners in the transit industry. In addition, FTA continued to maintain and expand an asset management technical assistance library on our website, and to support classroom offerings by the National Transit Institute of our "Introduction to Asset Management" training course. FTA also continued to supply a "Lite" version of our Transit Economic Requirements Model (TERM), which individual grantees can use to model 20-year capital investment scenarios for

their own transit systems – and which also fulfills one of FTA's statutory deliverables under MAP-21. By the end of FY 2015, FTA had also wrapped up five out of six asset management pilot grants, publishing the final reports from each project in the technical assistance library of our website.

PERFORMANCE PLAN

Transit Conditions (FTA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Keep the nation's state of good repair backlog to less than $100 billion (current-year dollars) through 2018. **(NEW)**	State of Good Repair backlog (current year dollars)	$98B	$99B

Next Steps

To bring transit systems into a state of good repair, FTA will do the following:

- Respond to comments and publish National Transit Asset Management System Final Rule which will:
  - Define state of good repair.
  - Require recipients and sub-recipients to establish transit asset management plans.
  - Establish state of good repair performance measures against which grantees will be required to set targets annually.
  - Require annual reporting of asset inventories, condition assessments, and state of good repair performance results to the National Transit Database.
- Continue to provide research and technical assistance on best practices in transit asset management.
- Conduct outreach to the transit industry through roundtable meetings, technical assistance products, research reports, and training sessions to encourage knowledge sharing of best practices in transit asset management.

Goal Leaders

Robert J. Tuccillo, Associate Administrator for Budget and Policy, Federal Transit Administration

Strategic Objective 2.2—Sustain Assets

Reduce the costs of sustaining the Nation's transportation infrastructure, equipment, facilities, and technology by instilling proven asset management practices through partnerships with other governmental agencies and infrastructure owners.

PERFORMANCE OVERVIEW

MAP-21 required States to develop and implement a risk-based asset management plan for the NHS to improve or preserve the condition of the assets and the performance of the system. States must address pavements and bridges but are encouraged to include all infrastructure assets within the highway right-of-way in their risk-based asset management plan. MAP-21 also established a new National Transit Asset Management System, requiring a strategic approach to asset management by grantees.

DOT will encourage its partners to adopt and use asset management practices through training and technical assistance, research and demonstration projects, and by adopting common performance measures and reporting systems.

DOT Operating Administrations: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Office of the Secretary (OST).

STRATEGIC GOAL 2: STATE OF GOOD REPAIR
Strategic Objective 2.2: Sustain Assets

Highway Infrastructure (FHWA)

Overview

States are at various levels of maturity with respect to the use of asset management for highways and bridges. A survey conducted in 2013 found that only 31 percent of States had developed and were at various stages in implementation of an asset management plan. Nearly 40 percent of the survey respondents reported that their agencies do not appropriately balance preservation expenditures and capital improvements based on economic analysis. Under MAP-21, States are required to set targets for each of the proposed performance measures for the NHS discussed earlier and will be expected to make significant progress toward the achievement of the targets.

In addition, FHWA must establish minimum condition levels for Interstate pavements before allowing National Highway Performance Program (NHPP) funds to be spent to meet other needs. States are also required to maintain their NHS bridge conditions so that the percent of deck area on bridges categorized as structurally deficient does not exceed 10 percent for three consecutive years. In 2016, States must make a determination of compliance for bridges using these new minimum condition requirements. As States follow the Asset Management framework included in MAP-21, they are to consider the risks to their system and management of their assets for their whole life as they develop their investment strategies.

Progress Update-Results

In February 2015, DOT published a *NPRM* to define the requirements for the process to develop risk-based asset management plans. The notice included the minimum standards States would use in developing and operating highway bridge and pavement management systems as called for in MAP-21.

FHWA co-sponsored transportation asset management peer exchanges and hosted a series of web-based information exchanges with State partners to advance principles and practices of asset management. FHWA also conducted a gap analysis in 15 States and reviewed asset management plans submitted by three pilot States. In addition, FHWA provided onsite technical assistance to States working through the process with senior managers and executives to establish an asset management program.

In addition, FHWA asset management initiatives included improved organization and reporting of infrastructure inventory and condition information, further evaluation of performance along a single Interstate corridor through several States, and sponsoring an evaluation of approaches to measure infrastructure performance. Details can be found at http://www.fhwa.dot.gov/asset/pubs/hif13042.pdf.

Information Gaps

FHWA is continuing to present webinars and undertake other activities to advance the concepts and principles of asset management. Additional gaps will be identified as the rulemaking

process continues and the *Final Rule* is issued that requires all States to develop an asset management plan. Gaps are anticipated in data collection, reporting, and data quality. Specifically, it is believed that the quality and uniformity of data collection and reporting of pavement cracking data can be improved. In addition, most States do not have formalized and documented risk management procedures for management of their pavement, bridges and network. It is anticipated as States develop their asset management plans their processes will mature.

Key Strategies

Currently, States select pavement and bridge projects and exercise considerable flexibility in prioritizing how funds are used. FHWA's role in programming projects is limited. FHWA is working collaboratively with AASHTO, Metropolitan Planning Organizations (MPOs), and other stakeholders to identify performance measures for pavements and bridges. Some of these activities and processes will involve a rulemaking.

FHWA will also continue working with its partners to develop pavement and bridge condition performance measures and targets that support Federal Lands and Tribal Transportation Program. Before allocations are made, Federal participants will be required to submit program proposals that describe how the national goals, as well as the goals of FLMAs, are supported by the use of the funds.

Next Steps

FHWA will invest an estimated $6 million to $10 million to help States standardize the collection and analysis of the pavement and bridge data within the asset management plan, as well as develop risk and investment strategies. Most States use their pavement and bridge management systems to allocate the assigned dollars, not for investment decision making. This funding will help States establish standards for data collection and analysis. FHWA will assess those efforts approximately every two years after the *Final Rule* is published.

Specifically, NHPP program funds will be used to improve organization and reporting of infrastructure inventory and condition information by:

- Evaluating performance along a single Interstate corridor through several States;
- Evaluating approaches to measure infrastructure performance; and
- Continuing to monitor actions under established plans of corrective actions and improvement plans and will continue monitoring compliance with the established metrics under the National Bridge Inspection Program (NBIP) oversight process.

Performance Management Data Support Program (PMDSP) funds will be used to update the Highway Performance Monitoring System, or HPMS, to more realistically report on the condition of the IHS and NHS Pavements. The implementation of a performance-based Federal program will allow for a better understanding of how investments have led to the achievement of performance outcomes. This information will be used to develop improved predictive models that, when applied, will increase the successful return from transportation investments made to improve performance.

STRATEGIC GOAL 2: STATE OF GOOD REPAIR
Strategic Objective 2.2: Sustain Assets

Responsible Officials

Walter Waidelich, Associate Administrator for Infrastructure, Federal Highway Administration
Michael Trentacoste, Associate Administrator for Research, Development and Technology, Federal Highway Administration
Timothy Hess, Associate Administrator for Federal Lands Highway, Federal Highway Administration.

Strategic Goal 3: Economic Competitiveness

Promote transportation policies and investments that create ladders of opportunity, support strong communities, and bring lasting and equitable economic benefits to the nation and its citizens.

Strategic Objective 3.1—Enhance Productivity and Growth

Improve the contribution of the transportation system to the Nation's productivity and economic growth by supporting strategic, multi-modal investment decisions and policies that reduce costs, increase reliability and competition, satisfy consumer preferences more efficiently, and advance U.S. transportation interests worldwide.

PERFORMANCE SUMMARY

Based on current economic and demographic forecasts, it is likely that the movement of people and goods within the United States and abroad will continue to increase and the transportation sector will continue to enable economic growth and job creation. The transportation sector contributed approximately $1.466 trillion, or 9.7 percent, to gross domestic product (GDP) in 2011. Our Nation must make strategic investments that enable the movement of people and goods more efficiently with full utilization of the existing capacity across all transportation modes. The cornerstones of this strategy are investments in high-performance passenger rail, the development of a national freight strategy, investments in public transportation, continued operating improvements that mitigate traffic congestion on our highways, and implementing the Next Generation Air Transportation System, or NextGen, to improve operations and alleviate airport congestion.

DOT Operating Administrations: Federal Aviation Administration (FAA), Federal Highway Administration (FHWA), Federal Motor Carrier Safety Administration (FMCSA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Maritime Administration (MARAD), National Highway Traffic Safety Administration (NHTSA), Saint Lawrence Seaway Development Corporation (SLSDC), and Office of the Secretary (OST).

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

Modernizing Air Traffic Control Systems (FAA)

Overview

As of March 27, 2015, En Route Automation Modernization (ERAM) has replaced the En Route Host computer and backup system used at 20 Federal Aviation Administration (FAA) Air Route Traffic Control Centers (ARTCCs) nationwide. This transition represented a live transplant of the "heart" of today's air traffic control system while maintaining safe and efficient flight operations for the flying public.

ERAM is vital to the future of air navigation, providing the foundational platform required for FAA to enable Next Generation Air Transportation System (NextGen) solutions, via modernization programs such as System Wide Information Management (SWIM), Data Communications (DATACOMM), and Automatic Dependent Surveillance-Broadcast (ADS-B).

Going forward, ERAM will provide benefits for users and the flying public by increasing air traffic flow and improving automated navigation and conflict detection services, both of which are vital to meeting future demand and preventing gridlock and delays.

PERFORMANCE REPORT

Modernizing the Automation Platform at the ARTCCs (FAA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
DOT PRIORITY GOAL: Cumulative number of continental U.S. En Route air traffic control centers achieving Initial Operating Capability and ultimately Operational Readiness Date (ORD) on ERAM	**2 (IOC)**	**2 (IOC)**	**9 (IOC)**	**17 (IOC)**	**16 (ORD)**	**20 (ORD)**	**20 (ORD)**	**Met** 

ERAM targets were for Initial Operating Capability (IOC) in FY13 and are for Operational Readiness Date (ORD) in FY14-15. There will be no metric for ERAM in FY16.

FY2015 ORD (by Quarter):

- **1st Quarter Performance**: 0 sites
- **2nd Quarter Performance**: 4 sites (or 20 cumulative)
- **3rd Quarter Performance**: Met (ORD was achieved at all sites on March 27, 2015)
- **4th Quarter Performance:** Met (ORD was achieved at all sites on March 27, 2015)

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

Progress Update-Results

As of March 27, 2015, FAA achieved Operational Readiness Date (ORD) at all 20 Air Route Traffic Control Centers (ARTCCs).

When all centers have declared ORD it is considered the final milestone to achieving full operational capability.

PERFORMANCE PLAN

Modernizing the Automation Platform at the Airport Traffic Control Centers (FAA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
DOT Priority Goal: Improve the efficiency of the National Airspace System through more effective data communications systems – By the end of FY2017 (September 2017), DATACOMM will be implemented at a cumulative total of 18 Airport Traffic Control Towers (ATCTs). (NEW)	Number of ATCTs achieving Operational Readiness Date for DATACOMM	6	18

Overview

The DATACOMM program provides digital communications services between pilots and air traffic controllers (similar to text messaging). DATACOMM will provide a link between ground automation and flight deck avionics for safety-of-flight ATC clearances, instructions, traffic flow management, flight crew requests and reports. DATACOMM is critical to the success of NextGen operational improvements (OIs) by providing needed communication infrastructure enhancements. DATACOMM will reduce the impact of delays due to ground delay programs, airport reconfigurations, convective weather, congestion, and other causes. DATACOMM will also reduce communication errors, improve controller and pilot efficiency through automated information exchange, enable NextGen services (e.g., enhanced re-routes, trajectory operations), and increase controller productivity leading to increased capacity.

Key Strategies

DATACOMM will be delivered in several Segments and Phases. The initial deployment, DATACOMM Segment 1 Phase 1 (S1P1) will deploy the Controller-Pilot Data Link Communications (CPDLC) Departure Clearance (DCL) in the Tower domain. In S1P1, the DATACOMM program will deliver CPDLC DCL to 56 airports, to include revisions with full route clearances transmitted directly to the aircraft on the airport surface. The CPDLC DCL service will expedite the delivery of departure clearances to aircraft, streamline clearance delivery operations and enable quicker recovery from adverse weather events. CPDLC DCL will improve efficiency, reduce ground delays, and result in more strategic management of NAS resources.

Following this Segment 1, Phase 1 capability tower deployment, DATACOMM Segment 1 Phase 2 (S1P2) will deliver En Route services. This phase is further broken down into two parts: Initial En Route Services and Full En Route Services. DATACOMM S1P2 Initial En Route Services will leverage the S1P1 infrastructure, which is an enabler and confidence builder for FAA and industry to begin to get measurable benefits in the En Route domain and to deliver services such as transfer of communication/initial check-in, airborne reroutes, altimeter settings and altitudes, limited controller initiated reroutes, limited direct-to-fix messages, and limited crossing restrictions.

DATACOMM S1P2 Full En Route services will deploy additional airspace safety and efficiency support services to the NAS such as tailored arrivals, full crossing restrictions, full direct-to-fix messages, full controller initiated reroutes, stuck microphone, beacon codes, speeds and headings, and advisory messages.

Segment 2 is currently in the planning stages and will add an Aeronautical Telecommunications Network (ATN) infrastructure for DATACOMM as well as enable advanced services such as 4-D trajectories, advanced flight interval management, and dynamic required navigation performance (RNP).

Next Steps

The DATACOMM program is in the final stages of testing prior to implementation of the S1P1 service. DATACOMM has completed a hardware tech refresh of the necessary tower equipment, completed hardware installation and test at the necessary ARTCC, and finished the software modifications to the Tower Data Link Services (TDLS) and ERAM subsystems. DATACOMM has tested and accepted the initial air ground network Data Communications Network Services (DCNS) and cutover the necessary FAA Telecommunications Infrastructure (FTI) ground-ground communications services. DATACOMM has completed Enterprise Integration testing (IT) and Operational Test and Evaluation (OT&E). DATACOMM is in the process of conducting the necessary training of technical operations and air traffic controller personnel to support implementation. DATACOMM is also coordinating with air carriers to ensure appropriately equipped aircraft and trained aircrews are available to support DATACOMM operations.

DATACOMM is planning Initial Operating Capability at three key site towers (Salt Lake City, Houston Intercontinental, and Houston Hobby) in Q4 FY2015. In Q1 FY2016 the FAA completed an Independent Operational Assessment (IOA), and after a successful In Service Decision (ISD) in Q1 FY2016 will deploy DATACOMM to the remaining 53 Airport Traffic Control Towers (ATCTs) by Q4 FY2019.

The FAA commits to begin delivering departure clearances at 56 airports under the DATACOMM program's Segment 1 Phase 1. The baseline calls for this work to be completed by the end of FY2019 but the FAA is working toward challenge dates that would have services at all 56 locations in place by the end of FY2017.

In Q1 FY17 (October – December 2016), measurement of the impact of DATACOMM implementation on Taxi Out Times will begin at two airports, where DATACOMM Segment 1

Phase 1 (S1P1) will already be fully operational: Newark (EWR) and John F Kennedy (JFK). Impact measurement will continue at these two airports through Q3 FY2017.

Goal Leaders

Michael P. Huerta, Administrator, Federal Aviation Administration
Teri L. Bristol, Chief Operating Officer, Air Traffic Organization, Federal Aviation Administration

Highway Congestion (FHWA)

Overview

Highway congestion adversely affects the Nation's economy, communities, and quality of life. According to the 2015 Urban Mobility Scorecard, traffic congestion has remained relatively unchanged during the past year in American cities. It is estimated that congestion creates a $160 billion annual drain on the U.S. economy in the form of 6.9 billion lost hours resulting from travel delay and 3.1 billion gallons of wasted fuel.

While automobile and truck congestion currently imposes a relatively small cost on the overall economy (about 0.6 percent), the cost of congestion has risen at a rate of almost 7 percent per year over the past 25 years, or more than double the growth rate of GDP. Congestion may detract minimally from the overall economy, but the 2015 Urban Mobility Scorecard also estimates the costs of overall truck congestion to be $28 billion per year. Additionally, congestion identified at known freight bottlenecks is estimated to cost direct users almost $8 billion a year, reducing the efficiency of freight supply chains. These inefficiencies increase costs of production, consumer prices, and can contribute to businesses shifting their operations and jobs to locations where they can achieve more efficient supply chains, resulting in regional and national job losses.

DOT uses two indicators to measure congestion: the Travel Time Index (TTI) and the Freight Buffer Index. In 2014, FHWA enhanced the TTI measure with a new data source and expanded coverage. The new measure reflects travel on Interstates, freeways and expressways in 52 urban areas, up from 19 in previous years. Using the initial results from a larger number of urban areas as a baseline, FHWA reset the target to 1.36 in FY 2016. FHWA measures the freight buffer index on select interstates and it was recently revised to focus on interstate corridors with the highest levels of freight flow. Based on continued analysis of the data for the 25 freight significant corridors, FHWA increased the target in FY 2015 to 18.5 to more accurately capture the sensitivity of the buffer index. A target of 18.5 will provide a more accurate understanding of reliability, as the new target appears closer to the point of inflection for current freight conditions.

In 2015, FHWA adopted an additional indicator to track progress in the transition to a performance based approach to transportation planning. Within 5 years, congestion and reliability will figure more prominently in the investment decision making processes of MPOs and State DOTs. The indicator will transition from the existing requirement, which is for MPOs serving Transportation Management Areas (TMAs) to develop a congestion management process (CMP), to a requirement for all MPOs to use congestion reduction strategies for decision-making through a performance-based planning and programming approach. By ensuring that all States

and MPOs are utilizing the CMP and eventually, performance based planning and programming as part of their decision-making process, more effective congestion mitigation strategies can be selected during the planning and programming phase. The FY 2016 target is for approximately 90 percent of the 181 TMAs to use the CMP in making programming and project decisions.

PERFORMANCE REPORT

Highway Congestion (FHWA)

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Target Met or Not Met
Maintain Travel Time Reliability in urban areas as measured by a reduction in the Travel Time Index to No More Than 1.36 in 2018.	n/a	n/a	n/a	n/a	1.36	1.36	1.37	Not Met 
Maintain Travel Time Reliability in Top 25 Domestic Trade Corridors at or below 18.5 through 2018.	n/a	n/a	n/a	16.3	18.6	18.5	18.8	Not Met 
Percent of TMAs using CMPs in making programming and project decisions (total of 181 TMAs)	N/A	N/A	N/A	N/A	10%	20%	90%	Met 

Progress Update -Results

The Travel Time Index (TTI) represents the extra time a driver spends in traffic during congested traffic as compared with light traffic. A TTI of 1.36 represents an extra 10 minutes, on average, for a trip that usually takes 30 minutes. Therefore, a lower TTI is better as it means drivers spend less time stuck in traffic. In FY 2014, the TTI was 1.36 in the 52 metropolitan statistical areas with a population of more than a million that are currently being monitored. During the four quarters of FY 2015, the average TTI ranged from 1.36 to 1.37. Annually, it appears that the level of urban traffic congestion in FY 2015 increased slightly when compared to FY 2014.

FHWA undertook numerous activities to monitor freight performance at the national level and to support freight performance measurement and management at the State and regional level. DOT uses a suite of measures, including the freight buffer index, to routinely analyze national freight corridors, interstates, intermodal areas, border crossings and urban areas to monitor performance. In FY 2015, the average freight buffer index for travel time reliability on the Nation's interstates with the highest levels of freight was 18.8, which was slightly above the anticipated target of 18.5. The buffer index represents the extra time, or time cushion, that has to be added in planning a trip to ensure on time arrival 95 percent of the time. Winter weather events slowed goods movement in many areas of the U.S., as did the port shutdowns on the west coast. The results reveal that most congestion occurs in urban areas and at known freight highway bottlenecks. Urban and interstate mobility decreased due to increased traffic congestion, while intermodal mobility at border crossings, ports and intermodal facilities other than west coast areas was unchanged.

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

FHWA has made significant progress in developing a number of programs and analytical tools to improve traffic operations and strategically target capital investments to improve congestion including:

- Assistance with reorganization efforts in States to establish divisions dedicated to transportation system management and operations.
- Establishing a Real-Time System Management Information program in States.
- Development of the Freight Analysis Framework and Freight Performance Measurement tools and approaches for identifying areas for improvement.
- A national travel time data set for the entire NHS and border crossings, which is available free to States and MPOs to support their performance measurement and planning programs for both passenger and freight traffic.
- Deploying surface transportation weather monitoring infrastructure in 39 States, five local agencies, and four Canadian provinces.
- Deploying innovative adaptive control, corridor management, and congestion pricing strategies.
- Ensuring greater emphasis on improving reliability in major freight corridors, international border crossings, and intermodal connectors.
- Developing a model that links population, freight demand, driver behavior, and other data to vehicle miles traveled, or VMT.
- Working with State and local DOTs and law enforcement to demonstrate how to collect, analyze and report on three criteria that measure the effectiveness of Traffic Incident Management response operations in opening lanes and reducing non-recurring traffic congestion.

FHWA provided technical assistance and guidance to States in implementing the Real-Time System Management Information Final Rule and conducted Traffic Incident Management (TIM) workshops and decision maker meetings in two urban areas. All 50 states were in compliance with the Final Rule as of June 2015.

In FY 2015, FHWA conducted a total of 76 Train-the-Trainer Traffic Incident Management (TIM) Responder sessions for 2,387 trainers, including two sessions at the National Fire Academy for 286 new trainers from 45 states. The existing and new cadre of trainers reached out to 61,376 responders through post-classroom sessions, and another 1,263 individuals had completed the web-based version through NHI. FHWA has completed or scheduled TIM Responder Training in all 50 States, D.C., and Puerto Rico, and already exceeded a multi-year goal of deploying TIM training to 80,000 responders. In addition, FHWA conducted 26 assessment workshops to determine organizational capabilities for transportation systems management and operations; with 13 implementation plans completed. FHWA also began providing direct technical assistance to 27 States and large metropolitan areas to better focus on improving operation of the transportation system.

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

To increase freight awareness and understanding among system stakeholders, FHWA provides opportunities including training courses and webinars on freight planning, private sector engagement, and freight and land use. In addition, FHWA routinely coordinates research and outreach in conjunction with the AASHTO to discuss freight issues and identify collaborative solutions with States and MPOs. FHWA aims to provide continued outreach, analysis, reference material and tools to further the understanding of freight movement in the U.S. and assist decision makers in setting priorities for freight improvement efforts.

A total of 186 MPOs and States are now using the FHWA data set for freight and passenger vehicle congestion to support their freight analysis and planning activities. In addition, FHWA is currently assisting several states, metropolitan regions and regional authorities on freight performance measure projects using FHWA data; working with Canada and Mexico and federal partners such as the Census Bureau and the Department of Commerce to apply a fluidity analysis for North America; and supporting the National Freight Advisory Committee and the development of the Freight Conditions and Performance Report and National Freight Strategic Plan. Also, FHWA provides the Freight Analysis Framework that consolidates valuable information on tonnage, value, origins and destinations by mode and supports freight transportation modeling efforts and the develop of new freight data options.

In FY 2015, FHWA continued and initiated research on several aspects of freight including urban freight movement, economic competitiveness, performance measurement and data opportunities to aid in freight analysis and planning. Specifically, FHWA promoted current research that includes the impacts of context sensitive solutions (CSS) such as Complete Streets and Urban Road Diets, as well as the concept of off-hours delivery.

FHWA provided analysis, input and management for implementation of key freight provisions in MAP-21. For example, the Agency is working with the States of Vermont, Indiana and Georgia on Section 1116 freight projects that allow for an increased federal share of funding. FHWA made significant progress toward implementation of Section 1118 of MAP-21 that direct the Secretary to encourage each State to develop a comprehensive State Freight Plan that outlines immediate and long-range plans for freight-related transportation investments. State freight plans identify policies, strategies, and performance measures that can guide the freight-related transportation investment decisions of the State. At the end of Fiscal Year 2015, 16 States had a MAP-21 compliant plan, and 34 had a MAP-21 compliant plan or update in progress.

PERFORMANCE PLAN

Highway Congestion (FHWA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Maintain Travel Time Reliability in urban areas as measured by a reduction in the Travel Time Index to No More Than 1.36 in 2018.—REVISED	The ratio of the peak-period travel time as compared to the free-flow travel time. This measure is computed for the AM peak period (6:00 a.m. to 9:00 a.m.) and PM peak period (4:00 p.m. to 7:00 p.m.) on weekdays	1.36 (r)	1.36 (r)

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

Goal	Indicator	FY 2016 Target	FY 2017 Target
Maintain Travel Time Reliability in Top 25 Domestic Trade Corridors at or below 18.5 through 2018.—NEW	Freight buffer index (A representation of the extra time that would have to be added to the average travel time to ensure on-time arrival 95% of the time.)	1.02	1.01
All Metropolitan Planning Organizations (MPO) serving a Transportation Management Area (TMA) develop and utilize a congestion management process (CMP) in making programming and project decisions within 5 years.	Percent of TMAs using CMPs in making programming and project decisions (currently there are 181 TMAs). Note: FHWA will implement performance-based planning rule and discontinue this metric after FY 2016.	90%	Discontinued

Key Strategies

Future efforts will support the continued implementation of operations-based congestion reduction strategies in the Nation's largest metropolitan areas. These efforts will address both recurring and nonrecurring congestion problems and include increasing the availability of real-time traveler information, evaluating the success of TIM operations on quickly and safely opening lanes impacted by traffic accidents by using technology to quickly collect and transmit TIM performance based on time lanes are closed, time responders are on scene, number of secondary incidents, and number of responders killed or injured during traffic incident response operations, improving reliability in major freight corridors and connections through analysis of bottlenecks, arterial connections, accessibility, truck volumes and multi-corridor approaches. They will also address the challenges brought on by adverse weather, work zones, special events and emergencies, as well as international border crossings; and intermodal connectors.

FHWA also seeks to improve the capacity of States and MPOs to develop congestion management strategies through the transportation planning process. FHWA will work to enhance tools and performance based processes for States, MPOs and regional and local governments to assess congestion and target operational and capital improvements most appropriately.

FHWA is providing access to a national data set of average travel time for cars and trucks that States and MPOs are using to support their measurement programs. Additionally, FHWA is focusing on a comprehensive set of freight performance measures by developing best practices on these measures and providing a primer for the application and use of these measures. Significant efforts are under way to also engage the public and private sector in a measure of freight fluidity and total supply chain analysis to increase understanding of freight flow impacts and relate to private sector focus areas for congestion.

FHWA's efforts will continue to support the significant focus on freight in Title 23 U.S.C. 167 and FAST the development of national freight policy, funding to support freight infrastructure, the prioritization of projects to improve freight movement, the establishment of freight stakeholder advisory committees, the development of statewide freight plans, and required reporting on freight performance. With such focus on freight flow improvements and project

development and implementation, FHWA hopes for greater achievements in congestion reduction, which will create efficiencies for all highway travel.

Next Steps

The National Highway Performance Program (NHPP) will establish techniques to:

- Assess the performance of the highway system, including measuring the relationship between freight movement, congestion, and reliability and the speed and safety in opening temporarily closed lanes due to crashes or other non-recurring incidents like mechanical breakdowns, weather impacts, traffic crashes, hazardous material releases, and medical emergencies.
- Strengthen routine traffic operations and control practices, and also to proactively manage the transportation system during disruptions such as traffic incidents, work zones, adverse weather, special events, and emergency situations.
- Provide useful, real-time information to travelers.
- Foster a more balanced transportation supply and demand through ridesharing, parking demand management, and congestion pricing.

The Surface Transportation Block Grant Program will help reduce congestion through:

- Techniques and tools, including an Intelligent Transportation System, to improve traffic operations and control and manage disruptions such as traffic incidents, work zones, adverse weather, special events, and emergency situations.
- Application of current technology (e.g. Smartphones, GPS tracking, dashboard cameras mounted on public safety vehicles, unmanned aerial vehicles) to rapidly capture real-time situation status reporting that will aid in rapid deployment of the correct mix of resources to an incident scene, operational tactical planning, and collection of key performance measurement metrics.
- Demonstrating innovative practices that speed construction, reducing traffic delays.
- Providing useful, real-time information to travelers.
- Investigating and implementing ridesharing, parking demand management, and congestion pricing.

These efforts will be supported by research and outreach from the Highway Research, Technology, and Education, or RT&E, Program.

Metropolitan Transportation Planning will provide for each MPO to carry out a coordinated, performance based, transportation planning process and develop long-range transportation plans and transportation improvement programs that make effective use of limited transportation funding by focusing decision making on transportation system performance outcomes.

The FAST Act includes a new Performance Management Data Support Program, funded at up to $10 million per year, to develop and maintain data sets and analysis tools to assist States, MPOs, and other stakeholders in carrying out performance management analyses.

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

Goal Leader

Jeff Lindley, Assistant Administrator for Operations, Federal Highway Administration

Gloria Shepherd, Assistant Administrator for Planning, Environment, and Realty, Federal Highway Administration

Michael Trentacoste, Assistant Administrator for Research, Development and Technology, Federal Highway Administration

High-Performance Passenger Rail (FRA)

Overview

High-speed and intercity passenger rail represents an innovative approach to addressing the complex 21st century transportation challenges facing the United States. By 2050, the U.S. population will likely increase by more than 95 million people from 2015. Freight shipments are forecasted to increase by 4 billion more tons of freight by 2050. Highway and airport congestion are increasing, with related severe economic and environmental impacts. To help address these challenges and strengthen the country's competitive position in an increasingly global economy, DOT has a comprehensive program to develop high-speed and intercity passenger rail. FRA manages an approximately $23 billion grant and loan portfolio focused on:

- Upgrading existing intercity passenger rail corridors to improve reliability, speed, and frequency of existing services.
- Building new high-speed rail corridors that expand and fundamentally improve passenger transportation in the geographic regions they serve.
- Laying the groundwork, through corridor, multi-State, and State planning, for future high-speed rail services.
- Relocating, rehabilitating, and increasing the capacity of freight rail.

PERFORMANCE REPORT

High Performance Passenger Rail

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Perforamance
Number of individual construction projects that achieve initial construction	N/A	8	27	48	60	65	67	Met
Number of planning, preliminary engineering, environmental analysis, and construction projects that are substantially complete	N/A	N/A	N/A	36	51	74	74	Met

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

Progress Update-Results

Projects Completed and Rail Services Improved: Project sponsors have substantially completed more than 70 projects, resulting in upgraded stations, improved operational efficiency, and enhanced services. Passenger rail service has been extended to Freeport and Brunswick, Maine, and track, signal, and bridge improvements are now in service on Amtrak's Vermonter, reducing travel times by nearly 30 minutes. Initial reliability and travel time improvements have also been achieved on the Chicago-St. Louis, Chicago-Detroit, Los Angeles-San Diego, and Philadelphia-Harrisburg corridors.

Construction Underway Throughout the United States. Construction is under way on almost 35 projects for approximately $5 billion in Federal investments. FRA's partners are investing billions of their own funds to match these Federal investments. Additionally, the freight rail industry invested more than $28 billion of private capital in the Nation's rail network in 2014, with $29 billion expected in 2015.

Since the passage of the Passenger Railroad Investment and Improvement Act in 2008, states and local governments have spent significant time and money on planning, engineering, and environmental analyses. Seventy-five planning, environmental analysis, and engineering projects across the country are complete or underway. As a result, many states and local governments now have a strong pipeline of rail capital projects across the country. This pipeline is ready for market-based investments that will transform the studies into improved and new passenger rail service. Substantial private sector participation is anticipated for several corridors, particularly those that will provide higher speed services.

PERFORMANCE PLAN

Key Strategies

FRA's National High-Performance Rail System (NHPRS) will substantially improve the Nation's rail system to accommodate a growing population and growing freight traffic. NHPRS will support the development of passenger rail networks concentrated in the Nation's mega-regions: dense networks of metropolitan areas with interlocking economies and shared transportation, environmental, and cultural resources. Although mega-regions encompass 26 percent of U.S. land area, approximately 75 percent of the U.S. population lives in these regions. This share is expected to grow larger, as the majority of expected population growth will occur in these areas. These mega-regions are well-suited for intercity rail transportation, given the relatively short distances, generally less than 600 miles, between large cities.

Each regional network will contain a range of corridor types, based on the market conditions and transportation needs of the specific region. Consequently, a range of levels of service will meet these conditions and needs—some regions will need numerous trains per hour operating at speeds above 125 miles-per-hour; others will be better suited to incremental, cost-effective upgrades to existing services. This market-based approach is consistent with the investment strategy followed in rail programs throughout the world.

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

FRA has developed a sophisticated grants management apparatus, laid the foundation for sustainable long-term passenger rail improvements, and strengthened industry capacity to deliver rail projects through technical assistance and strategic initiatives. FRA is strongly committed to robust stakeholder outreach, communication, and collaboration as central components of program management, allowing FRA to identify program improvements, engage in project planning and development, and provide the support necessary for grantees to carry out projects successfully.

Next Steps

To ensure that grantees deliver projects on schedule, within budget, and with their specified scopes and purposes, FRA has established a monitoring program to oversee grantees' project implementation and provide guidance to assist project development and delivery. Project monitoring is a comprehensive review of a grantee's compliance with the grant conditions, as well as an assessment of the grantee's performance in meeting milestones. Monitoring also proactively identifies issues and facilitates work with the grantee to address concerns or implementation impediments through technical assistance. Monitoring by FRA staff and contractors occurs in conjunction with other types of oversight, such as frequent and substantive communications between FRA and its grantees. Monitoring activities can reveal opportunities for FRA to provide grantees training and technical assistance to increase the likelihood of project success. Results, including positive observations, are discussed in detail with the grantee, including recommendations to resolve compliance and performance concerns.

FRA uses a risk-based methodology and professional judgment to prioritize onsite monitoring reviews. The methodology considers detailed risk indicators, such as Federal investment amount, last review date, and previous monitoring findings. Professional judgment factors include schedule efficiencies, deliverable quality, and recipient responsiveness. FRA has also established a tool that tracks the initiation and substantial completion of High-Speed Intercity Passenger Rail Program, or HSIPR, construction projects. FRA uses this tool as part of its monitoring program to oversee grantees' project implementation and provide guidance to assist project development and delivery.

Goal Leader

Jamie Rennert, Acting Director, Program Delivery, Federal Railroad Administration

Domestic and International Commerce (MARAD)

Overview

The America's Marine Highway (AMH) Program is a DOT-led program to create new supply chain solutions that take advantage of the excess capacity of our Nation's navigable waterways to increase national economic competitiveness while contributing to the efficiency of the surface transportation system.

The AMH program does not develop or operate Marine Highway services. The private sector and state/local governments develop and operate Marine Highway services. The AMH program

was designed to reduce landside congestion by integrating commercially-operated Marine Highway services into the nation's surface transportation system. Once integrated, Marine Highway services connect with all modes of transportation for freight and passengers, providing a convenient transportation alternative alongside landside transportation corridors.

The efficiency, flexibility and system resiliency provided by our navigable waterways can provide national public benefits, but are currently underutilized within the U.S. surface transportation system. By acting to increase the use of the United States' underutilized marine transportation assets, AMHs contribute to public benefits that are not normally considered by shippers by increasing the following:

- Economic competitiveness by adding new, cost-effective freight and passenger transportation capacity; thus creating/sustaining jobs in U.S. vessels, ports, and shipyards;
- State of good repair of the U.S. transportation system by reducing maintenance costs from wear and tear on roads and bridges;
- Environmental sustainability of the U.S. transportation system by using less energy and reducing air emissions per passenger or ton-mile of freight moved. Further benefits come from the mandatory use of modern engine technology on designated projects; and
- Public safety and security by providing alternatives for the movement of hazardous materials outside of heavily populated areas, and by adding to the nation's strategic sealift resources.

PERFORMANCE REPORT

International and Domestic Commerce (MARAD)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	**Performance**
Number of Twenty Foot Equivalent (TEU) containers transported across America's Marine Highway routes.	N/A	5,901	16,031	16,191	29,981	30,000	29,318	Not Met 

Progress Update - Results

MARAD's America's Marine Highway (AMH) Program was enacted to expand use of waterway transportation routes and to facilitate incorporation of our Nation's rivers, waterways, Great Lakes, and coastlines as extensions of the surface transportation system. MARAD's baseline measure of performance for the AMH Program is volume of containers, or twenty-foot equivalent units (TEUs), moved by grant-program-assisted services, which is a direct indicator of program performance and enables further downstream calculation of program benefits. Every TEU transported across the marine highway corridors is equal to the removal of one truck on our roadways. For FY 2015, MARAD did not meet the agency target for TEUs transported by program assisted marine highway projects. The decrease in performance is due to a lower volume than normal of TEUs transported owing to a company merger disruption, seasonality slumps, and severe weather conditions that caused cancellations in service.

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

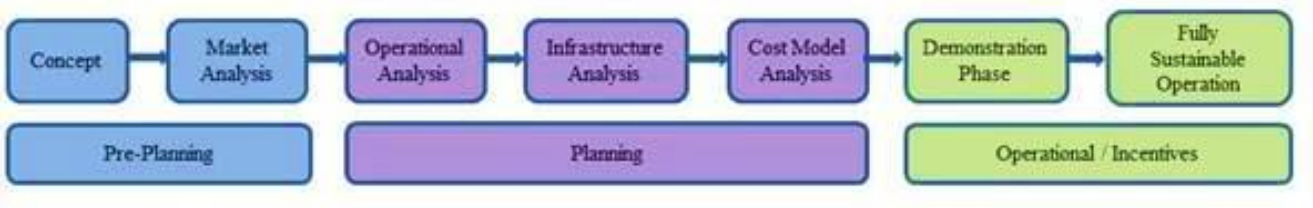
PERFORMANCE PLAN

International and Domestic Commerce (MARAD)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Number of Twenty Foot Equivalent (TEU) containers transported across America's Marine Highway (AMH) routes.	Number of containers transported across AMH.	35,000	40,000

Key Strategies and Next Steps

While AMH performance is currently measured by TEUs moved via grant-assisted projects, the impact of the program is having a greater effect on how State DOTs and Metropolitan Planning Organizations (MPOs) view water transportation within their region as well as increasing the market opportunities being developed through program activities. Through the management of its grants and technical assistance efforts since 2009, AMH has identified the following steps as shown in Figure 1 below. This service development process reflects the key strategies for effectively establishing new short-sea services, and engaging stakeholders from concept to fully sustainable operations, which requires about five years per service.

Figure 1: Service Development Process



Potential future program performance measurements could include number of projects designated during a given period. Additionally, support for designated projects actively moving freight can extend beyond grant funding, making it more appropriate to measure TEUs moved by designated projects rather than limiting it to TEUs moved only by grant-assisted projects.

The FAST Act gives the Department important authorities to collect performance data, including statistics on freight capacity and throughput, from the Nation's top ports. This, coupled with a new emphasis on multimodal freight planning has the potential to expand our performance data and analysis of this important mode of transportation.

The program works extensively with other Federal agencies including U.S. Customs and Border Protection, U.S. Coast Guard, Delta Regional Authority, and others to address challenges in creating efficiencies in the marine transportation system and marine highway services.

Goal Leader

Lauren Brand, Associate Administrator for Intermodal System Development, Maritime Administration

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

Domestic and International Commerce (SLSDC)

Overview

The binational St. Lawrence Seaway is the international shipping gateway to the Great Lakes, with almost 50 percent of Seaway traffic traveling to and from overseas ports, especially in Europe, the Middle East, and Africa. SLSDC operations impact 227,000 U.S. and Canadian jobs with associated benefits of $35 billion in annual business revenue from transportation firms and $14 billion in annual wages and salaries, and provide approximately $3.6 billion in annual transportation cost savings compared to the next least expensive mode of transportation. The St. Lawrence Seaway directly serves the eight-State, two-province Great Lakes region, which represents the world's third largest economy with economic output of almost $5 billion. The Seaway offers access and competitive costs with other routes and modes to the Midwest portion of North America, so it is critical that the U.S. Seaway waters and locks maintained by SLSDC be open and navigable continuously during the navigation season.

SLSDC's principal performance goal is to provide a safe, secure, reliable, and efficient U.S. portion of the St. Lawrence Seaway to its commercial users. The annual goal is 99 percent reliability of the U.S. section of the Seaway, including the two U.S. locks, during the annual navigation season (typically late March to late December each year). Downtime is measured in minutes/hours of delay for weather, vessel incidents, water level and rate of flow regulation, and lock equipment malfunction.

PERFORMANCE REPORT

International and Domestic Commerce (MARAD)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Percent of time the U.S. portion of the St. Lawrence Seaway is available to commercial users (SLSDC)	99.8%	99.0%	99.7%	99.1%	97.2%	99.0%	97.3%	Not Met

Progress Update

The U.S. Seaway System reliability rate for FY 2015 was 97.3 percent. Adverse weather conditions at the start of the 2015 season and three significant vessel incidents/groundings caused the missed performance target. The SLSDC has the most control over the functioning of its lock equipment. In FY 2015, only 4 percent of all system delays were lock-related.

PERFORMANCE PLAN

International and Domestic Commerce (SLSDC)

Goal	Indicator	FY 2016 Target	FY 2017 Target
Maintain availability of the St. Lawrence Seaway is available to commercial users.	Percent of time the U.S. portion of the St. Lawrence Seaway is available to commercial users.	99%	99%

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

Key Strategies and Next Steps

SLSDC's activities for this measure are related primarily to efficient management and operations of the locks and vessel traffic control and capital asset renewal investment in aging lock parts and machinery.

SLSDC will work to improve its system reliability performance by providing safer and more efficient vessel traffic control and passage through the U.S. locks and waters. These efforts include maintaining, rehabilitating, and modernizing U.S. Seaway infrastructure, performing safety inspections and ballast water examinations of all foreign-flag vessels, continuing close coordination and involvement with the Canadian St. Lawrence Seaway Management Corporation in all aspects of Seaway operations, and utilizing and enhancing technology to more efficiently manage vessel traffic control and lock transits.

In addition to managing and operating the St. Lawrence Seaway with the Canadian St. Lawrence Seaway Management Corporation, SLSDC coordinates closely with the U.S. Coast Guard on safety, security, and environmental programs.

Goal Leader

Thomas Lavigne, Associate Administrator, Saint Lawrence Seaway Development Corporation

Transit Ridership (FTA)

Overview

Every day, tens of millions of Americans benefit from having transit as a transportation option for getting to work, health care, education, shopping, and recreation destinations. FTA's goal is to increase transit ridership by making public transportation increasingly available and convenient for transit-dependent populations, and by making transit a "mode of choice" to populations with multiple transportation options.

PERFORMANCE REPORT

Transit Ridership (FTA)

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Increase the total number of urban boardings from 10.4 billion in 2012 to 11.2 billion in 2018 (in billions of passenger boardings.)	10.1	10.12	10.33	10.39	10.53	10.8	N/A	Potentially not met 
Number of planning, preliminary engineering, environmental analysis, and construction projects that are substantially complete	N/A	N/A	N/A	36	51	74	74	Met 
Increase the transit market share among commuters to work in at least 10 of the top	0	1	4	3	N/A	5	TBD	Potentially not met

STRATEGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.1: Enhance Productivity and Growth

Performance Measure	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
50 urbanized areas by population, when compared to a 2010 baseline								

Progress Updates - Results

In 2015, FTA awarded 2,001 grants totaling $13.2 billion. FTA has also carried out several discretionary grant programs – undertaking a solicitation for applications for the Tribal Transit Program as well as the Passenger Ferry Grant Program, and announcing the selections of projects under the Pilot Program for Transit-Oriented Development, the Workforce Development Program, the Low or No Emission Vehicle Deployment Program, and the National Research Program. FTA continued progress in closing out older grants. In 2015, FTA updated its Standard Operating Procedure for determining grant activity. Overall, FTA closed 2,072 grants/cooperative agreements, deobligating approximately $175 million.

In 2015, FTA completed the implementation of MAP-21 for its major grant programs. During the year, FTA final program circular to reflect changes to MAP-21 for the remaining grant programs: the Bus and Bus Facilities Circular, State of Good Repair Program Circular, and the Formula Grant for Rural Areas Circular; all after responding to public comments received. Additionally, FTA has worked to implement the new Common Rule, by providing webinars to stakeholders on the new requirements and by working on an update to the Grants Management Circular. Further, in 2015, FTA made substantial progress in developing FTA's new grant management system, TrAMS.

Additionally – FTA has worked to improve grants development and management and held training for headquarters and regional staff on issues related to grants management at a Grants Management and Oversight Workshop held in September 2015.

PERFORMANCE PLAN

International and Domestic Commerce (SLSDC)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Increase the total number of urban transit boarding's from 10.4 billion in 2012 to 11.2 billion in2018.	Number of urban and rural transit boardings (in billions.)	10.9	11.1
Increase the transit market share among commuters to work in at least 10 of the top 50 urbanized areas by population, when compared to a 2010 baseline.	Transit market share among commuters to work in the top 50 urbanized areas.	8	9

Key Strategies and Next Steps

National transit ridership increased in 2014. Three of the Top 50 urbanized areas reported a statistically significant increase in transit market share in 2013; results for this goal are running behind target. This measure relies on three-year averages from the American Community Survey (ACS). However, national transit ridership growth was higher in 2014 compared with 2013,

which may translate into increased transit market share in other urbanized areas. FTA expects to meet the 2014 target.

Data collections are being supported by new ACS data that is now available from the Census Bureau. The ACS provides data on the mode of travel to work for people over 16 years of age by urbanized area. FTA is targeting a statistically significant increase in the percentage of commuters who use transit to ride to work in at least 10 of the largest 50 urbanized areas. Key activities include:

- Developing data sources and maintaining a public database of transit access points and service levels;
- Working with other Federal agencies to identify specific policies or programs to reinforce common agency development efforts;
- Awarding grants to support construction of new and extended transit services; and,
- Using research to improve understanding and performance in livability and environmentally sustainable outcomes.

Goal Leader

Robert J. Tuccillo, Associate Administrator for Budget and Policy, Federal Transit Administration

Strategic Objective 3.2—Increase Access to Foreign Markets

Increase access to foreign markets by eliminating transportation-related barriers to international trade through Federal investments in transportation infrastructure, international trade and investment negotiations, and global transportation initiatives and cooperative research, thereby providing additional opportunities for American business and creating export-related jobs.

PERFORMANCE SUMMARY

The recent trend toward more international movement of people and goods and globalization of markets is expected to continue. This means continued growth in international air traffic and more goods and services transported from within the country to ports and then across national borders. DOT will focus on creating new opportunities in foreign markets for U.S. transportation-related goods and services. The Department will continue its efforts to create a more competitive air transportation system and protect the rights of traveling consumers. The Department will advance U.S. economic interests in targeted markets abroad in order to create additional transportation-related jobs. We set standards for both the manufacture and operation of transportation products. American transport manufacturers and service providers rely on access to foreign markets through liberalized entry or operational rules and compatible technical standards. We exert extensive positive influence over international transportation development as well as to heighten U.S. competitiveness. Through the development of a National Freight Strategic Plan pursuant to the Moving Ahead for Progress in the 21st Century Act, or MAP-21, we will focus transportation infrastructure investments on projects that will particularly benefit U.S. exports.

DOT Operating Administrations: Office of the Secretary (OST).

STRATGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.2: Increase Access to Foreign Markets

Air Service Agreements (DOT)

Overview

The United States has achieved Open Skies with over 100 aviation partners. DOT is continuing its Open-Skies outreach to aviation partners around the globe including important trading partners in Asia, South America and Africa, and continues to work toward incremental liberalization with other strategic partners, including China and Russia In order to enforce and enhance the usability of commercial rights negotiated in international aviation agreements, the Department routinely engages with foreign partners on behalf of U.S. stakeholders.

PERFORMANCE REPORT

Air Service Agreements (OST)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Reach 3 or more new bilateral and multilateral aviation agreements to remove market-distorting barriers to transportation.	7	4	4	5	3	3	5	Met 

Progress Update – Results

In Calendar year 2015, DOT concluded new air service agreements with Azerbaijan, Cote d'Ivoire, Mexico, Serbia and Ukraine that improved market access for U.S. air carriers.

PERFORMANCE PLAN

Barriers to Trade Removed (OST)

Goal	Indicator	FY 2016 Target	FY 2017 Target
Remove 3 or more market-distorting barriers to transportation through resolution of major stakeholder commercial concerns and/or negotiation of new bilateral and multilateral aviation agreements.	Number of bilateral and multilateral aviation agreements reached and/or major commercial concerns resolved..	3	3

Key Strategies

Transportation interests advanced in targeted countries around the world through policy development, planning (including preparation of background briefing documentation and event scenarios), support of logistics, meeting support, and follow up on commitments and deliverables on the following types of activities:

- Meetings with high-level foreign counterparts.
- Negotiating sessions with foreign counterparts.
- Speaking engagements at forums, stakeholder group meetings, multilateral organizations, multilateral ministerial meetings, and private sector stakeholder events.

- Recurring international forums with key partners.
- Senior level trips to key partner countries, during which meetings addressing issues in multiple modes of transportation normally take place.

Transportation interests advanced in targeted markets around the world through:

- Conducting face-to-face formal negotiations with foreign governments.
- Coordination with the Departments of State and Commerce in developing U.S. negotiating positions.
- Working with U.S. aviation stakeholders to identify liberalization targets and resolve business issues.
- Facilitating technology transfer and capacity building through the Safe Skies for Africa Program.

Partners include the Departments of State, Commerce, and Homeland Security, the Federal Aviation Administration, U.S. Trade and Development Agency; aviation community industry groups, including Airlines for America, National Air Carrier Association, Airports Council International-North America; individual airlines, airports, communities and labor unions.

Goal Leaders

Susan L. Kurland, Assistant Secretary for Aviation and International Affairs, Office of the Secretary.

Strategic Objective 3.3—Improve System Efficiency

Improve the efficiency of the Nation's transportation system through transportation-related research, knowledge sharing, and technology transfer.

PERFORMANCE OVERVIEW

Transportation research has little value if its technological outcomes are not transferred to those that might apply them. DOT will facilitate the exchange of knowledge and technologies by streamlining processes for partnership agreements and increasing awareness of commercialization and technology transfer opportunities. DOT will also pursue additional innovations through international dialogues such as the International Transportation Forum, cooperation agreements with global partners, and international research initiatives.

DOT Operating Administrations: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), and Office of the Secretary (OST).

STRATGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.3: Improve System Efficiency

Highways Research and Development (FHWA)

Overview

Through Highway Research, Technology and Education (RT&E) programs, FHWA conducts and coordinates research and development to generate innovative solutions to highway and transport challenges. The Agency also undertakes significant technology deployment to accelerate the use of more effective decision-making information and cutting-edge practices and tools that allows our country to make the best investments in the Nation's transportation system.

Three components of the RT&E program are necessary to cover all phases in the innovation life cycle.

- The R&D program encompasses advanced and applied research, by exploring new areas of research as well as developing and testing new products and services that can provides short-term benefits for the Nation's transportation system.
- Once a new product or technology has gone through initial testing and evaluation and is proven to provide value, the Technology and Innovation Deployment Program (TIDP) supports its implementation through the delivery and deployment phase, which includes further refined testing and evaluation, market research, and marketing and communication to the wider community.
- The third component is the Training and Education (T&E) Program, which supports training the current and future transportation workforce. This program is discussed in more detail under the Dynamic Workforce strategic objective.

Progress Update

In 2009, FHWA launched Every Day Counts (EDC) in cooperation with AASHTO to speed up the delivery of highway projects and to address the challenges presented by limited budgets. EDC is a State-based model to identify and rapidly deploy proven but underutilized innovations to shorten the project delivery process, enhance roadway safety, reduce congestion and improve environmental sustainability. Through the EDC model, FHWA works with State and local transportation agencies and industry stakeholders to identify a new collection of innovations to champion every two years. Innovations are selected collaboratively by stakeholders, taking into consideration market readiness, impacts, benefits and ease of adoption of the innovation. After selecting the EDC technologies for deployment, transportation leaders from across the country gather at regional summits to discuss the innovations and commit to finding opportunities to implement the solutions that best fit the needs of their state highway programs.

Information gathered at the summits is brought back to State Transportation Innovation Councils (STICs), which bring together public and private transportation stakeholders to evaluate innovations and spearhead their deployment in each State. EDC's collaborative, State-based approach to deploying innovation enables states to be in the driver's seat and decide which innovations will work best for them and their customers. Working through STICs or similar groups, States can consider innovations FHWA recommends, along with technologies and practices from sources such the AASHTO Innovation Initiative and the second Strategic

Highway Research Program, and adopt those that add value to their highway programs. Currently, 46 States, D.C., and Puerto Rico have established STICs. With a STIC in nearly every State, there is a national network to exchange best practices for widespread use of innovation across the Nation.

Every state transportation agency has used eight or more of the 32 innovations promoted under the initiative, and some have adopted more than 20. Several of those innovations are now mainstream practices in many states. The initiative has also fostered a transportation workforce that is adept at putting innovation to work to address transportation challenges. Provisions for continuation of the EDC initiative included in the FAST Act serve as recognition of the overall success and impact the initiative has made. The following highlights provide a glimpse of innovation deployment by State and local transportation agencies along with the resulting benefits:

- Since October 2010, more than 2,500 replacement bridges have been designed and constructed using accelerated bridge construction technologies. For example, the Nevada DOT replaced two bridges using slide-in bridge construction, which saved an estimated $12.7 million in time and fuel costs for commuters. The Rhode Island DOT replaced a 57-year old bridge using prefabricated superstructure, substructure and foundation systems. This allowed the contractor to replace the bridge in 33 days instead of the six months required for traditional methods, saving road users about $2 million.
- During EDC, Division Offices and State DOTs have initiated, revised, or expanded over 250 programmatic agreements to establish a streamlined process for handling routine environmental requirements. All 50 States, Washington, DC and Puerto Rico have programmatic agreements in place with 37 States having two or more. For example, the Oregon Endangered Species Act programmatic agreement with National Marine Fisheries Service resulted in a reduction in the review time by 85 percent, from 170 days to 30 days per biological assessment.
- From 2009 to 2013, warm-mix asphalt use increased from about five to 30 percent of the total asphalt produced, resulting in savings of over $600 million in fuel use during production. In total, 47 State DOTs and all Federal Lands Highway Divisions have a specification and/or contractual language allowing warm-mix asphalt on Federal-Aid or Federal Lands projects.
- Prior to EDC, approximately 12 agencies were using Adaptive Signal Control Technology, or ASCT, to adjust the timing of traffic lights to accommodate changing traffic patterns and ease traffic congestion. Now, over 100 agencies are implementing this technology.

FHWA launched an Incentive Program that offers technical assistance and funds, of up to $100,000 per STIC per year, to support the costs of standardizing innovative practices in a State transportation agency or other public STIC stakeholder. In FY 2015, a total of $4.2 Million was awarded to 44 STICs and a FLH TIC to fund a variety of projects. For example, the Vermont Transportation Agency is using STIC Incentive funds to develop a design-build guidance document, the Utah DOT is developing a 3D utility database, and the North Carolina DOT is developing a local public agency certification program.

FHWA also launched the Accelerated Innovation Deployment (AID) Demonstration Program in 2014. The AID Demonstration Program provides incentive funding to offset risk of using an innovation on a project. Under this program, funds are available to implement an innovation in any aspect of highway transportation including planning, financing, operation, structures, materials, pavements, environment, and construction on any project eligible for assistance. The funding award is for the full cost of the innovation on a project up to $1 million. A total of $45 million was allocated to fund the program and, 45 awards have been issued totaling $33.8 million since the program was started.

The Strategic Highway Research Program 2 (SHRP2) complements the EDC and STIC initiatives. In coordination with AASHTO, FHWA is encouraging transportation agencies to field test the results of more than 100 research projects, referred to as SHRP2 Solutions, to determine if they will ultimately be adopted as standard business processes and practices. FHWA's Implementation Assistance Program (IAP) offers financial and technical assistance to eligible State DOTs, MPOs, local transportation entities and others to help offset the costs and risks of early adoption of innovation. Below are some highlights of FHWA's achievements with SHRP2 implementation.

- The first six rounds of the IAP put more than 40 SHRP2 solutions to work on 350 projects in all 50 States, the District of Columbia, and Puerto Rico. In addition to State DOTs, MPOs, and local agencies, IAP participants include Tribal agencies, regional councils of governments, tolling authorities and FHWA Federal Lands Divisions.
- FHWA and AASHTO have instituted a programmatic process to evaluate the success of SHRP2 solutions based on outcome, output, and impact metrics. Baseline data have been gathered for many of the SHRP2 products under implementation and will be collected via various methods for products not yet implemented or for which no data were originally gathered.
- FHWA and AASHTO have a broad audience for marketing, communications, and education about SHRP2 solutions, reaching out to State DOTs, MPOs, and regional, local and Tribal organizations. Information about SHRP2 is widely disseminated through ongoing outreach to transportation agencies and other practitioners, both directly and through numerous national associations and organizations. In July 2015, FHWA announced the selection of 10 universities that are receiving cooperative agreements under the SHRP2 Education Connection initiative to incorporate SHRP2 solutions into their existing coursework in a variety of disciplines.
- Internationally, FHWA shares SHRP2 updates with the Forum of European Highway Research Labs, or FEHRL, and there has been interest in including SHRP2 products in the European Road Authority's innovation and technology program. Additionally, the Australian Road Research Board, or ARRB, is currently reviewing selected SHRP2 Solutions for implementation by road agencies in Australasia.

Information Gaps

In order to better assist our most important partners, the State Departments of Transportation (DOTs), FHWA launched the Top Three initiative to solicit input from State DOTs regarding their top three challenges that could potentially be solved or improved through research and

technology solutions. Through this initiative, FHWA's RT&E program is increasing support to the States, ensuring that their most important concerns are taken into consideration when setting an agenda for the FHWA RT&E Programs. The input received from the States was analyzed and the potential additions to FHWA's research roadmaps are being identified.

FHWA is developing a performance and evaluation system for its RT&E program to assess and communicate its value and effectiveness and to ensure that stakeholders and Congress understand their return on investment of Federal funds. Reports for the first set of programs and projects were completed and are undergoing final review. Simultaneously, data collection has begun for a second wave of project evaluations.

Key Strategies

R&D program supports research in a variety of mission-critical area and ultimately provides transportation policymakers with information and data that allows them to make more informed decisions. The R&D program includes FHWA's advanced and applied research, and facilitates national and international coordination and collaboration to leverage knowledge and develop solutions to address current and emerging highway transportation needs. The R&D program is closely coordinated with, but does not duplicate, research and development conducted through the University Transportation Center Program, the Intelligent Transportation System Program, the pooled fund National Cooperative Highway Research Program, and State-based research and technology initiatives.

The TIDP undertakes final analyses, pilots, demonstrations, marketing, communications, and promotional activities that will accelerate the adoption of a product or service by the States and other governmental entities. As described earlier, FHWA administers the EDC initiative, STIC Incentive Program, AID Demonstration Program, and SHRP2 under the TIDP established under MAP-21 and continued under the FAST Act

FHWA is an active participant in the Small Business Innovation Research (SBIR) Program, in which more than 2.5 percent of all extramural research funds are contracted to small businesses to develop products to support the highway transportation industry. For example, a small business developed a new stereovision-based approach for detecting pedestrians at intersections. Based on a concept borrowed from military tracking, the company used a new light-emitting diode stereo camera and advanced pedestrian-detection algorithms to distinguish pedestrians and vehicles on the roadways. FHWA and the FTA are collaborating on a follow-up project to research whether the information from the project can be used in connected-vehicle research to greatly reduce pedestrian fatalities. Another SBIR project developed a smartphone application that alerts pedestrians before crossing the street. Sending signals between the pedestrian's phone and the traffic signal box, the application becomes a warning sign to notify when it's safe for the pedestrian to step into the crosswalk.

FHWA is also actively pursuing Cooperative Research and Development Agreements (CRADA), to enhance innovation and the acceptance of new ideas. Examples of recent CRADAs, which are established with privately-owned firms, include an agreement to examine the use of laser shearography in evaluating asphalt binders, asphalt mixtures and pavements; and

an agreement to test the production of durable, sustainable, cost-effective, hydration-free construction material.

Next Steps

FHWA will continue to promote the use of innovative products and services by:

- Developing and evaluating more durable and sustainable pavements, such as Reclaimed Asphalt Pavement and Reclaimed Asphalt Shingles mixes;
- Studying and evaluating the benefits of deploying low-cost highway safety countermeasures, such as offset improvements for left-turn lanes, increased retro reflectivity at stop signs, and lane and shoulder width combination on rural, two-lane, undivided roads;
- Continuing EDC implementation efforts in 2016 to deploy 11 innovations;
- Promoting the use of a STIC at the State level and provide funding incentive support through the STIC Incentive and AID Demonstration programs;
- Soliciting ideas for EDC-4, making selections with stakeholders, preparing for launch of EDC-4, and ultimately supporting deployment efforts of the selected innovations in 2017-2018.
- Working with its partners to implement SHRP2 solutions and evaluate the success of the products themselves and the deployment methods. The selections for round 6 were announced this past year and round 7 will launch in April 2016.
- Continuing to use T&E Program funds to support the delivery of a wide variety of services and products, such as instruction in the latest technologies and best practices in highway construction through the National Highway Institute; technology transfer centers in all 50 states, Puerto Rico, and regional centers serving Native American Tribal governments; freight planning capacity building in transportation planning; and strategic programs and activities in the areas of environment, surface transportation safety, rural safety, and project finance; and
- Advancing the objectives of the Long-Term Pavement Performance program (LTPP) and the Long-Term Bridge Performance program (LTBP).

Goal Leaders

Michael Trentacoste, Associate Administrator for Research, Development and Technology, Federal Highway Administration
Tom Harman, Director, Center for Accelerating Innovation, Federal Highway Administration
Amy Lucero, Director of Technical Services, Federal Highway Administration

STRATGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.3: Improve System Efficiency

Railroad Research and Development (FRA)

Overview

FRA's Research and Development (R&D) program enables the safe, reliable, and efficient movement of people and goods through basic and applied research and development of innovations and solutions. It does so by providing the scientific and engineering basis for safety rulemaking and enforcement. FRA also collaborates with the railroad industry to develop and implement new technologies and practices that improve overall system safety. R&D produces long-term benefits. The work that began 5 to 10 years ago contributes to today's safety record.

Progress Update

Recent examples of successful rail safety R&D include crashworthiness research that led to improved passenger rail car safety; analysis of vehicle-track interaction that led to revised track safety and vehicle qualification standards; development of a freight train braking algorithm that enables achievement of positive train control safety benefits without adversely affecting operations; and safety culture pilot programs that have reduced the number of human factors caused accidents and incidents.

Key Strategies

FRA R&D will continue to focus on the most pressing safety challenges. For example, R&D FRA full-scale testing and computer modeling will lead to improvements in the crashworthiness of passenger equipment and training and software development will support passenger and commuter railroads' safety culture programs. In addition, FRA's R&D program is developing new technologies for highway-rail grade crossing protection and train to vehicle communication to reduce the number of incidents. Regarding the safe transportation of energy products, FRA focus areas include tank car and rail integrity and developing the scientific and engineering foundation to continue revamping of FRA's track safety regulations.

Goal Leader

Dr. John Tunna, Director, Research, Development, and Technology Program, Federal Railroad Administration.

Strategic Objective 3.4—Create Dynamic Workforce

Foster the development of a dynamic and diverse transportation workforce through partnerships with the public sector, private industry, and educational institutions.

PERFORMANCE OVERVIEW

The operation of the Nation's transportation system depends on a highly skilled and qualified workforce, now and for the foreseeable future. To be successful in addressing unmet infrastructure needs, the Nation will need a broad spectrum of skilled workers. As demand for transportation services increase, both public and private sector transportation organizations face the ever-increasing difficulty of finding qualified workers and managers to fill priority occupations. DOT will collaborate with our partners in Government agencies, private and public employers, educational institutions, and workforce and labor organizations to identify and advance career and technical education pathways. These pathways support transportation jobs, STEM (science, technology, engineering, and mathematics) and transportation-related academic and certification programs for K–12 students, and improve pathways into various levels of transportation occupations for all segments of the population.

DOT Operating Administrations: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Maritime Administration (MARAD), Federal Aviation Administration (FAA), and Office of the Secretary (OST).

STRATGIC GOAL 3: ECONOMIC COMPETIVENESS
Strategic Objective 3.4: Create Dynamic Workforce

Highways Workforce Training (FHWA)

Overview

Changes in the transportation industry and in the demographics of the U.S. workforce require public and private sector transportation organizations, training providers, academic institutions and other strategic partners to focus greater attention on the challenges facing transportation workforce development. DOT can successfully address these issues by collaborating with our partners in Government agencies, private and public employers, educational institutions, and professional, workforce and labor organizations.

Progress Update

In FY 2014, the National Highway Institute (NHI) provided training to more than 45,000 course registrants across more than 300 course offerings of instructor led, web-based and blended training approaches. Instructor-led training sessions accounted for 14,183 participants in 576 hosted sessions. The Dwight David Eisenhower Transportation Fellowship Program awarded 171 fellowships to students pursuing transportation-related degrees at the associate through the advanced academic and professional degree levels. Of the total, 96 were awarded to Minority Serving Institutions.

Key Strategies

FHWA is authorized to allocate up to $10M annually in On-the-Job-Training (OJT/SS) dollars to State DOTs to administer surface transportation and technology training and skill improvement programs. Successful programs are those that partner with State and local stakeholders with established skills training, recruitment and job placement abilities, such as, Workforce Development Boards, technical colleges and universities, unions, and trade associations. Like FHWA's OJT program, the objective is target minorities, women, and others with historic underutilization in the highway construction industry, and moves them into journey-level positions in skilled and semi-skilled crafts.

FHWA is supporting the Ladders of Opportunity initiative by identifying existing national successful practices in the recruiting, hiring, and retention of a sustainable transportation trades workforce. In September 2015, FHWA advertised a Notice of Funding Availability in an amount totaling $3M. FHWA anticipates awarding amounts up to $500,000 to successful applicants. State DOTs and their sub-recipients are eligible to apply. The Notice solicits proposals that promote innovative, nationally and regionally significant, highway construction workforce development programs that invest in America's economic growth and build ladders of opportunity into the middle class for American workers.

In addition, FHWA manages a number of training, education, and workforce development programs to address all aspects of the transportation education continuum including career awareness and preparation at the 6 through 12 grade levels, community college, university and post graduate, and for professional development for incumbent transportation professionals. The programs support public and private sector partner workforce development interests, and engage partners across the transportation and education communities to assist in program development. Programs include the following:

- The National Highway Institute provides high level technical and policy courses to the transportation industry; primary participants are State DOT employees.
- The Local Technical Assistance Program (LTAP) provides technical assistance and training to local agency and Tribal government managers and employees. There are 58 locations that include an LTAP Center and seven Regional Tribal Technical Program Centers.
- The Eisenhower Transportation Fellowship Program provides funds to colleges and universities to attract top students and support their pursuit of transportation careers.
- The Garrett A. Morgan Technology and Transportation Education (GAMTTEP) Program provides for grants to State and local education agencies to develop and deliver K–12 transportation-related curriculum and education enrichment programs with an emphasis on women and underrepresented groups. In 2014, a clearinghouse was established to broadly share the results of projects previously funded by GAMTTEP grants and to leverage other transportation education programs in support of the objectives.
- The Surface Transportation Workforce Development, Training and Education program allows core funds to be used for training, education and workforce development activities, at the discretion of the States, at 100 percent Federal funding.
- The Transportation Education Development Program will provide grants to institutions of higher education to develop and deliver, in partnership with industry, new curricula and education programs to prepare and train individuals at all levels of transportation. The program provides for innovation in workforce development.
- The National Summer Transportation Institute program funds State DOTs to work with colleges and universities as host sites to introduce middle and high school aged youth to the transportation industry. Approved programs are STEM focused and provide hands-on learning experiences through lab work and field trips.

Next Steps

The OJT/SS program will enhance the development of our Nation's highway construction industry workforce. Jobs-Driven Skills Training Incentive program will strengthen workforce development services.

The Training and Education program will support NHI, LTAP, Eisenhower Fellowships, Transportation Education Development Program, and the Garrett Morgan Technology and Transportation Futures Program. These programs educate and development the current and future transportation workforce, transferring knowledge quickly and effectively. The Transportation Education Development Program will support five Regional Surface Transportation Workforce Centers that will facilitate partnerships and successful practices throughout the transportation, education, and workforce investment communities.

The successful applicants of the OJT/SS Notice of Funding Availability will establish training programs that provide career pathways that move targeted populations to sustainable careers. Successful applicants will establish programs that demonstrate partnerships with other State and local stakeholders with successful track records with providing skills training, recruitment and

job placement. Successful programs will target on areas with high rates of unemployment and address gaps in areas with current or projected workforce shortages in fields related to the transportation industry. FHWA will work to identify examples of established workforce development programs nationwide with established State and local partners. FHWA will showcase these practices as models for other States to consider.

Goal Leaders

Amy Lucero, Director of Technical Services, Federal Highway Administration

Irene Rico, Associate Administrator (Acting), Office of Civil Rights, Federal Highway Administration

Transit Workforce Training

Overview

The Public Transportation Workforce Development Program is part of Secretary Foxx's Ladders of Opportunity Initiative. The program promotes innovative nationally and regionally significant public transportation workforce development models and programs that invest in America's economic growth and help build ladders of opportunity into the middle class for American workers.

These grants help transit agencies create employment training programs, conduct outreach programs to increase minority and female employment in transit, conduct research on public transportation personnel and training needs, and provide training and assistance for minority business opportunities.

Progress Update

FTA announced the selection of 19 Innovative Public Transportation Workforce Development Program Projects to receive approximately $9.5 million in FY 2015. Fourteen of the 19 cooperative agreements have been obligated.

Strategic Goal 4: Quality of Life in Communities

Foster quality of life in communities by integrating transportation policies, plans, and investments with coordinated housing and economic development policies to increase transportation choices and access to transportation services for all.

Strategic Objective 4.1—Enhance Quality of Life

Expand convenient, safe, and affordable transportation choices for all users by directing Federal investments in infrastructure toward projects that more efficiently meet transportation, land use, goods movement, and economic development goals developed through integrated planning approaches.

PERFORMANCE OVERVIEW

U.S. transportation investments over the last 50 years have often been poorly coordinated with other investments such as housing and commercial development. These development patterns have provided many American families at a range of income levels with choices in where they can live, and in many cases the ability to own a single-family home. However, the reliance on car-dependent, dispersed development is not without costs. According to the Transportation Research Board, the average American between the ages of 25 and 54 drives over 12,700 miles per year; and the average American household spends 19 percent of its annual income to buy, maintain, and operate personal automobiles. Many communities lack alternatives to auto travel. Fewer than 5 percent of households are located within 0.5 mile of rail transit and only 53 percent of Americans have access to any form of public transportation service. A reliable, integrated, and accessible transportation network that enhances choices for transportation users will provide access to employment opportunities and other destinations, and promote positive effects on the surrounding community.

DOT Operating Administrations: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), and Office of the Secretary (OST).

STRATEGIC GOAL 4: QUALITY OF LIFE IN COMMUNITIES

Strategic Objective 4.1: Enhance Quality of Life

Pedestrian and Bicycle Access (FHWA)

Overview

DOT will encourage the development or significant improvement of multimodal transportation networks with more convenient and affordable choices particularly for people with disabilities, as well as greater use of non-motorized transportation modes such as bicycling and walking. In 2010, DOT issued a policy statement on *Bicycle and Pedestrian Accommodation Regulations and Recommendations* that signaled an increased commitment to support safe and convenient transportation choices, including walking and bicycling.

FHWA released a series of reports that demonstrate how transportation projects can foster livability in communities of varying sizes including in rural areas. These efforts build upon the results of the Non-motorized Transportation Pilot Program (NTPP), which demonstrated that making investments in pedestrian and bicyclist infrastructure has numerous community benefits. In May 2014, FHWA reported the continued growth in walking and bicycling in four pilot communities and the associated improvements in access and mobility, safety and public health, and the environment and energy. In September 2015, FHWA and the National Center for Safe Routes to School released a 10-year report that highlighted the success of the program in the areas of walking and bicycling and how projects have impacted communities throughout the U.S.

PERFORMANCE REPORT

Pedestrian and Bicycle Access (FHWA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Number of created and/or significantly improved pedestrian and bicycle transportation networks. *New measure*	N/A	N/A	N/A	N/A	N/A	25	86	Met 

Progress Update

FHWA led bicycling and pedestrian safety assessments in 36 States in support of the Department's Safer People Safer Streets Initiative. The purpose of the Initiative is to improve the safety of the growing number of Americans who are using nonmotorized means of transportation to travel to and from work, to reach public transportation, and to reach other important destinations.

More than one-half of the States currently have policies and plans that support improved transportation choices. FHWA provides funding support for reports, technical assistance, and training related to walking, wheeling, and bicycling. During FY 2015, FHWA continued to share information about the importance of considering transportation choices and to monitor the States for the adoption of policies that encourage and support walking and bicycling. FHWA updated

its Guidance: Bicycle and Pedestrian Provisions of Federal Transportation Legislation in September 2015. The purpose of this guidance is to describe Federal legislative and policy direction related to safety and accommodation for bicycling and walking.

FHWA also released updated guidance for the Transportation Alternatives Program (TAP) in a Question and Answer format to address implementation issues identified as States and communities moved forward with eligible projects. In addition to providing accessible transportation choices, TAP projects are vital to improving the safety of all roadway users including bicyclists and pedestrians. Projects funded through the TAP enjoy broad popularity with communities across the country, because small projects at the community level that would not otherwise be funded are eligible. The FAST Act replaced the TAP with the STP Set-Aside, but the project eligibilities and program processes remain the same.

To build on this progress, FHWA increased efforts to promote best practices related to quality of life in communities, multimodal transportation, and collaboration with nontraditional partners. In 2013, FHWA issued a memorandum expressing support for taking a flexible approach to bicycle and pedestrian facility design. The memo also supported the use of the AASHTO, National Association of City Transportation Officials (NACTO), and Institute of Transportation Engineers (ITE) resources to plan and design safe and convenient facilities and connected networks for pedestrians and bicyclists. FHWA guidance included examples that demonstrated appropriate design flexibility as follow-up to the memorandum. FHWA issued a set of Questions and Answers to complement the design flexibility guidance that supports the use of the Urban Street Design Guide in the planning and design process. FHWA released the Bicycle and Pedestrian Funding, Design and Environmental Review document to address common misconceptions about the use of Federal funding, street design, and the Environmental Review process as it pertains to pedestrian and bicycle facilities.

FHWA is advancing research to enhance safety and accommodations for pedestrians and bicyclists. FHWA completed several projects including:

- A Separated Bike Lane Planning and Design Guide that includes a detailed safety analysis and offers planning considerations and a flexible menu of design recommendations for this innovative bicycle facility type;
- A Design Resource Index that identifies the specific location of information in key national design manuals for various pedestrian and bicycle design treatments;
- A Statewide Pedestrian and Bicycle Planning Handbook that addresses statewide planning from plan inception and scoping to engaging stakeholders and the general public; developing goals, objectives and strategies; collecting and analyzing data; linking to the larger statewide transportation planning process; and implementation;
- A review of international best practices on Delivering Safe, Comfortable, and Connected Pedestrian and Bicycle Networks; and
- A report entitled Case Studies in Delivering Safe, Comfortable, and Connected Pedestrian and Bicycle Networks that focuses on the documentation and promotion of pedestrian and bicycle networks, which are interconnected pedestrian and/or bicycle

transportation facilities that allow people of all ages and abilities to safely and conveniently get where they want to go.

FHWA added to information provided to stakeholders and the public about fostering quality of life in communities through various education and outreach efforts including: the Fostering Livable Communities newsletter, the Human Environment Digest, additional case studies, and new resources for rural communities. FHWA also hosted webinars with practitioners to discuss: how Context Sensitive Solutions (CSS) and Streets as Places reconnect transportation agencies with their customers and their mission, while creating great communities. In addition, these webinars discussed the origin, evolution, and application of level of service (LOS) and the need for practitioners to choose LOS goals that consider all road users, supports livable communities, and help achieve CSS.

Information Gaps

As noted in the FHWA report, *Evaluating the Economic Benefits of Nonmotorized Transportation*, the variety of potential economic benefits of pedestrian and bicycle infrastructure and programming investments may include: commute cost savings for bicyclists and pedestrians; direct benefits to bicycle and tourism-related businesses; indirect economic benefits due to changing consumer behavior; and individual and societal cost savings associated with health and environmental benefits. There are only limited data available for this type of analysis however. Understanding the economic benefits from non-motorized transportation projects will become increasingly important as communities decide how to allocate limited transportation resources.

FHWA is undertaking research on a range of topics including pedestrian and bicycle safety, performance measures, design flexibility, network development, international best practices, and TAP performance evaluation. FHWA is also working on a *Strategic Agenda for Pedestrian and Bicycle Transportation* that will identify critical gaps, prioritize near term investments, and establish a national framework for issues such as data collection and management, network implementation and documentation, research, training, and national design guidance. FHWA is conducting a bicycle and pedestrian count technology pilot, updating pedestrian and bicycle elements of the Traffic Monitoring Analysis System, and developing a Nonmotorized Travel Analysis Toolkit. The Agency is also developing a pedestrian and bicycle safety reference tool, researching noteworthy local policies that support safe and complete pedestrian and bicycle networks, and developing a handbook for MPO pedestrian and bicycle planning.

PERFORMANCE PLAN

Pedestrian and Bicycle Access (FHWA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Increase the number of created and/or significantly improved pedestrian and bicycle transportation networks in communities (i.e., local, regional, and State) that provide functional	Number of States and MPOs taking programmatic steps to correct gaps in connectivity and accessibility (revised from	15	20

Goal	Indicator	FY 2016 Target	FY 2017 Target
connections and enhance transportation choice to 65 by FY 2018.	FY 2015.)		

Key Strategies

FHWA performance measures and indicators are now used to track progress in the development of seamless walking and bicycling networks. FHWA will work with partners and stakeholders, including communities, States, and others, to identify indicators of performance appropriate to the local context, while also providing information on available data, collection methods and analysis techniques. In addition, FHWA will conduct research to support improved bicycle and pedestrian design, with a focus on comfortable, convenient, and safe pedestrian and bicycle facilities and intersections that meet the needs of all users.

Hundreds of communities and many States across the United States have established Complete Streets policies. DOT will continue to encourage policies that improve transportation choice so that they are increasingly mainstreamed. Moving forward, the focus will be on measuring the results of these policies. DOT's new measure focuses on tracking the successful implementation of connected pedestrian and bicycle networks (i.e. the physical infrastructure on which people walk and bike). Tracking the creation of pedestrian and bicycle networks is the next logical step in tracking the success of the policies and these networks will, over time, directly improve transportation choice in communities throughout the United States.

Next Steps

States will use Federal-aid funds to support projects that create safe and affordable transportation choices in communities across the country. FHWA will continue to develop additional information and tools, such as TAP performance management guidebook, for States and other agencies to use as the implement their competitive project selection processes.

FHWA is undertaking an aggressive research agenda on a range of topics including pedestrian and bicycle safety, performance measures, design flexibility, network development, international best practices, and TAP performance evaluation. FHWA continue to address and implement elements of the *Strategic Agenda for Pedestrian and Bicycle Transportation* that will identify critical gaps, prioritize near term investments, and establish a national framework for issues such as data collection and management, network implementation and documentation, research, training, and national design guidance.

FHWA's research initiatives demonstrate our commitment to providing leadership, guidance, tools, and decision support resources to improve safety and accelerate the delivery of connected pedestrian and bicycle networks. To further leverage our research efforts, FHWA will continue to support a Pedestrian and Bicycle Information Center to provide technical resources, online tools, and training opportunities.

STRATEGIC GOAL 4: QUALITY OF LIFE IN COMMUNITIES

Strategic Objective 4.1: Enhance Quality of Life

Goal Leaders

Gloria Shepherd, Associate Administrator for Planning, Environment, and Realty, Federal Highway Administration

Integrated Planning (FHWA)

Overview

Building quality of life in communities involves a holistic approach. FHWA and other modal administrations in the Department are working with the U.S. Department of Housing and Urban Development (HUD), and the U.S. Environmental Protection Agency (EPA) through the interagency Partnership for Sustainable Communities. The Partnership coordinates Federal housing, transportation, water, and other infrastructure policies and investments.

FHWA sponsors planning and project development approaches like Context Sensitive Solutions and activities that promote public involvement and environmental justice. These activities help enable people to live closer to jobs, save time and money for households, reduce pollution, participate in community growth and change, and benefit from transportation system improvements. Projects and activities, such as the HUD-DOT-EPA Location Affordability Portal, build on the Partnership's principles and include investments that increase the number of new and/or significantly improved pedestrian and bicycle transportation networks in communities.

Nearly one-third of bike trips are taken by people who make less than $30,000 a year. Bicycling is an important option for transportation and FHWA's efforts are directed at helping to make sure that there are safe and efficient routes for all Americans, regardless of what mode they choose.

Key Strategies

FHWA has developed numerous tools, as well as provided training and capacity building for livability. Key activities and products are described below:

- PlaceFit, a tool that provides access to a variety of existing websites based on user-identified livability characteristics that may appeal to their locational and lifestyle choices;
- Community Vision Metrics, a tool that provides quality of life performance indicators. goals.
- Case studies covering a broad range of policy areas such as expanding transportation choices and developing integrated multimodal networks; promoting equitable, affordable housing; enhancing economic competitiveness; coordinating and leveraging Federal policies and investments; and enhancing the unique characteristics of communities;
- Fact sheets to address the relationship of transportation to safety, land use, housing costs, system management and operations, development and the environment, economic development, freight, rural communities, and the role of State DOTs;

- Weekly Human Environment Digest that provides the latest information from a variety of Federal and non-Federal sources that addresses transportation and its relationship to the human environment;
- Newsletters that provide real world examples of the relationship between transportation and community, such as providing access to good jobs and affordable housing, quality schools, and safer streets and roads; and provide access to effective practices and resources for practitioners and the public;
- Outreach to improve the capacity of States and communities to address quality of life in communities and transportation in the development of plans, programs and projects; and
- FHWA's Livable Communities Discussion Board, an online forum for practitioners to share information, and engage in questions and ideas on livability,

Next Steps

FHWA Research, Training, and Education, or RT&E, will address quality of life in all aspects of transportation. Key activities and products include:

- Case studies showcasing innovative approaches to improving community quality of life through transportation; and webinars to share and promote examples quality of life in transportation planning;
- Quarterly newsletters that provide transportation professionals with real-world examples to help them improve the relationship between transportation agencies and communities, such as providing access to good jobs, affordable housing, quality schools, and safer roads; and
- FHWA's Livable Communities Discussion Board, an online forum for practitioners to share information, and engage in questions and ideas on livability.

Quality of life is important in rural America as well. Many communities outside national parks, refuges, and forests are close enough to urban areas to facilitate the use of transit, vanpools, and bicycles to access Federal lands. Greater use of alternative transportation options in and outside Federal lands helps reduce emissions, eases congestion at the gate, and preserves the environment for future generations. The Tribal Transportation Program supports rural livability in Tribal communities by providing better access to housing, emergency services, schools, stores, places of employment, and medical services. Access to these basic services will enhance the quality of life on Tribal lands.

Goal Leaders

Gloria Shepherd, Associate Administrator for Planning, Environment, and Realty, Federal Highway Administration

Timothy Hess, Associate Administrator for Federal Lands Highway, Federal Highway Administration

STRATEGIC GOAL 4: QUALITY OF LIFE IN COMMUNITIES
Strategic Objective 4.1: Enhance Quality of Life

Increasing Passenger Rail Ridership (FRA)

Overview

High-performance passenger rail is uniquely well-suited to addressing interconnected transportation challenges facing the United States. Highway and aviation congestion cost the U.S. economy $121 billion in 2011 in lost time, productivity, and fuel, from an estimated $24 billion impact in 1982.[7] The United States' population is projected to grow by 95 million residents from 2015 to 2050, exacerbating congestion and stressing our infrastructure. Reliance on imported oil for American transportation (now 33 percent of consumption, the lowest level since 1985) negatively influences national and economic security and environmental quality. Moreover, 33 percent of all U.S. greenhouse gas emissions are from the transportation sector, with total 2011 emissions 8.4 percent higher than in 1990.[8]

Rail transportation is also well suited to help meet the mobility needs and choices of the growing and aging U.S. population. The number of Americans 65 years old and older is expected to double by 2040, to more than 80 million people (over 20 percent of expected the U.S. population). Only 15 percent of Americans older than age 65 drive regularly, with 6 percent of those older than age 75 driving regularly. Younger generations of Americans are also choosing to drive both less often and for shorter distances than previous generations.

As highway and airport congestion increases, rail service can provide a more reliable and efficient travel options for many markets. Rail provides high capacity with a relatively limited geographic footprint.

PERFORMANCE REPORT

Increasing Passenger Rail (FRA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Number of intercity passenger rail miles traveled, in billions of miles	5.90	6.33	6.80	6.80	6.65	6.90	N/A	Met

Progress Update

Americans are choosing rail in record numbers—Demand for passenger rail has surged across the United States. Ridership levels set new records in 10 of the past 11 years. In FY 2014, Amtrak carried almost 31 million passengers, down slightly from 2013. Poor reliability—a result of increased freight traffic and construction—contributed to lower ridership this year compared with previous years and projections. As recently funded service improvements take effect—new

[7] Texas Transportation Institute, *2012 Urban Mobility Report*, tti.tamu.edu/documents/mobility-report-2012.pdf.

[8] U.S. Department of State, *2014 Climate Action Report*, http://www.state.gov/documents/organization/214959.pdf.

trains, faster trip times, reduced delays—Amtrak ridership will likely continue rising. FRA has several responsibilities with regard to Amtrak, including:

- Administering Federal operating subsidies and capital and debt grants and ensuring compliance with grant agreement provisions.
- Providing technical assistance and standards for such matters as Amtrak capital planning and equipment standardization.
- Overseeing and enforcing Amtrak compliance with Federal rail safety regulations and accessibility requirements.

PERFORMANCE PLAN

Increasing Passenger Rail (FRA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Increase intercity passenger rail ridership to at least 7.5 billion miles traveled by the end of FY 2018.	Intercity passenger rail miles traveled (in billions.)	7.05	7.20

Key Strategies

FRA makes strategic investments that reflect the needs of multiple stakeholders—passenger and freight rail operators, the traveling public and shippers, governments, and private interests. This wide range of projects is based on specific market needs and rigorous analysis of costs and benefits. Investments in both new and improved passenger rail services with varying frequencies and speeds provide financial assistance to eliminate rail chokepoints, add freight capacity, and conduct comprehensive planning.

Most segments of the Northeast Corridor were built over a century ago. Maintaining and modernizing these assets will reduce long-term costs and result in safer, more reliable, and more efficient rail transportation. FRA will invest to reduce the backlog of rail maintenance needs, replace obsolete equipment, upgrade stations to comply with *Americans with Disabilities Act of 1990*, or ADA, requirements, and continue vital long-distance passenger services.

Specific activities FRA will pursue, subject to the availability of funds include:

- Soliciting applications and awarding funding.
- Providing training and technical assistance to States and other stakeholders to aid in the successful development and implementation of high-speed and intercity passenger rail proposals.
- Developing tools for use in regional route planning and national- and corridor-level analyses of public benefits and costs of high-performance rail.

Goal Leaders

Paul Nissenbaum, Associate Administrator, Railroad Policy and Development, Federal Railroad Administration

Strategic Objective 4.2—Expand Access and Choice

Expand convenient, safe, and affordable transportation choices for all by emphasizing greater public engagement, fairness, equity, and accessibility in transportation investment plans, policy guidance, and programs.

PERFORMANCE OVERVIEW

The *Americans with Disabilities Act of 1990* (ADA) prohibits discrimination against persons with disabilities in all aspects of life, and applies to all entities, i.e., public or private regardless of funding source. Title II of the ADA applies to the entire operations of all stations in transit systems, airports facilities, intercity rail transportation system, and roadway facilities including sidewalks and pedestrian crosswalks. While many entities have developed ADA transition plans, implementation has been slowed by competing priorities for limited funds. DOT will provide guidance and assistance, to encourage ADA compliance in existing facilities. Also, the Department will integrate environmental justice principles into all Department planning and programming, rulemaking, and policy formulation.

In the 1950s, President Eisenhower expressed a vision for a modern highway system that would match the needs of our "growing population, our expanding economy, and our national security." Planners and builders designed a national network that would move cars and trucks as efficiently as possible from one point to another. One devastating outcome of this approach was a decision made to route highways directly through the urban core of cities. These highways often went where housing values were lowest and where public resistance would be least problematic. As eminent domain powered the system into existence, many families and individuals were displaced and entire neighborhoods – often well-established low income and minority communities previously targeted for urban renewal efforts – were razed. Anti-discriminatory planning regulations were passed starting in the 1960s, but by then most of the damage had already been done. A national effort is needed to undo this legacy of dividing neighborhoods through highway building that even today forms a barrier to upward mobility and neighborhood revitalization efforts because cities are divide

DOT Operating Administrations: Federal Highway Administration (FHWA), Federal Aviation Administration (FAA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), and Office of the Secretary (OST).

Strategic Goal 4: Quality of Life in Communities
Strategic Objective 4.2: Expand Access and Choice

ADA Compliance (FHWA)

Overview

Under the Americans with Disabilities Act (ADA) and Section 504, public entities must ensure that all programs, activities, and services are examined to identify barriers to access for persons with disabilities. Every State is required by Section 504 and by the ADA, to have completed a self-evaluation and an ADA transition plan. A self-evaluation is an inventory of an entity's facilities (e.g. sidewalks, curb ramps, detectable warnings) that identifies barriers in policies (e.g., public meetings in inaccessible locations), programs (e.g., sidewalks and curb ramps are both considered to be programs that are inaccessible to persons with disabilities, or, missing where they should have been constructed) and other activities and services that prevent access for persons with disabilities.[9] An ADA transition plan is the document that identifies the steps necessary to complete the changes identified in an entity's self-evaluation to make its programs, activities, and services accessible. The plan describes in detail the prioritized actions an entity will take to make facilities accessible and a prioritized schedule for making the improvements. As of December 2015, 26 States had current ADA transition plans that include the public right-of-way and 26 States were in the development phase of completing their plans.

PERFORMANCE REPORT

ADA Compliance (FHWA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
States that have developed an Americans with Disabilities Act (ADA) transition plan that is current and includes the public right-of-way.	N/A	N/A	15(r)	17	24(r)	31	26	Not Met 

Progress Update

ADA transition plans are developed after a comprehensive inventory of a State's buildings and facilities, including those facilities in the public right-of-way (PROW) such as sidewalks and curb ramps. The entire process, including the inventory, writing the plan, posting the plan on the State's public website for comment, and review by the FHWA Division Office, takes

[9] All public entities with 50 or more employees agency-wide are required to develop a transition plan, and a copy of the plan is required to be made available for public inspection. Agencies with fewer than 50 employees should document in what is known as a program access plan, which summarizes the actions needed to correct the deficiencies identified in their self-evaluation. Section 504 contains similar requirements but has no employee threshold.

approximately 18 to 24 months to complete. In some cases, the process can be even longer depending on the number of PROW facilities.

Although FHWA projected that 31 States would complete their transition plan in FY 2015, a number of States unexpectedly confronted one or more of the following obstacles that resulted in a significant delay in completing their plan: seriously constrained resources, issues or delays with consultants, and changes in personnel (e.g., loss of ADA coordinator). In response to these State-based challenges, FHWA developed a process involving a multidisciplinary working group of ADA subject matter experts and division office administrators to review transition plans that will ensure compliance with regulatory requirements and facilitate the States' completion of their plans. The new process was implemented in the Fall 2015, with a guidance memo issued to the field that provided the purpose and background of the process and explained the operations of the working group and the responsibilities of a new ADA Transition Plan review team. A detailed overview of the new process, along with FHWA's expectations of the State DOTs for completing their transition plans, were outlined in national webinars held in October and December for both FHWA Division Offices and State DOTs. FHWA will continue to provide States with any technical assistance or training that is needed to ensure they are submitting final draft ADA transition plans that meet the regulatory requirements, and, at the same time, focus on successful outcomes rather than process.

PERFORMANCE PLAN

ADA Compliance (FHWA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Improve accessibility on Public Rights of Way by increasing the number of State DOTs with ADA transition plans that include the Public Rights of Way to 48 by FY 2018	Number of State DOTs with ADA transition plans that include the Public Rights of Way.	32 (revised)	42

Key Strategies and Next Steps

An additional 26 States are actively developing ADA transition plans, with the majority of those States projecting a completion date within the next 2 to 3 years. Further, FHWA is planning several webinars during 2016 that will provide technical assistance on best practices for expediting a State's completion of its transition plan. In addition, another webinar is being planned that will address the issue of what Division and State planners need to know about ADA and transition plans. Given that many ADA compliance issues involve addressing challenges that are not only civil rights-related, but also those that involve issues pertaining to the planning, project development, infrastructure and safety aspects of the transportation decision-making process, FHWA will continue to implement its ADA program in a multi-disciplinary manner. The Agency recently released a Question & Answer (Q&A) document that is a supplement to its technical assistance on resurfacing and curb ramp installation that was jointly issued with the U.S. Department of Justice in 2013. Some of the Q&As touch on what practitioners need to know about what should be placed on a recipient's ADA transition plan.

Strategic Goal 4: Quality of Life in Communities
Strategic Objective 4.2: Expand Access and Choice

Goal Leaders

Irene Rico (Acting) Associate Administrator for Civil Rights, Federal Highway Administration

ADA Compliance (FTA)

Overview

ADA required that existing light rail, rapid rail, and commuter rail systems identify "key" stations that would be made accessible to and usable by persons with disabilities, regardless of other short- or long-term capital improvement plans. The deadline for completion was July 26, 1994; however, regulations provided for extensions through July 26, 2020 where extraordinarily expensive modifications or station replacement would be required. FTA continues to provide technical assistance to those transit systems that are still working to meet their extended deadlines for completion of their key station obligations.

PERFORMANCE REPORT

ADA Compliance (FTA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
The number of key transit rail stations verified as accessible and fully compliant.	513	522	567	567	607	605	607	Met 

Progress Update

As of 2015, FTA has continued to exceed its target for key rail stations verified as accessible and fully compliant under ADA. Following the issuance of the Department's ADA Final Rule on reasonable modification, FTA conducted a series of webinars to ensure that the transit industry was aware of the new requirements and prepared to implement them by the Rule's effective date. FTA completed work on the ADA Circular during FY 2015, and published the full, 12-chapter document on October 5, 2015. The Circular provides detailed guidance to transit agencies on how to comply with the provisions of the DOT ADA regulations. The release of FTA's ADA Circular represents a major milestone in assistance to the transit community. It thoroughly explains ADA requirements for public transit, providing real-life situations as examples of good practices for the transit industry to ensure accessible services for riders. The document does not amend or supersede the DOT ADA regulations; rather, it offers explanatory scenarios and sample templates, such as a rail station checklist for new construction and alterations.

PERFORMANCE PLAN

ADA Compliance (FTA)

Strategic Goal 4: Quality of Life in Communities
Strategic Objective 4.2: Expand Access and Choice

Goal	Indicator	FY 2016 Target	FY 2017 Target
Increase the number of key transit rail stations verified as accessible and fully compliant with ADA from 513 in 2010 to 605 in 2016.	Number of Key Rail Stations Verified as Accessible and Fully Compliant	605	605

Next Steps

To increase the number of key rail stations that are verified as both accessible and fully compliant under the ADA, FTA will:

- Continue to monitor progress on remaining key station work.
- Continue to review corrective actions for those key stations where work has been completed but deficiencies have been found.
- Continue to conduct verifications of those key rail stations that have been completed but have not yet been reviewed for compliance.
- Continue to provide research and technical assistance on best practices in transit asset management.

Goal Leaders

Linda Ford, Associate Administrator for Civil Rights, Federal Transit Administration

Accessible Intercity Passenger Rail Stations (FRA)

Overview

ADA requires that all intercity rail transportation system stations be readily accessible to and usable by individuals with disabilities, including those who use wheelchairs, as soon as practicable, but no later than July 26, 2010. Limited funding prevented Amtrak from meeting this deadline.

PERFORMANCE REPORT

Accessible Intercity Passenger Rail Stations (FRA)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Percent of intercity passenger rail stations that comply with the requirements of the ADA	N/A	N/A	less than 1% (r)	less than 3% (r)	N/A	17%	N/A	Not Met

Notes: N/A = Not available. (r) = Revised.

Progress Update

ADA compliance projects were funded under the previous Amtrak capital grants program and the Capital Assistance for High Speed Rail Corridors and High-Speed Intercity Passenger Rail (HSIPR) programs. By the end of calendar year 2011, 95 percent of Amtrak stations had barrier-

free access between platforms and trains and ADA-related design and construction work was under way at 110 stations. Amtrak did not make more progress as it reorganized its management structure and approach for addressing remaining accessibility issues.

PERFORMANCE PLAN

Accessible Intercity Passenger Rail Station (FRA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Improve access to rail transportation for people with disabilities and older adults by ensuring that 100 percent of intercity passenger rail stations* comply with certain requirements of the Americans with Disabilities Act by the end of 2020.** [Revised and Expanded]	1) Percentage of intercity passenger rail stations* that are functionally accessible. [New]	94%	96%
	2) Percentage of intercity passenger rail stations* that have accessible restrooms. [New]	87%	97%
	3) Percentage of intercity passenger rail stations* that have ADA-compliant passenger information display systems installed where required. [New]	84%	88%

*** Where Amtrak is responsible for compliance.**
**** For the purposes of this goal, the following definitions apply—**
(1) Functionally accessible means that passengers have an accessible path from the public right of way to the train platform.
(2) Accessible restrooms mean the station restrooms meet 2006 U.S. Department of Transportation standards, which provide minimum requirements for all facilities in a restroom to ensure all Americans, including those in wheelchairs, can use the facilities.
(3) Passenger information display systems mean integrated messaging services that deliver synchronized audible and visual messages regarding train service (arrival and departure times, gate and track assignments, boarding locations, stops and train status) and general announcements (passenger paging, emergency messages, etc.).

Key Strategies and Next Steps

FRA's National High-Performance Rail System, or NHPRS, contains two programs—Current Passenger Rail Service and the Rail Service Improvement Program—that support initiatives aimed at planning and developing high-speed and intermodal rail corridors and terminal areas, developing multi-modal stations, facilitating the standardization and procurement of rail equipment, and maintaining critical rail assets and infrastructure. Many of these initiatives, as well as projects currently underway, began under the previous Capital Assistance for High Speed Rail Corridors and HSIPR programs, as well as Amtrak's capital and operating grants.

Strategic Goal 4: Quality of Life in Communities
Strategic Objective 4.2: Expand Access and Choice

The Current Passenger Rail Service program supports efforts to bring all intercity passengers rail stations into compliance with the requirements of ADA. Additionally, ADA compliance projects were funded under the previous Amtrak capital grants program and the Capital Assistance for High Speed Rail Corridors and HSIPR programs.

FRA and Amtrak, with input from many stakeholders, have developed a new performance goal for tracking progress toward ADA compliance at intercity passenger rail stations. The focus is on projects that address significant accessibility challenges across the country. The goal has three indicators for these challenges: accessible paths from the public rights of way to the train platforms; restroom facilities that are usable by all Americans, including those in wheelchairs; and integrated messaging services that deliver synchronized audible and visual train service messages. Specific activities supporting this objective include:

- Soliciting applications and awarding funding.
- Providing training and technical assistance to States and other stakeholders to aid in the successful development and implementation of high-speed and intercity passenger rail proposals.
- Developing tools for use in regional route planning and national- and corridor-level analyses of public benefits and costs of high-speed rail.
- Assisting Amtrak in prioritizing its ADA compliance plan and coordinating with third parties that share responsibility with Amtrak for ADA compliance.
- Overseeing Amtrak's implementation and compliance with ADA requirements.

Goal Leaders

Paul Nissenbaum, Associate Administrator for Railroad Policy and Development, Federal Railroad Administration
Calvin Gibson, Director of Civil Rights, Federal Railroad Administration

Strategic Goal 5: Environmental Sustainability

Advance environmentally sustainable policies and investments that reduce carbon and other harmful emissions from transportation sources, reduce our nation's dependence on foreign oil, improve air quality, and promote public health.

Strategic Objective 5.1—Promote Energy Efficiency

Reduce foreign oil dependence and carbon emissions through research and deployment of new technologies, including alternative fuels, and by promoting more energy-efficient modes of transportation.

PERFORMANCE OVERVIEW

The transportation sector accounts for about 70 percent of all petroleum usage in the United States. Consumption of motor gasoline represents about 46 percent of all petroleum consumed. Most transportation activity is based on fossil fuel consumption, which is the largest source of U.S. greenhouse gas (GHG) emissions. About 27 percent of all U.S. GHG emissions are due to tailpipe emissions from transportation activities, and additional emissions are associated with the extraction and refining of fuels, the manufacture of vehicles, and the construction and maintenance of transportation infrastructure. On-road collectively account for approximately 84 percent of domestic transportation emissions, with the remainder coming from domestic aircraft (8 percent), and rail, domestic ships and boats, and pipelines (roughly 2 percent each).

DOT is working across all modes to improve the energy and environmental performance of the transportation sector, including its operations and facilities. The aviation industry has made significant gains in fuel efficiency, with commercial jet aircraft fuel efficiency improvements of 70 percent over the last 40 years. DOT and the U.S. Environmental Protection Agency (EPA) have worked closely with auto manufacturers, the State of California, environmental groups and other stakeholders to promulgate new rules and develop a series of programs to increase fuel economy of the Nation's vehicle fleet. The Department will continue to promote the deployment of advanced vehicle technologies, alternatives fuels and alternatives fuels infrastructure where feasible to reduce energy consumption and GHG emissions of transportation systems.

DOT Operating Administrations (OAs): Federal Highway Administration (FHWA), Federal Aviation Administration (FAA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Maritime Administration (MARAD), and Office of the Secretary (OST).

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.1: Promote Energy Efficiency

Aviation Energy Efficiency (FAA)

Overview

Environment and energy issues present a significant challenge to aviation and the development of the Next Generation Air Transportation System (NextGen). A critical component to ensure that the economic and social benefits of future air transportation demand are met will be to improve mobility (i.e., increasing efficiency and capacity); however, these enhancements have the potential to be constrained by aviation's environmental effects. The environmental vision for NextGen is to provide environmental protection that allows sustained aviation growth. Noise, air quality, climate, and energy are the most significant potential environmental constraints to increasing aviation capacity, efficiency, and flexibility. Measuring and tracking energy efficiency from commercial aircraft operations allows FAA to monitor improvements in aircraft/engine technology, renewable fuels, operational procedures and air traffic management enhancements in the airspace transportation system. This information provides an assessment of the combined influence on improving energy efficiency and reducing aviation's emission contributions.

Today's aircraft are up to 70 percent more fuel efficient than early commercial jet aircraft. There is growing concern over aviation's impact on the environment and public health, however. Aviation is currently viewed as a relatively small contributor to those emissions that have the potential to influence air quality and global climate. Carbon dioxide (CO2) emissions are a primary GHG and are directly related to the fuel burned during the aircraft's operation. As air traffic grows, aviation's CO2 contribution will increase unless there are offsetting improvements in aircraft/engine technology, renewable fuels, operational procedures, and traffic management.

The NAS energy efficiency target was selected based upon knowledge of the factors that most accurately characterize commercial aircraft fleet fuel efficiency. The data that underlies this target can be assessed in terms of aircraft and engine technology, fleet turnover, and air traffic management procedures that influence routes and schedule.

FAA's Continuous Lower Energy, Emissions and Noise (CLEEN) program goals related to the energy efficiency performance plan are to develop and demonstrate (1) certifiable aircraft technology that reduces aircraft fuel burn by 33 percent relative to current subsonic aircraft technology, and which reduces energy consumption and GHG emissions; (2) use of "drop in" sustainable alternative jet fuels in aircraft systems and quantifying benefits; and (3) suitability of new technology for engine and aircraft retrofit to accelerate penetration into the commercial fleet. Recognizing significant progress toward these goals under the CLEEN program, in 2015 the FAA initiated CLEEN II, a follow-on program that will run from 2015 through 2020, pursuing a goal of 40 percent reduced fuel burn compared to a best in class year 2000 in service baseline.

FAA uses radar-based data from the Enhanced Traffic Management System, or ETMS, to generate annual inventories of fuel burn and Official Airline Guide, or OAG, schedule information to estimate total distance flown data for all U.S. commercial operations. The Bureau of Transportation Statistics, or BTS, provides the payload factors for commercial aircraft. This

information is used to estimate progress of the energy efficiency performance indicator against the performance targets.

PERFORMANCE REPORT

Aviation Energy Efficiency (FAA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Percent reduction in aviation fuel burned per revenue-ton-mile from the FY 2001 energy use baseline	19.08%	22.28%	22.72%	21.66%	22.4%	20%	24.41%	Met 

Progress Update-Results

FAA's current energy efficiency target is based on a 2-percent per-year improvement, relative to a calendar year (CY) 2000 baseline (i.e., CY 2000 = 0 percent). For FY 2015, the target in terms of fuel consumed by payload (the load carried by an aircraft that is not necessary for its operation, e.g., passengers or cargo) transported and distance flown decreased 20 percent relative to the baseline. With a result of a 24.41-percent decrease, FAA was successful in achieving its energy efficiency goal.

In addition, the FAA's CLEEN program is accelerating the development of energy efficient technologies. These will be deployed to the commercial fleet sooner than normal market forces would have enabled. General Electric's advanced engine combustor known as the Twin Annular Premixed Swirler (TAPS) II, which was matured under the CLEEN program, will be used in CFM International's LEAP turbofan engine and is expected to enter service in 2016.

Advances in the development of sustainable alternative fuels also offer great promise for emissions reduction. Nearly 100 percent of the fuel used in aviation operations is petroleum-based, raising issues of energy supply, energy security, and the effect of fossil fuel emissions on air quality and climate. In response to these multiple concerns, government and the aviation industry have a strong interest in alternative aviation fuels that can be blended with or replace petroleum jet fuel without changes to existing engines, aircraft, ground infrastructure, or supply equipment.

More information about the CLEEN program can be found at: http://faa.gov/go/cleen

PERFORMANCE PLAN

Reducing Carbon Dioxide Emissions (FAA)

Goal	Indicator	FY 2016 Target	FY 2017 Target
Maintain or reduce carbon dioxide (CO2) emissions out to 2020 for domestic operations NAS-wide, relative to the CY 2005 baseline. [New]	CO2 emissions from domestic operations	<132.7 terra grams (Tg)	<132.7 terra grams (Tg)

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.1: Promote Energy Efficiency

Key Strategies

The strategic target is to maintain carbon dioxide (CO2) emissions for domestic operations at or below the CY2005 levels out to 2020. This performance target indicates that aircraft flying in the NAS burn less fuel (synonymous with less CO2 emissions) year-on-year due to improvements in fleet fuel efficiency, despite growth in domestic aviation. Demonstrating continued progress in maintaining carbon dioxide emissions for domestic commercial aircraft operations within the airspace system at or below 2005 levels minimizes environmental and climate impacts.

Paramount to reducing CO2 emissions and improving fuel efficiency will be a continued focus by commercial airlines to modernize their fleets. FAA will also focus on deploying NextGen and continuing research and development of advanced engine, airframe and fuels technologies. Transitioning to more fuel efficient aircraft models, implementing NextGen improvements, and developing and maturing technologies under FAA's CLEEN technology program and the National Aeronautics and Space Administration (NASA) supported research programs will contribute greatly toward continued improvements.

Fuel burn (synonymous with CO2 emissions) and fuel efficiency are heavily dependent on commercial airline operating procedures and day-to-day operational conditions. This includes the airline's operating fleet and route assignments, air traffic conditions, weather, airport operating status, congestion in the system, and any disruptions that introduce delay in scheduled flights. For example, a major sustained disruption or enhancement in air traffic and/or a significant shift in commercial operations amongst airlines, including changes in fleet composition and missions could have a profound impact upon achieving the performance target.

FAA's worldwide partners include the International Civil Aviation Organization, or ICAO, which is focused on developing environmental standards and recommended practices, as well as other Federal agencies (i.e. EPA, NASA, and the Department of Defense), the Aerospace Industries Association, Airports Council International-North America, Airlines for America, the Airport Cooperative Research Program (ACRP), and the Aviation Sustainability Center (ASCENT, the FAA Center of Excellence for Alternative Jet Fuels and Environment). NASA works with FAA to conduct research and development in order to identify engine and airframe technologies that offer potential for reducing fuel burn and emissions. The Aerospace Industries Association works with FAA and NASA to commercialize technologies from the research phase and develop operational procedures to address environmental impacts. Airlines for America works with FAA to identify fleet and air traffic procedural changes that reduce fuel burn and improve fuel efficiency.

CLEEN has a partnership with industry. Industry funds at least 50 percent of development and testing costs leading to ground and/or flight test technology demonstrations. Industry will entirely fund product development costs required for certification and entry into service in the fleet. Since 2006, FAA has also been a major partner in the Commercial Aviation Alternative Fuels Initiative® (CAAFI, http://www.caafi.org), whose participants include a cross-section of airlines, manufacturers, airports, fuel producers, Federal agencies and international players. CAAFI's efforts are leading to new fuel standards and early production of sustainable alternative jet fuels.

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.1: Promote Energy Efficiency

Next Steps

FAA has several ongoing primary activities supporting the reduction of foreign oil-dependence and carbon emissions and the increase in energy efficiency and usage of alternative fuels. These activities are:

- Develop and deploy sustainable alternative jet fuels by leveraging CLEEN, CAAFI, and ASCENT.
- Develop and mature clean and quiet technologies and advance alternative fuels to mitigate NextGen environmental impacts through CLEEN.
- Leverage a broad cross section of stakeholders through ASCENT and ACRP to foster scientific, operations, policy and work advances and breakthroughs that mitigate emissions impacts.
- Continue to measure and track fuel burn and efficiency from aircraft operations annually, in order to monitor improvements in aircraft/engine technology and operational procedures, and enhancements in the airspace transportation system. This information provides an assessment of their influence on reducing aviation's fuel burn and emissions contribution.

Goal Leaders

Michael P. Huerta, Administrator, Federal Aviation Administration
Rich Swayze, Assistant Administrator for Policy, International Affairs and Environment, Federal Aviation Administration

Alternative-Fuel and Hybrid Transit Vehicles (FTA)

Overview

FTA promotes and researches the use of environmentally friendly equipment in transit infrastructure construction and operations. To track progress, the National Transit Database includes a revenue vehicle inventory that records the primary fuel type of each vehicle used for carrying passengers in public transportation. The revenue vehicle inventory includes all modes of public transportation, rail and nonrail. This measure is a count of all such vehicles that are recorded as not being powered directly by traditional fossil fuels, divided by the total number of revenue service vehicles.

PERFORMANCE REPORT

Aviation Energy Efficiency (FAA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Percentage of alternative-fuel and hybrid vehicles in the total revenue fixed route fleet.	44%	45%	47%	50%	50%	49%	N/A	Met 2014 

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.1: Promote Energy Efficiency

Progress Update – Results

As part of the Department's Environmental Sustainability goals, FTA aims to be a good steward for the natural environment by supporting the deployment of transit vehicles that make use of alternative fuels to emit fewer emissions. These efforts improve local air quality in America's communities, and also support the transit industry's larger efforts to mitigate emissions-induced climate change. FTA met its goal of 50 percent of the transit revenue fleet being comprised of alternative-fuel and hybrid vehicles in 2013 and continued to exceed this goal in 2014. The calculation of this metric is based on data received through the National Transit Database. The performance for 2015 will be available in fall of 2016.

Alternative fuel vehicles are eligible under FTA's core programs, including the Urbanized Area Formula Program and the Bus and Bus Facilities Program. FTA grants obligated during FY 2014 included funding for 1,597 Rail vehicles and 4,764 buses. Of the 4,764 buses that were in grants, 1,773 were alternative fuels.

In addition to formula fund support for alternative fuel vehicles, FTA's Low or No Emission Vehicle Deployment (LoNo) Program provides funds for deployment of innovative bus technologies for U.S. transit operators. The program focuses on deploying the cleanest and most energy-efficient transit buses that are specifically designed to reduce emissions like carbon dioxide and carbon monoxide. Grants from the LoNo Program will help transit agencies integrate more of these cutting-edge buses into their fleets.

PERFORMANCE PLAN

Alternative Fuel and Hybrid Transit Vehicles			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Increase the percentage of alternative-fuel and hybrid vehicles in the total transit revenue service fleet to 44% in 2010 to 50% in 2016	Percentage of alternative-fuel and hybrid vehicles in transit revenue service fleets.	49%	50%

Key Strategies and Next Steps

FTA does not directly purchase vehicles used for operating public transportation service. Vehicle purchase decisions, including the decision on fuel type, are made at the local level by transit agencies using FTA formula funds and limited discretionary funds. Meanwhile, the ongoing decline in prices for natural gas continues to make compressed natural gas an attractive alternative for many transit systems.

FTA also has authority to support research activities related to low- or no-emission bus and bus facilities to minimize environmental impacts and improve air quality. FTA can fund research that supports the goal of increasing the percentage of alternative-fuel and hybrid vehicles in the transit revenue service fleet.

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.1: Promote Energy Efficiency

Responsible Official

Vince Valdes, Associate Administrator for Research, Technology, and Innovation, Federal Transit Administration

Energy Use and Emissions Reduction (FHWA)

Overview

The Congestion Mitigation and Air Quality Improvement (CMAQ) program provides a funding source for State and local governments to fund transportation projects and programs that help meet the requirements of the Clean Air Act and help reduce regional congestion on transportation networks. CMAQ investments support transportation projects that reduce mobile source emissions in areas designated by the EPA as nonattainment or maintenance for the ozone, carbon monoxide and particulate matter National Ambient Air Quality Standards (NAAQS). Since its inception, $30 billion in CMAQ funds have been invested in more than 30,000 projects that reduced emissions of particulate matter, carbon monoxide, nitrogen oxides, and/or volatile organic compounds and contributed to improved air quality and public health.

FHWA has developed tools to support States' efforts to reduce energy consumption and GHG emissions. FHWA continues to promote the use of EERPAT, a model that can be used by States to evaluate strategy alternatives and scenarios for reducing transportation-related GHG emissions and fuel consumption. It has also supported the development of other analytic tools, including practitioner handbooks and a spreadsheet calculator addressing emissions associated with transportation infrastructure.

PERFORMANCE REPORT

Progress Update

The Energy and Emissions Reduction Policy Analysis Tool (EERPAT) allows transportation agencies to evaluate the impact of transportation strategies on travel demand, energy consumption, and GHG emissions. Several States have used the analytic model to evaluate the combined effects of planning-related policies, highway operations, vehicle efficiency, and lower-carbon energy.

FHWA developed the Infrastructure Carbon Estimator, a calculator to estimate energy use and GHG emissions from the construction and maintenance of transportation infrastructure. The calculator allows practitioners to analyze infrastructure emissions associated with transportation plan alternatives, National Environmental Policy Act *(*NEPA) project alternatives, and alternative construction and maintenance practices. A final version was released in 2014, after being piloted by several States and Metropolitan Planning Organizations.

In January 2015, FHWA completed a report entitled Feasibility and Implications of Electric Vehicle (EV) Deployment and Infrastructure Development to better understand how the deployment of EVs will impact the mission of FHWA, the financial implications for available

revenues, and potential infrastructure development needs for EV deployment in the United States.

Information Gaps

FHWA examined 72 projects selected from the more than 8,100 projects funded through the Congestion Mitigation and Air Quality Improvement (CMAQ) program between FY 2006 and FY 2012. A 20 member expert team that reviewed the information found that the projects were consistent with the goals of the CMAQ program. Estimated emissions impacts were reported most frequently for these projects, and more so for changes in volatile organic compound and nitrogen oxide emissions than for carbon monoxide and particulate matter emissions. Estimates of traffic or congestion mitigation impacts were also frequently reported; however, these impacts are not anticipated in all funded projects and reporting is not required for project eligibility.

Estimation of human health impacts was underreported in these projects, again primarily because reporting is not required but also because there is no standardized methodology available to account for these health impacts. After examining 10 analytic models currently available for use to evaluate expected air quality outcomes for most CMAQ-funded actions, the team recommended improving model inputs, more consistency in reporting, new approaches for estimating impacts; and greater use of before-and-after studies to improve emission estimate methods. Based on a literature review, they also observed that projects that result in air quality improvements generally relate to reducing respiratory illnesses even though there is only limited causal evidence for this relationship. In addition, the team observed that projects which improve the physical and mental health of individuals can positively impact general well-being and quality of life; and projects that result in more equitable access to transportation produce multiple benefits including improved access to health care, education, jobs, nutritional food, and safe recreational areas.

Key Strategies

The CMAQ program provides broad flexibility in project selection for States and communities that need to reduce emissions from their transportation sources. The program's statutory focus on congestion- and emissions-reducing efforts is unique in the Federal-Aid Highway Program as it seeks to employ tailored transportation investments to combat formidable air quality challenges around the country.

Next Steps

The CMAQ program will support eligible transportation projects that help to reduce emissions in EPA designated nonattainment or maintenance areas. The FAST Act emphasizes the importance of reducing fine particulate matter emissions, setting aside a portion of CMAQ funds for this purpose.

The Oregon Department of Transportation pooled fund initiative was established in 2014 in coordination with FHWA and the U.S. Department of Energy. This initiative assists state and local transportation agencies interested with the needed tools, information, and knowledge to promote the use of alternative vehicle and fuel technologies at a state, regional or corridor scale.

The initiative is now underway and will help States and regions reduce greenhouse gas emissions and petroleum use.

The FAST Act requires the Department to designate national corridors for electric and other alternative fuels. The legislation requires the designations and a report to be issued no later than one year from the date of enactment.

Goal Leader

Gloria Shepherd, Associate Administrator, Office of Planning, Environment, and Realty, Federal Highway Administration

Sustainable Practices at DOT (OST)

Overview

Under EO 13693, DOT is required to increase efficiency; measure, report and reduce GHG emissions in its own facilities and operations. OSSM will continue to strengthen the Department's culture of sustainability by developing long-term strategic plans, guidance documents for implementation, sharing best practices, tracking performance and providing training and outreach activities that promote sustainability goals such as improving energy efficiency, reducing vehicle fleet GHG emissions per mile, using more renewable energy and using technology alternatives in place of travel to reduce the GHG footprint of DOT's operations.

The Department is committed to achieving the above sustainability goals; however the following factors may impact the effectiveness of these efforts:

- Increase or change of core mission responsibilities.
- Alteration of existing and future appropriation of funds.
- New or revised sustainability requirements.
- Other unforeseen circumstances outside the control of the Department.

To mitigate some of these factors, the Department is maximizing the use of no- or low-cost tools such as performance-based contracts for energy efficiency enhancements or upgrades to existing buildings. Additionally, DOT is leveraging free, web-based data collection and management systems to monitor and measure sustainability performance such as EPA's ENERGY STAR Portfolio Manager System. Finally, the Department is partnering with other Federal agencies to achieve a common goal. For example, DOT continues to collaborate with experts in DOE's Workplace Charging Challenge to provide technical assistance with the identification of electric vehicle charging pilot sites to reduce GHG emissions.

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.1: Promote Energy Efficiency

PERFORMANCE REPORT

Sustainable Practices at DOT (OST)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	**Performance**
Percent reduction in greenhouse gas emissions from facilities and fleets	7.9%	15.4%	29%	29.4%	23%	8%	N/A†	N/A† 
Percent reduction in greenhouse gas emissions from employee business travel and commuting	N/A	(4.7%)	0.1%	27.3%	31%	6%	N/A†	N/A† 
Percent reduction of vehicle fleet petroleum use	5%	4.9%	14.5%	22.1%	23.7%	20%	26%	Met 
Percent reduction in building energy intensity consumption	20.2%	26.4%	24%	19.6%	19%	30%	N/A†	N/A† 
Percent use of renewable energy	3.6%	8.4%	14.4%	9.2%	19.1%	10%	N/A†	N/A† 

† Available in spring 2016

Progress Update

OST's Office of Sustainability and Safety Management (OSSM) completed the following accomplishments in FY 2015:

- Used the *Greenhouse Gas and Sustainability Data Report* template developed by the Department of Energy (DOE), submitted DOT's GHG inventory to DOE for review and comment. In addition, the Office completed a department wide survey of its employees' commuting habits to measure GHG emissions.
- Updated the Department's Strategic Sustainability Performance Plan as per Executive Order (EO) 13514.
- Submitted updates and additional supportive data for bi-annual Office of Management and Budget (OMB) Sustainability and Energy Scorecard.
- Provided ongoing technical support and guidance to each of the 10 OAs regarding activities such as Energy Efficiency and Renewable Energy Consumption, High Performance and Sustainable Buildings (HPSB), Performance-based Contracts, and Fleet Management to ensure the Department continues to meet the latest regulatory and legislative requirements along with organizational goals. Additionally, the office continues to update a guidance manual(s) for departmental field offices for implementing the above referenced policies.

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.1: Promote Energy Efficiency

PERFORMANCE PLAN

Sustainable Practices at DOT (OST)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Reduce DOT building energy intensity use 25% from an FY 2015 baseline by FY 2025.	Percent reduction from the FY 2015 energy use baseline.	2.5%	5%
Reduce DOT vehicle fleet GHG emissions per mile 30% from an FY 2014 baseline by FY 2025.	Percent reduction from the FY 2014 fleet petroleum use baseline.	3%	6%
Obtain 30% of total energy from renewable sources by 2025	Percent of energy consumed from renewable resources.	10%	10%
Reduce greenhouse gas emissions by 35% from facilities and fleets by 2025 from a FY 2008 baseline.	Percent of greenhouse gas emissions reduced from the FY 2008 baseline.	14%	16%
Reduce greenhouse gas emissions by 35% from employee business travel and commuting by 2025 from an FY 2008 baseline	Percent of greenhouse gas emissions reduced from employee business travel and commuting from an FY 2008 baseline.	14%	16%

Key Strategies and Next Steps

Leadership in Sustainability Scorecard: The Department will continue to evaluate each OA's sustainability performance during the internal management review meetings with the Deputy Secretary. The scorecards have been updated to reflect current priority areas such as energy efficiency.

Policy Orders, Action Memos, and Guidance Documents: The Department plans to update sustainability policy orders and will continue working on supporting guidance documents that help to reduce its environmental footprint and resource consumption and ensure that its buildings and fleet are performing efficiently with the best return on investment for the American people. The Department is also updating its comprehensive fleet management policy this year.

Greenhouse Gas Inventory: The Department will continue to compile a comprehensive inventory of GHG emissions and identify opportunities and strategies for reducing these emissions.

Performance-Based Contracts: The Department will continue, to the maximum extent possible, to use these no- or low-cost contracts for energy efficiency enhancements or upgrades to existing buildings.

Annual Reports to OMB: The Department will continue to track and update its strategies and departmental performance to meet requirements related to reports such as the Strategic Sustainability Performance Plan and the OMB Scorecard.

Sustainability Action Plans: The Department is working on developing and implementing new strategies related to benchmarking, metering, renewable energy and energy efficiency resulting in a pro-active approach to monitoring and improving the energy and water footprint. Additionally, the Department is working on developing and implementing new strategies related to climate change resiliency, workplace electric vehicle charging and multi-modal commuting options for its employees to reduce GHG emissions.

Other key partners are FAA Real Estate Management System, or REMS, managers; EPA; the Office of the Federal Environmental Executive, or OFEE; the Council on Environmental Quality (CEQ), OMB, and the General Services Administration (GSA). As a key member of interagency workgroups, DOT has worked closely with GSA and DOE to provide comments and recommendations on government-wide issues related to HPSBs, the GHG emissions inventory, climate change resiliency and energy use in federal buildings. Conversely, DOE, CEQ, and OMB serve as oversight agencies, which issue guidance and review DOT's annual sustainability and energy-related reports.

Goal Leader

Jeff Marootian, Assistant Secretary for Administration & Chief Sustainability Officer, Office of the Secretary

Strategic Objective 5.2—Mitigate Environmental Impacts

Avoid and mitigate transportation-related impacts to climate, ecosystems, and communities by helping partners avoid risk, improve transportation and disposal of hazardous materials, make informed project planning decisions through an analysis of acceptable alternatives, and balance the need to obtain sound environmental outcomes with demands to accelerate project delivery.

PERFORMANCE OVERVIEW

DOT is committed to reducing the impact of the Nation's transportation system on the environment, including within its own operations and facilities. This includes potential impacts during the transportation and disposal of hazardous materials, construction and operation of the transportation system.

The Nation has a vast network of pipelines and thousands of commercial vehicles on roadways and rail that carry hazardous materials each day. The Department partners with State and local governments and the private sector to improve operating practices and identify potential risks.

DOT also promotes good environmental impact assessment in the planning phase of transportation infrastructure investments. Environmental impacts and sustainability issues must be considered in all phases of transportation system development including project development, implementation, and ongoing operation and maintenance.

DOT programs encourage managers of transportation systems and infrastructure investments to address the secondary effects of construction, including land use and environmental impacts and storm water runoff. Transportation officials must balance environmental needs against the demand for faster project delivery time. DOT works with its Federal partners to improve internal project delivery processes and identify opportunities for enhanced interagency harmonization, through continued DOT initiatives, implementing Executive Order (EO) 13604 to streamline infrastructure projects, and other related efforts.

DOT Operating Administrations (OAs): Federal Highway Administration (FHWA), Federal Aviation Administration (FAA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Maritime Administration (MARAD), Pipeline and Hazardous Materials Safety Administration (PHMSA), and Office of the Secretary (OST).

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.2: Mitigate Environmental Impacts

AVIATION ENVIRONMENTAL IMPACTS (FAA)

Overview

Mitigating noise directly impacts our ability to increase capacity while sustaining our future. While airport expansion projects are the best way to increase capacity, communities and local government are reluctant to build them if they impose increased aircraft noise exposure. In addition, noise can be a concern for the implementation of certain NextGen initiatives, like performance based navigation (PBN). These NextGen initiatives are necessary to continue to deliver on the safest, most efficient system and noise mitigation will continue to be an important element.

PERFORMANCE REPORT

Aviation Environmental Impacts (FAA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
U.S. population exposed to significant aircraft noise around airports	292,000	318,000	315,000	319,000	321,000	342,000	340,000	Met 

Progress Update

In FY 2015, with a result of 340,000 people exposed, FAA achieved the noise exposure goal of keeping the number of people exposed to aircraft noise below 342,000 people exposed. Although FAA consistently achieved this goal in the recent past, the number of people exposed to noise fluctuates every year. Factors that have contributed to increases include variations in the number of flights at individual airports, the fleet mix at those airports, and the flight paths flown. The number of people exposed to noise at certain airports can be affected by small changes in the shape of a noise contour and changes in population around airports. A noise contour is a line on a map that connects points of equal noise exposure on the surface. A small change in a contour shape can potentially cause a large change in the population count due to the uneven distribution of the population around airports property.

The metric tracks the residential population exposed to significant aircraft noise around U.S. airports. Significant aircraft noise is defined as aircraft noise at or above Day-Night Average Sound Level (DNL) 65 decibels (dB). In 1981, FAA issued 14 CFR Part 150[10], Airport Noise Compatibility Planning, and as part of that regulation, formally adopted DNL. DNL, symbolized as Ldn, is the 24-hour average sound level, in dB, obtained from the accumulation of all events

[10] FAA published a table of land uses that are compatible or incompatible with various levels of airport noise exposure, expressed in DNL in 14 CFR Part 150. This table established that levels below DNL 65 dB are considered compatible for all indicated land uses and related structures. For more information on airport noise, visit: http://www.faa.gov/airports/environmental/airport_noise/.

with the addition of 10 dB to sound levels in the night from 10 p.m. to 7 a.m. The weighting of the nighttime events accounts for the increased interfering effects of noise during the night when ambient levels are lower and people are trying to sleep.

The FAA has made great strides in reducing noise impacts on the public, primarily through advancements in aircraft technology. Our CLEEN program provides incentives for manufacturers to develop lower-noise aircraft through technologies such as Boeing's Ceramic Matrix Composite (CMC) acoustic nozzle at the engine exhaust, and Pratt & Whitney's ultra-high bypass ratio geared turbofan (GTF) engine and associated advanced technologies.

PERFORMANCE PLAN

Aviation Environmental Impacts (FAA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Reduce the number of people exposed to significant noise around airports to less than 300,000 people in FY 2018.	Number of people exposed to day-night average sound levels of 65 dB or greater around US in the previous calendar year.	328,000	315,000

Key Strategies

The number of people exposed to significant noise levels was reduced by over 95 percent between 1975 and 2014. This is due primarily to the legislatively mandated transition of airplane fleets to newer generation aircraft that produce less noise. Most of the gains from quieter aircraft were achieved by FY 2000. The reduction in noise exposure since 2005 has been driven by air carrier fleet and operational changes as carriers continue to retire older, less fuel-efficient aircraft that tend to produce more noise. In addition, passenger demand fell due to a deepening recession and growing unemployment. However, air carrier traffic is slowly starting to recover to pre-2005 levels and consequently, the actual number of residents exposed to significant noise increased in 2015, but remained below the current target. As air traffic continues to recover and grow over time, noise exposure is likely to continue to increase.

The target will continue to be reassessed as FAA takes a more integrated approach to environmental mitigation and regulation. FAA will assess the relative costs and benefits of addressing impacts associated with noise, air quality, and greenhouse gas emissions and the tradeoffs in achieving reductions in each. When achieving noise reduction, FAA is using a balanced approach that takes into account reductions at the source of noise, improved operational procedures, and land-use compatibility. Source noise reduction can be achieved through the maturation and commercialization of aircraft that meet the most stringent noise certification standards. As existing aircraft are retired and replaced with newer quieter aircraft, the number of people exposed is expected to decrease. Implementation of improved operational procedures developed under the Next Generation Air Transportation System (NextGen) may also contribute to reducing the noise of aircraft operating over communities around airports. FAA will continue to conduct research and development activities related to technology and operations as well as

enhancing our scientific and technical basis for understanding the impacts of aircraft noise on the exposed population.

This metric is calculated using the Aviation Environmental Design Tool (AEDT). The computational core of AEDT is based from FAA's Integrated Noise Model (INM) with methodological improvements. FAA replaced INM with AEDT in May 2015 for modeling purposes. INM was the most widely used computer program for the calculation of aircraft noise around airports. Major assumptions on local traffic utilization come from obtaining datasets that were developed for an airport, from the Performance Data Analysis and Reporting System (PDARS), or from the Enhanced Traffic Management System, or ETMS. The AEDT model calculates individual DNL contours for the top 101 U.S. airports using detailed flight tracks, runway use and track utilization. The contours are superimposed on year 2010 census population densities projected to the current year being computed to calculate the number of people within the DNL 65 dB contour at each airport[11]. For smaller airports, AEDT uses less detailed information consisting of flight tracks that extend straight in and straight out from the runway ends. The contours areas are then used to calculate people exposed using 2010 Census population densities projected to the current year being computed. The projection is used to account for population growth between 2010 and the computed year. The individual airport exposure data are then summed to the national level. Finally, the number of people relocated through the Airport Improvement Program is subtracted from the total number of people exposed.

Partners include government agencies worldwide and the aviation industry through the International Civil Aviation Organization (ICAO), who periodically update noise standards and methodologies. FAA has also partnered with the National Aeronautics and Space Administration, or NASA, in the development of advanced noise reduction technologies and FAA has the Continuous Lower Energy, Emissions and Noise (CLEEN) program to promote maturation of those technologies and their acceleration into the fleet to help achieve NextGen goals to increase airspace system capacity while reducing significant community noise and air quality emissions impacts in absolute terms and limiting or reducing aviation greenhouse gas emissions impacts on the global climate.

FAA is currently conducting research to understand the impact of aviation noise on communities around airports. Specifically, one project's goal is to evaluate the annoyance reaction to aircraft noise in the current airport operating environment. When completed, this research will be used to evaluate the agency's measure and goal with respect to aviation noise.

The primary external factors affecting performance are market forces that drive changes in commercial aircraft fleets and operations. Other external factors include providing FAA the authority and funding to accelerate the implementation of new aircraft emissions and noise technology, and providing funding to FAA's Airport Improvement Program. These programs help foster the type of fleet and performance change required to meet either our current target or historic experience.

[11] For years before 2012, year 2000 Census data population density projected to the current year was used to calculate the number of people within the DNL 65 dB contour at each airport.

Next Steps

FAA will continue to support research under the CLEEN II program, initiated in 2015. In addition, research on operational improvements that have the potential to reduce noise will continue to be funded. Longer term, FAA is in the process of promulgating the new international noise standard that was adopted by ICAO as recommended by its Committee on Aviation Environmental Protection, or CAEP, in February 2013, which will help influence the manufacture of quieter aircraft. Though it will take some time for these aircraft to be incorporated into the fleet, a new noise standard leads to the development of quieter aircraft. FAA continues to work to refine the goal through additional research to understand people's reaction to aircraft noise. In addition, refinements to both the model and modeling inputs will be conducted.

Goal Leader

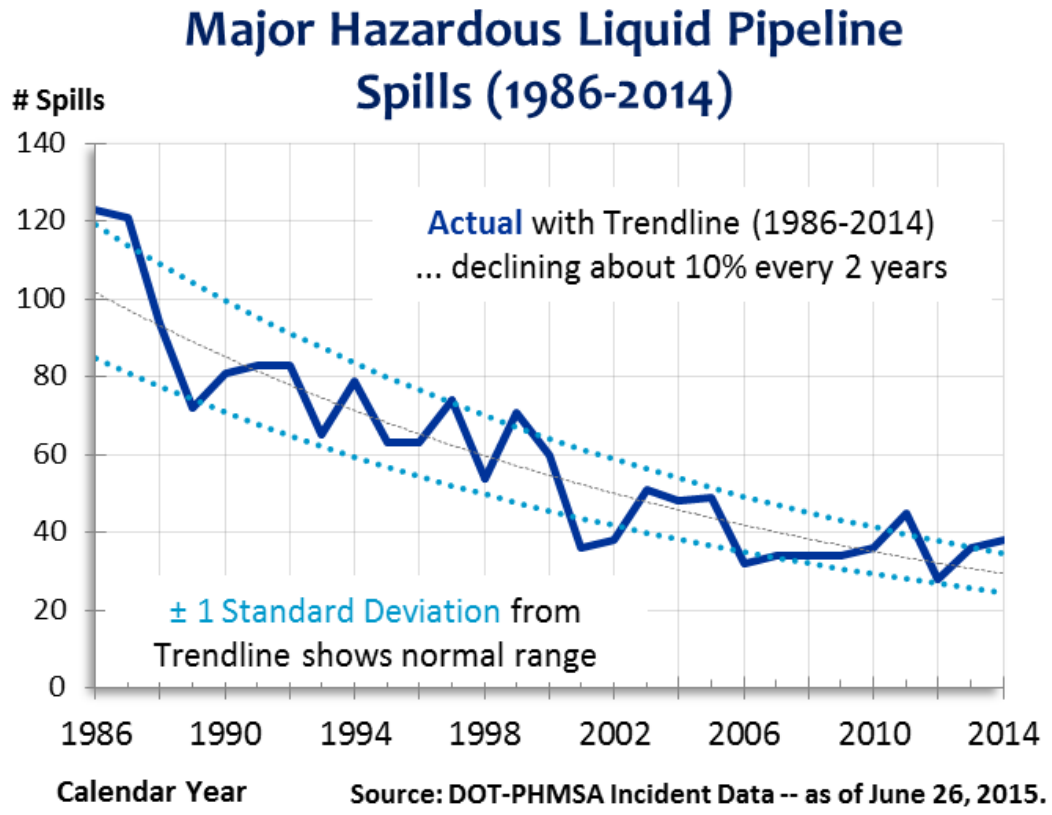
Michael P. Huerta, Administrator, Federal Aviation Administration
Rich Swayze, Assistant Administrator for Policy, International Affairs and Environment, Federal Aviation Administration

HAZARDOUS LIQUID PIPELINE SPILLS (PHMSA)

Overview

Hazardous liquid pipelines supply most of the energy for transportation, as well as crude oil that is used in many other ways—through a nationwide network of nearly 198,000 miles of pipelines and over 7,600 storage tanks. While this is the safest mode of transportation for hazardous liquids, the volume and nature of the cargo can present environmental risks, particularly in high-consequence areas.

Major hazardous liquid pipeline spills (greater than 10,000 gallons) are the largest class of spills, and the most likely to result in environmental harm. Major spills account for 96 percent of all volume released into the environment from hazardous liquid pipelines. In addition to tracking major hazardous liquid pipeline spills, PHMSA will continue to analyze and develop unique strategies for reducing the number of medium and minor spills, particularly those with the potential for major release.



PERFORMANCE REPORT

Hazardous Liquid Pipeline Spills (PHMSA)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Hazardous liquid pipeline spills with environmental consequences	94	117	124(r)	120(r)	141	104	87*	Potentially Met

Progress Update

PHMSA will not meet its target of 107 hazardous liquid spills with environmental consequences, with 146 spills projected by the end of the year. As of October, pipeline operators reported 117 hazardous liquid spills with environmental consequences, exceeding the annual target before the end of the year. From 2002 to 2013, the number of spills with environmental consequences declined by 10 percent every 5 years, on average, with fluctuations year to year. From 2011 to 2013, however, PHMSA failed to meet its targets.

Although it is difficult to explain the increasing trend in spills with environmental consequences, there are several possibilities for the rise. Despite a comprehensive, data-driven, risk-informed approach to addressing the Nation's highest pipeline risks, most measures of risk exposure—

U.S. population, pipeline mileage and pipeline ton-miles—have increased. PHMSA continues to face aging and obsolete pipeline infrastructure including over 800,000 miles of pipelines installed before 1970. Many of these pipelines were built with materials that are more vulnerable to deterioration and failure than the materials commonly used today. Of spills with environmental consequences reported from 2010 to 2013, the largest share of spills was attributable to corrosion failure, with both age and material frequently contributing to the failure. Further, pipeline operators may be more attuned to reporting requirements and guidance on the definition of environmental consequences, thus increasing the number of reported spills.

PHMSA continues to take a calculated approach to address high risk pipelines through the expansion of our incident investigations program to better understand the root causes of failures; integration, targeting, and expansion of safety inspections based on the most serious risks; and improvement of data collection and analysis to support risk-informed decision making. While PHMSA's primary focus is on prevention, accidents can still occur. As such, PHMSA continues to look for ways to reduce safety and environmental consequences of failures through improved leak detection and the use of product control systems; improve the quality and utility of pipeline facility response plans; support coordinated emergency response intervention; and continuation of our safety mission during any incident of national significance; and provide a comprehensive training and qualification program for Federal and State inspectors.

Many spills with environmental consequences occur within facilities that support the operation of the pipelines, such as pump stations and tank farms. Our future plans to address these vulnerabilities are to extend hazardous liquid integrity management principles to facilities and improve the spill reporting instructions to improve the quality of data related to the environmental consequences.

PHMSA also plans to enhance outreach presence among the public and communities including field staff engaging, educating, and empowering the public and first responders to become more involved in pipeline safety. PHMSA wants communities and first responders to know that agency engineers, scientists, educators, and other safety personnel can assist in expanding their understanding of underground damage prevention efforts—including awareness of the "811–Call Before You Dig" public awareness campaign, emergency responder outreach and training, and community land-use planning around existing pipelines.

Additionally, PHMSA is currently working to promote Safety Management System (SMS) and safety culture in the pipeline industry. This requires a commitment to safety on every level of an organization and integrity management plays a role. Specifically, PHMSA has played an integral part in assisting the pipeline industry in the development of an American Petroleum Institute Recommended Practices guidance document on SMS for the industry.

PHMSA plans to change its current pipeline environmental Strategic Performance Indicator. PHMSA proposes substituting a new Strategic Performance Indicator, major hazardous liquid pipeline spills, in place of our current Strategic Performance Indicator, hazardous liquid spills with environmental consequences, beginning in 2016. The details of PHMSA's proposed new Strategic Performance Indicator are discussed in the 2016 Performance Plan.

Information Gaps

PHMSA reports on its Strategic Performance Indicators on a calendar year cycle for consistency with a wide array of stakeholders, which creates a 3-month delay in completing reporting. Additionally, the number of hazardous liquid spills with environmental consequences for 2014 is estimated due to data lags. Title 49 of the Code of Federal Regulations (49 CFR Parts 191, 195) requires pipeline operators to submit incident reports within 30 days of a pipeline incident or accident. Accordingly, incident data for hazardous liquid spills with environmental consequences lags by 30 days. Accident reports for all spills with environmental consequences in 2014 would not be received until the end of January 2015.

PHMSA proposes substituting a new Strategic Performance Indicator for our current indicator in 2016. Beginning in 2016, PHMSA proposes using major hazardous liquid pipeline spills (greater than 10,000 gallons) in place of the hazardous liquid pipeline spills with environmental consequences indicator. The details of PHMSA's proposed new Strategic Performance Indicator are discussed in PHMSA's 2016 Performance Plan.

PERFORMANCE PLAN

Hazardous Liquid Pipeline Spills (PHMSA)			
Performance Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Reduce major hazardous liquid pipeline spills with environmental consequences. [New-now counting major spills.]	Hazardous liquid pipeline spills with environmental consequences	23-32	22-30

Key Strategies and Next Steps

PHMSA's environmental goals contribute to helping achieve the Secretary's goal of advancing environmentally sustainable policies and reducing harmful emissions from transportation sources. In its effort to improve pipeline environmental performance, PHMSA will undertake the following strategies to reduce the number of major hazardous liquid pipeline spills:

Understanding and targeting risk: A systematic approach to risk management requires a comprehensive understanding of the factors contributing to risk and the ability to focus resources in those areas that pose the greatest risk. PHMSA's strategy for dealing with this challenge is to:

- Develop our incident investigations program to better understand the root causes of failures;
- Integrate, target, and expand safety inspections based on the most serious risks; and
- Improve data collection and analysis.

Mitigation and Response: While our primary focus is on prevention, we recognize that accidents can still occur. Our general strategy for reducing the consequences of failures is to:

- Improve leak detection and the use of product control systems;
- Improve the quality and utility of pipeline facility response plans; and

- Support coordinated emergency response intervention and continuation of our safety mission during any incident of national significance.

Information Technology: The PHMSA Pipeline Data Mart provides a central repository for pipeline safety information; the FedStar system provides information and tools for State programs; and the National Pipeline Mapping System provides geospatial information on the national pipeline infrastructure.

Training: PHMSA provides a comprehensive training and qualification program for Federal and State inspectors, including a three-year core program for new inspectors.

Partners: State pipeline safety agencies inspect intrastate hazardous liquid pipelines in 14 states. State and local emergency responders play an important role in mitigating the consequences of incidents when they occur.

Pipeline corrosion and material failure are the two leading causes of hazardous liquid pipeline failures. PHMSA's strategy for dealing with this challenge is to:

- Integrate, target, and expand safety inspections based on the most serious risks; and
- Focus pipeline safety research on methods that might be used to improve identification of defects.

Many spills with environmental consequences occur within facilities that support the operation of the pipelines, such as pump stations and tank farms. Our future plans to address these vulnerabilities are to extend hazardous liquid integrity management principles to facilities and improve the spill reporting instructions to improve the quality of data related to the environmental consequences.

PHMSA also plans to enhance outreach presence among the public and the communities including field staff engaging, educating, and empowering the public and first responders to become more involved in pipeline safety. PHMSA wants communities and first responders to know that PHMSA's engineers, scientists, educators, and other safety personnel can assist in expanding their understanding of underground damage prevention efforts – including awareness of the "811—Call Before You Dig" program, emergency responder outreach and training, and community land-use planning around existing pipelines.

Additionally, PHMSA is currently working to promote Safety Management System (SMS) and safety culture in the pipeline industry. This requires a commitment to safety on every level of an organization and integrity management plays a role. Specifically, PHMSA has played an integral part in assisting the pipeline industry in the development of an American Petroleum Institute (API) Recommended Practices (RP) guidance document on SMS for the industry.

Goal Leader

Jeffrey Wiese, Associate Administrator for Pipeline Safety (PHMSA).

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.2: Mitigate Environmental Impacts

SHIP DISPOSAL PROGRAM (MARAD)

Overview

MARAD is the disposal agent for Federal Government-owned merchant-type vessels 1,500 gross tons or greater (as required by 40 U.S.C. § 548 of the Federal Property and Administrative Services Act of 1949) and has custody of a fleet of non-retention ships owned by the Federal Government. These include obsolete merchant ships moored at NDRF or other Federal sites that, while part of the NDRF, are not assigned to the Ready Reserve Force (RRF), or otherwise designated for a specific purpose. When ships are determined to be no longer useful for defense or humanitarian relief missions, MARAD arranges for their responsible disposal, on a worst-first basis, in accordance with 16 U.S.C. § 5405(c) of the National Maritime Heritage Act, as amended, and § 3502 of P.L 106-398, the National Defense Authorization Act, Fiscal Year 2001. Vessels are recycled domestically only at MARAD prequalified recycling facilities.

Additionally, MARAD manages compliance with historic reviews and documentation requirements prior to dismantling/recycling or other disposition such as donation, artificial reefing, deep-sinking, or sale for reuse. In 2011, MARAD renewed a Memorandum of Agreement with the U.S. Navy to dispose of its noncombatant auxiliary vessels. The U.S. Coast Guard and MARAD are exploring the feasibility of recycling decommissioned cutters through the Ship Disposal Program.

Due to the presence of onboard hazardous materials, surplus ships pose a risk to the surrounding environment and must be disposed of as early as possible. Proper custodianship of MARAD's non-retention vessels requires compliance with environmental requirements to ensure measures are taken to eliminate environmental risks associated with vessel storage and arrest deterioration of obsolete vessels awaiting disposal. Disposal of deteriorating obsolete ships lessens environmental risk and makes sense not only from the standpoint of avoiding environmental harm, but also for efficiently reducing costs. Environmental cleanup costs after a hazmat discharge incident are far higher than the cost of proper and timely disposal.

PERFORMANCE REPORT

Ship Disposal Program (MARAD)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Reduce risk of environmental contamination from disposal of Federally owned vessels by maintaining a 1:1 ratio of incoming vessels to vessels removed	N/A	N/A	N/A	N/A	1.0	1.0	1.0	Met
Cumulative number of ships (2010–2017) safely removed from the Suisun Bay Reserve Fleet (SBRF) for disposal	N/A	N/A	N/A	N/A	1.0	1.0	1.0	Met

Progress Update

The Ship Disposal program provides resources to properly dispose of obsolete Government-owned ships maintained by MARAD in the National Defense Reserve Fleet (NDRF) or in other Federal sites. This program conducts ship disposal primarily through dismantling/recycling for obsolete, Government-owned vessels in an environmentally-responsible manner that further reduces the risk of environmental contamination while contributing to the domestic recycling industrial base. Maintaining a consistent obsolete ship removal rate is necessary to reduce reserve fleet operating costs, mitigate environmental risks common with aging ships, and help ensure that a costly backlog of obsolete ships do not accumulate at MARAD's fleet sites. For FY 2015, MARAD achieved the ratio of 1.0 of incoming vessels to vessels removed for disposal.

By the beginning of FY 2015, a total of 52 of the 57 Suisun Bay Reserve Fleet (SBRF) obsolete vessels identified in the California consent decree. MARAD has expeditiously removed vessels from the SBRF at a rate higher than required in the decree. Two of the five remaining obsolete vessels were removed from the SBRF in FY 2015, bringing the cumulative number of vessels removed to 54, ten vessels above the target. The last three obsolete ships are scheduled for removal from the SBRF in FY 2017, meeting the consent decree requirement to remove all 57 ships by the end of FY 2017.

PERFORMANCE PLAN

Ship Disposal Program (MARAD)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Reduce risk of environmental contamination from disposal of Federally owned vessels by maintaining 1:1 ratio of incoming vessels to vessels removed.	Ratio of incoming vessels to vessels removed for disposal.	1.0	1.0
Cumulative number of ships (2010–2017) safely removed from the Suisun Bay Reserve Fleet (SBRF) for disposal.	SBRF vessels removed per consent decree.	50	57

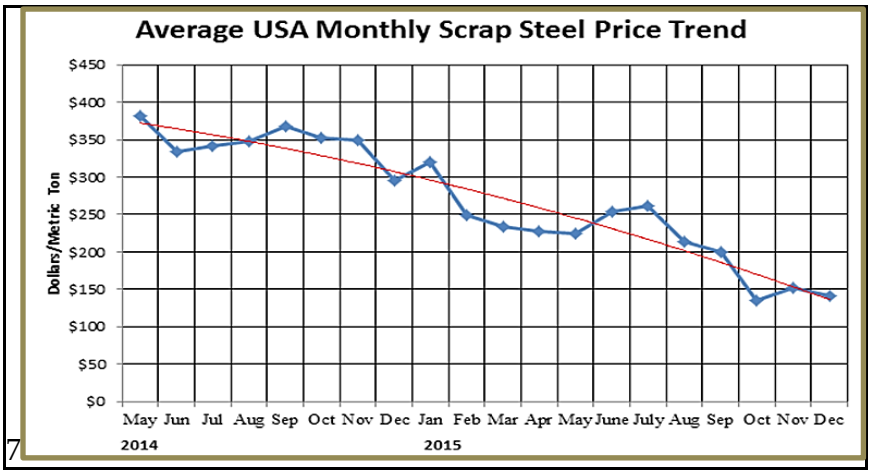
Key Strategies and Next Steps

It is anticipated that approximately two to four NDRF ships per year will be downgraded to obsolete status and added to the disposal queue. The number of ship disposals in a given year is primarily dependent on minimal price volatility in the recycled scrap steel markets. High scrap steel prices portend ship sales while low prices require sustained appropriations to procure ship recycling services. Extreme price volatility in the scrap steel markets creates uncertainty which swings ship recycling awards between sales and service contracts. Fluctuations in the actual per ship disposal costs, as a result of scrap steel price volatility along with regulatory, industry capacity, competition and appropriations affect the number of ships that can be disposed. Ship disposals will continue to utilize only MARAD qualified and regulatory compliant domestic

dismantling and recycling facilities. Primary activities in carrying out the objectives of the Ship Disposal Program include the following:

- Conducting ship recycling for obsolete, Federally-owned, merchant vessels in an environmentally responsible manner that reduces the risk of environmental contamination.
- Preventing the potential spread of invasive species by cleaning NDRF ships of marine growth in dry-dock or with approved in-water hull cleaning methods prior to removing ships from one biogeographical area to another for disposal.
- Conducting open and competitive solicitations for ship recycling services in a best-value manner that maximizes sale revenue, minimizes Government costs, and takes advantage of the capacity of the domestic ship recycling industry.

Consistent annual funding for the Ship Disposal Program is the most effective strategy to sustain program performance during unpredictable market fluctuations for scrap steel, fuel and periods of limited industrial capacity, all of which has a significant effect on the cost of vessel disposal.



Domestic and international scrap steel prices fell sharply during 2015, reflecting downward trends in virtually all metal and commodity markets. At the beginning of FY 2015, scrap steel was selling for approximately $353 per ton. By September 2015, scrap steel prices collapsed to $200 per ton, and by December 2015 fell to $142 per ton. Scrap steel prices are currently at levels not seen in the last ten years. The scrap steel price outlook remains uncertain with reduced economic activity in China driving the price decline. Industry analysts do not see a substantive price recovery until maybe late 2016 or early 2017. The average price of scrap steel is expected to maintain a range of $150 - $250 per ton. The price decline in FY 2015 has eroded vessel sales for recycling, especially vessels from the West Coast that must be towed to Gulf Coast recycling facilities. As a result MARAD, using appropriated funds, procured recycling services for the disposal of the two most recent recycling awards from the SBRF.

When the program is able to sell vessels for recycling, this provides a tangible benefit that returns sales proceeds to MARAD. These proceeds are then used to fund the maintenance, repair

and improvement of vessels in the NDRF; the preservation and presentation of maritime heritage property through the National Maritime Heritage Grants Program; and, expenses incurred by the U.S. Merchant Marine Academy and six State Maritime Academies. The Ship Disposal Program has generated approximately $67 million in revenue over the past 5 years (FYs 2010-2015) from the sale for dismantling/recycling of 56 NDRF non-retention vessels.

Goal Leader

Kevin Tokarski, Associate Administrator for Strategic Sealift, Maritime Administration

Reduce DOT Environmental Impacts (OST)

Overview

Building, operating and maintaining transportation systems has environmental consequences, and DOT faces many challenges for reducing carbon and other harmful greenhouse gas emissions, promoting energy independence and addressing global climate change for the Department's own operations and facilities. Under EO 13693, DOT is required to increase efficiency; measure, report and reduce greenhouse gas emissions; conserve and protect water resources; eliminate waste, increase recycling, and prevent pollution in its own facilities and operations. It must also acquire environmentally preferable materials, products, and services; design, construct, maintain and operate high performance sustainable buildings; and strengthen the vitality and livability of local communities.

The Department is committed to achieving the above sustainability goals; however the following factors may impact the effectiveness of these efforts:

- Increase or change of core mission responsibilities.
- Alteration of existing and future appropriation of funds.
- New or revised sustainability requirements.
- Other unforeseen circumstances outside the control of the Department.

PERFORMANCE REPORT

DOT Environmental Impacts (OST)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Percent improvement in water efficiency	(1.2%)	(9.7%)	0.9%	24.1%	19%	16%	N/A†	N/A†
Percent recycling and waste diversion	N/A	N/A	11%	20%	31%	50%	31%	Not Met
Percent of all applicable contracts that meet sustainability requirements	N/A	95%	95%	95%	95%	95%	N/A†	N/A†

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.2: Mitigate Environmental Impacts

† Available in spring 2016

Progress Update

OST's Office of Sustainability and Safety Management (OSSM) will continue to strengthen the Department's culture of sustainability by developing long-term strategic plans, guidance documents for implementation, sharing best practices, tracking performance and providing training and outreach activities that promote sustainability goals such as sustainable acquisition and bio-preferred purchasing, reducing waste, recycling, and using environmentally friendly technology practices. OSSM completed the following accomplishments in FY 2015:

- Improved the process and quality of water and waste data collection throughout the OAs.
- Updated the Department's Strategic Sustainability Performance Plan as per EO 13693.
- Provided ongoing technical support and guidance to each of the 10 OAs. OST provides guidance regarding activities such as Energy Efficiency and Renewable Energy Consumption, High Performance and Sustainable Buildings, Performance-based Contracts, Water, Waste Management, Sustainable Acquisition, Electronic Stewardship and Fleet Management. This support ensures the Department continues to meet the latest regulatory and legislative requirements along with organizational goals. Additionally, the office continues to update a guidance manual(s) for departmental field offices for implementing the above referenced policies.

PERFORMANCE PLAN

DOT Environmental Impacts (OST)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Divert 50 percent of non-hazardous solid waste annually from landfills (excluding construction and demolition waste).	Percent of solid waste diverted from landfills.	50%	50%
Reduce DOT water use 36% from an FY 2007 baseline by FY 2025..	Percent reduction from the FY 2007 water use baseline.	16%	18%
Meet sustainability requirements in 100 percent of all applicable contracts annually.	Percent of contracts that meet sustainability requirements	95%	100%

Key Strategies and Next Steps

Leadership in Sustainability Scorecard: The Department will continue to evaluate each OA's sustainability performance during the internal management review meetings with the Deputy Secretary. The scorecards have been updated to reflect current priority areas such as waste diversion.

Policy Orders, Action Memos, and Guidance Documents: The Department plans to update its sustainability policy orders and will continue working on supporting guidance documents that help to reduce its environmental footprint and resource consumption and ensure that its buildings and fleet are performing efficiently with the best return on investment for the American people.

Building Capacity: The Department will work to incorporate sustainable acquisition training into the core requirements for the acquisition workforce based on expected Office of Federal Procurement Policy's, or OFPP's, Policy Letter.

Data Quality: The Department will continue to work to improve the quality and quantity of environmental data including exploring contract modifications and more frequent reporting

Annual Reports to the Office of Management and Budget (OMB): The Department will continue to track and update its strategies and departmental performance to meet requirements related to reports such as the Strategic Sustainability Performance Plan and the OMB Scorecard. The 10-year DOT Strategic Sustainability Performance Plan identifies the far reaching programs and activities that must be instituted to meet the 2010-to-2020 energy, environmental, and sustainability requirements. In addition, these are incorporated in the DOT 2014–2018 Strategic Plan.

Goal Leader

Jeff Marootian, Assistant Secretary for Administration & Chief Sustainability Officer, Office of the Secretary

Strategic Objective 5.3—Adapt to Climate Change

Promote infrastructure resilience and adaptation to extreme weather events and climate change through research, guidance, technical assistance, and direct Federal investment.

PERFORMANCE OVERVIEW

Extreme weather events such as Superstorm Sandy, which disrupted major portions of air, highway, transit, and rail line service in the New Jersey-New York metropolitan region, have prompted DOT to consider more carefully how it plans, designs, and builds transportation infrastructure. Superstorm Sandy was the largest tropical storm to impact the Northeast United States in recent history. Climate change research predicts that storms will become stronger, so DOT needs to consider climate change impacts throughout the United States and the incorporation of adaptation strategies into DOT planning, operations, policies, and programs so that taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective under extreme climate conditions. The Department will encourage its funding recipients to perform climate change vulnerability and risk assessments for their transportation infrastructure and integrate the results into their planning and decision-making.

DOT Operating Administrations: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Maritime Administration (MARAD), and Office of the Secretary (OST).

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.3: Adapt to Climate Change

Vulnerability and Risk Assessment (FHWA)

Overview

FHWA is helping communities adapt to the effects of climate change and extreme weather events by assessing vulnerability and risk to their transportation infrastructure and by identifying measures to increase resilience. Improving infrastructure resilience helps communities anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment.

PERFORMANCE REPORT

Highway Vulnerability Assessment (FHWA)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	
Encourage at least 69 State DOTs, MPOs serving a Transportation Management Area (TMA), and Federal land management agencies to undertake an assessment of vulnerabilities of the highway system by FY 2018.	N/A	N/A	N/A	N/A	63	69	71	Met 

Progress Update

The number of States, eligible Metropolitan Planning Organizations (MPOs), and Federal Land Management Agencies (FLMAs) conducting a vulnerability assessment increased to 69 as continued outreach identified new opportunities to apply the vulnerability assessment framework. To facilitate this effort, FHWA published state-of-the-practice and case studies for transportation agencies to use in conducting climate vulnerability and resilience work. These included an Assessment of the Body of Knowledge and five vulnerability and risk assessment pilot project case studies. Also, FHWA promoted the use of their updated framework for conducting systems-level vulnerability and risk assessments of infrastructure likely to be impacted by climate change effects for use by State and local transportation agencies. Two interactive workshops were held to demonstrate the suite of tools FHWA developed for conducting vulnerability assessments. FHWA completed the Gulf Coast 2 project, in which the Agency conducted an overall vulnerability assessment of the Mobile, AL area, developed detailed engineering assessments of select transportation facilities, and released a suite of adaptation tools and procedures that could be more broadly transferred to communities nationwide. In addition, FHWA funded 19 climate resilience pilots at State DOTs and MPOs across the country and is leading a multi-agency study to learn from the impacts of Superstorm Sandy and Hurricane Irene on the transportation systems in New York, New Jersey and Connecticut. The pilots are largely complete and are pending official release. The post Sandy study should be completed in summer 2016.

STRATEGIC GOAL 5: ENVIRONMENTAL SUSTAINABIITY
Strategic Objective 5.3: Adapt to Climate Change

PERFORMANCE PLAN

Vulnerability Assessment (FHWA)			
Goal	**Indicator**	**FY 2016 Target**	**FY 2017 Target**
Encourage at least 69 State DOTs, MPOs serving a Transportation Management Area (TMA), and Federal land management agencies to undertake an assessment of vulnerabilities of the highway system by FY 2018.	Number of State DOTs, MPOs and Federal land management agencies that have conducted vulnerability assessments.	69	79

Key Strategies

FHWA partners with State DOTs, MPOs, and FLMAs to pilot approaches to conduct climate change and extreme weather vulnerability assessments of transportation infrastructure and to analyze options for adapting and improving resiliency.

Next Steps

FHWA will continue to:

- Disseminate results from the second round of the climate resilience pilot program that assessed vulnerability to climate change and extreme weather events, and to developed options for adapting to future changes.
- Disseminate the results of the Gulf Coast 2 study that was focused on Mobile, AL, including procedures and tools that can be used by MPOs and DOTs around the country.

FHWA will use Highway Research, Technology, and Education, or RT&E, funds to:

- Conduct research to develop climate change mitigation and adaptation strategies.
- Develop and promote tools to help State DOTs and MPOs incorporate climate change and related considerations into transportation plans and systems.
- Complete the Hurricane Sandy project in cooperation with State DOTs and MPOs in the Northeast.
- Conduct a study on transportation engineering approaches to address adaptation and resiliency, which focuses on promoting resiliency at the engineering level.
- Update the FHWA Climate Change & Extreme Weather Vulnerability Assessment Framework to incorporate results of recent research and DOT and MPO practices.

Goal Leader

Gloria Shepherd, Associate Administrator for Planning, Environment, and Realty, Federal Highway Administration

Strategic Goal 6: Organizational Excellence

Develop an innovative, world-class organization to advance the U.S. transportation system and serve the Nation's long-term safety, social, economic, security and environmental needs.

Strategic Objective 6.1—Develop Human Capital

Build a capable, diverse, and collaborative workforce of highly skilled, innovative, and motivated employees by making DOT a workplace of choice through employee empowerment and engagement, learning and development, succession planning, workplace flexibilities, and a healthy and safe workforce.

PERFORMANCE OVERVIEW

DOT's ability to provide transportation programs and services that meet the Nation's needs depends on excellent management of our organization and resources. The Department must build a workforce that can meet the challenges of this decade, especially in light of the pending retirement of many of its eligible employees. Retirement eligibility among our employees will continue to increase over the next several years given current workforce demographics. Mastering key competencies and skill sets needed in the future is key to effectively perform our jobs. Succession planning and employee engagement will be critical for retaining or replacing retiring employees. In addition, hiring and training will become increasingly important. DOT will implement workforce planning, competency-based hiring, and competency-based training to ensure the Department has a diverse and capable workforce; promote selfless leadership that focuses on performance and thrives on collaboration, while leveraging employee inclusion and engagement; and foster a culture of continuous learning and improvement among its employees.

DOT Operating Administrations: All Operating Administrations.

Strategic Objective 6.2—Improve Financial and Information Systems Management

Advance secure and innovative information systems and technology platforms that protect against cyber threats and support the efficient use of information and data for financial management.

PERFORMANCE OVERVIEW

DOT will provide secure, customer-focused information systems and technology platforms that support the innovative, effective, and efficient use of information and data for the management of all its business processes. DOT will leverage new technologies and ensure contingency plans are in place for its employees to function as a mobile workforce in all situations. DOT will continue to emphasize the importance of improving its financial management practices by focusing on increased oversight and proper recording of undelivered orders, which are budget obligations that have not yet been fully liquidated by making a final payment. With the large number and dollar value of DOT-funded grants and projects, identifying unused portions of this funding is constant work. By recovering these unused funds, DOT can make additional monies available to be used for eligible, higher priority projects.

DOT Operating Administrations (OAs): All Operating Administrations.

Strategic Goal 6: Organizational Improvement

Strategic Objective 6.2: Improve Financial and Information Systems Management

Financial Management

PERFORMANCE REPORT

Financial Management - Improper Payment Percentage (By Program Tested)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
FAA Airport Improvement Program	0.03%	0.89%	0.64%	0.07%	0.20%	0.50%	0.04%	Met
FHWA Federal-Aid Highways	1.40%	0.94%	0.22%	0.20%	0.10%	0.25%	1.08%	Not Met
FRA High-Speed Intercity Passenger Rail Program	Not Tested	Not Tested	0.96%	0.00%	1.06%	0.25%	0.03	Met
FTA Capital Investment Grants	0.00%	0.00%	0.00%	0.04%	0.00%	0.25%	N/A	N/A
FTA Formula Grants	0.16%	0.00%	0.44%	0.73%	2.91%	0.50%	0.05%	Met
FAA Facilities and Equipment—Disaster Relief Act	Not Tested	Not Tested	Not Tested	Not Tested	0.00%	N/A*	0.00%	Met
FHWA Emergency Relief Program—Disaster Relief Act (Hurricane Sandy-related only)	Not Tested	Not Tested	Not Tested	Not Tested	0.00%	N/A*	N/A	N/A
FRA Grants to Amtrak—Disaster Relief Act	Not Tested	Not Tested	Not Tested	Not Tested	0.41%	N/A*	N/A	N/A
FTA Public Transit Emergency Relief Program—Disaster Relief Act	Not Tested	Not Tested	Not Tested	Not Tested	0.02%	N/A*	0.03%	Met

* FY 2014 was the initial year of improper payments for Disaster Relief Act Programs. DOT will establish targets for the Disaster Relief Act Programs after FY 2015 improper payment testing is complete.

Progress Update

FY 2015 performance results met most, but not all, of DOT improper payment target rates. DOT's target rates are more rigorous than statutory thresholds which define programs susceptible to significant improper payments to have an improper payment rate exceeding 1.5 percent and $10 million of program outlays or $100 million of program outlays regardless of the percentage.

Strategic Goal 6: Organizational Improvement
Strategic Objective 6.2: Improve Financial and Information Systems Management

In FY 2015, DOT's OAs continued to enhance their payment processing guidance, update standard operating procedures, and reinforce controls during periodic training sessions with their internal and external grant management communities. These efforts resulted in fewer corrective actions compared with prior years.

DOT completed a department wide improper payment risk assessment of all programs in FY 2015. The risk assessment measures a number of factors including: payment processing controls; quality of internal and external monitoring controls; human capital; age and complexity of the programs; and, nature of program payments and recipients. In addition to meeting statutory requirements, the risk assessment is assisting DOT pinpoint control weaknesses and construct action plans to reduce the risk of improper payments.

The risk assessment identified three new funding activities susceptible to significant improper payments: FRA's Operating Subsidy and Capital and Debt Service Grants to Amtrak; FTA's PRIIA Projects for WMATA; and, MARAD's Electronic Invoicing System—Ready Reserve Force—Ship Manager Payments. FRA and FTA's merged the newly identified funding activities were into existing programs tested for improper payments. MARAD established a new improper payment program starting in FY 2015.

PERFORMANCE PLAN

DOT Improper Payments (OST)			
Goal	**Indicators**	**FY 2016 Target**	**FY 2017 Target**
Maintain the Percentage of Improper Payments Below Program Targets			
	FAA Airport Improvement Program.	0.038%	0.037%
	FAA Facilities and Equipment—Disaster Relief Act	0.000%	0.000%
	FHWA Federal-Aid Highways Program	0.950%	0.800%
	FRA Grants to Amtrak	0.300%	0.290%
	FRA High-Speed Intercity Passenger Rail Program	0.029%	0.028%
	FTA Formula Grants	0.045%	0.040%
	FTA Public Transit Emergency Relief Program—Disaster Relief Act	0.025%	0.020%
	MARAD Electronic Invoicing System – Ready Reserve Force – Ship	N/A*	N/A*

Strategic Goal 6: Organizational Improvement
Strategic Objective 6.2: Improve Financial and Information Systems Management

Goal	Indicators	FY 2016 Target	FY 2017 Target
	Manager Payments		

Key Strategies

Department wide: DOT will seek relief from testing program that have low-risk of improper payments and have demonstrated improper payment rates below statutory thresholds. FAA's Airport Improvement Program and FRA's High-Speed Intercity Passenger Rail program met OMB's requirements to request relief from annual improper payments reporting requirements.

Federal Aviation Administration (FAA): Through a grant and sponsor oversight process, continuous throughout the duration of the grant, FAA promotes proper fund stewardship. FAA receives quarterly reports on each grant to assess sponsor performance under every grant agreement. On a broader level, FAA uses a risk-based approach that increases the level of review of sponsor documentation, depending on the risk level of the Grantee.

Federal Transit Administration (FTA): FTA uses the State Management Reviews and Triennial Reviews to ensure proper compliance with Federal Grant regulations. In addition to stressing proper financial oversight, FTA Grantee reviews delve into various focus areas, such as legal compliance, technical compliance, and procurement processes at the State and local level.

Federal Highway Administration (FHWA): Under its Financial Integrity Review and Evaluation (FIRE) program, FHWA subjects States and territories not selected as part of the Improper Payments Elimination and Recovery Act, or IPERA, sample to a similar billing review process. The FIRE program also incorporates additional reviews, including focus areas such as inactive projects, grant administration at the local level, and procurement at the local level using Federal funds.

Federal Railroad Administration (FRA): Under a comprehensive, risk-based oversight program, FRA conducts routine monitoring, including periodic reviews of projects, as part of the management and administration of the High-Speed Intercity Passenger Rail Program, or HSIPR, Program. The routine monitoring activities center on recipient compliance with FRA agreement and with the approved budget, schedule, and fund stewardship. Routine monitoring highlights potential areas of concern and opportunities for training and technical assistance.

Maritime Administration (MARAD): The MARAD Internal Control Program (MICP) improves the accountability and effectiveness of MARAD programs and operations through the implementation of sound internal control methodologies, and (2) reasonably assure compliance with laws and regulations. The objective of MCIP is to advance organizational policies and procedures to help program and financial managers achieve results and safeguard the integrity of programs by reducing the risk of adverse activities, including loss or damage from waste, fraud, abuse, or mismanagement.

Strategic Goal 6: Organizational Improvement

Strategic Objective 6.2: Improve Financial and Information Systems Management

Next Steps

The improper payments program next steps are:

- Update DOT policies and procedures for estimating and reducing improper payments.
- Provide grantees with guidance on the retention of supporting documentation.
- Provide grantees with refresher training on disbursement guidelines.

Responsible Officials

Shoshanna Lew, Chief Financial Officer and Assistant Secretary for Budget and Program Performance, Office of the Secretary
David Rivait, Deputy Chief Financial Officer, Office of the Secretary

Strategic Goal 6: Organizational Improvement

Strategic Objective 6.2: Improve Financial and Information Systems Management

Information Systems

PERFORMANCE PLAN

Cybersecurity (OST)			
Goal	**Indicators**	**FY 2016 Target**	**FY 2017 Target**
Strengthen the cyber security posture of the Department through holistic situational awareness and risk management capabilities.			
	Percent of systems governed by Automated Continuous Monitoring capabilities within each component.	60%	70%
	Percent of systems converted to an ongoing authorization process	20%	50%

Key Strategies

As part of the Information Resources Management, or IRM, Strategic Plan, DOT plans to achieve the following objectives over the next 5 years:

- Implement a cybersecurity risk management program that continually adapts to changing threats, vulnerabilities, and assets.
- Enhance the Departmental Cybersecurity Incident Response Program to provide interdependent, enterprise wide coordination, information sharing, and response.
- Focus efforts on data and information entering and exiting our networks, what assets are on our networks, when security statuses change, and who is on our systems.

Responsible Official

Richard McKinney, Chief Information Officer, Office of the Secretary

Strategic Goal 7: Security, Preparedness, and Other Supporting Objectives

Meet transportation need for defense readiness through interagency cooperation with the Department of Defense, Department of State, Homeland Security and State and local agencies and foreign governments.

Strategic Objective 7.1—Ensure Effective Response

Mitigate the impacts to transportation due to all hazards by developing effective response planning and training for leaders and responders.

PERFORMANCE OVERVIEW

DOT proactively prepares to use our internal authorities for the safety and resilience of the U.S. transportation systems and support the transportation mission of the Department of Homeland Security (DHS) and other Federal departments and agencies to improve the security of domestic and intermodal transportation sectors. In addition, DOT collaborates with DHS to strengthen the transportation network and effectively mitigate risk through an integrated systems approach. During a response, DOT employees work at various locations including the National Response Coordination Center, Regional Response Coordination Centers, and Joint Field Offices to regulate transportation, manage the Nation's airspace, and ensure the safety and security of the national transportation systems. DOT ensures continuity of operations by maintaining emergency preparedness and response capabilities to effectively provide leadership and response to incidents and fulfill all of our commitments. The Department also provides guidance and technical assistance to localities, State departments of transportation, and their first response partners to improve their ability to conduct emergency response.

DOT Operating Administrations: Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and Office of the Secretary (OST).

Strategic Objective 7.2—Meet National Security Needs

Meet transportation needs for national security through interagency cooperation with the Departments of Defense, State, and Homeland Security, and State and local agencies.

PERFORMANCE OVERVIEW

DOT has responsibility for a number of modal emergency preparedness programs that provide the Department of Defense (DoD) and civilian agencies with assured access to commercial transportation during times of national emergency. The Department will continue to maintain Government-owned transportation assets, and provide access to commercial transportation assets for critical support for defense mobility and emergency response and will maintain steadfast defense readiness across all operating administrations in their respective national security responsibilities through interagency cooperation and drills with the DoD, Department of Homeland Security, and other State and local agencies.

DOT Operating Administrations: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Maritime Administration (MARAD), and Office of the Transportation Secretary (OST).

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.2: Meet National Security Needs

Maritime Security Program (MSP)

Overview

The MSP ensures the military's ability to obtain assured access to these commercial vessels and U.S. Merchant Mariners to support national defense and other security requirements during armed conflict or national emergency. The program also ensures that the intermodal assets of current U.S.-flag ship operators will be readily available to the DoD. These MSP vessels are the backbone of the sealift capability needed to globally project our Armed Forces by delivering the critical supplies and equipment necessary to support, protect and defend the Nation when called upon. Additionally, MSP also contributes to economic competitiveness strategic objectives as it helps to ensure that the U.S. will have a fleet of active, commercially viable, militarily useful, privately owned U.S.-flag vessels to maintain a presence in foreign commerce.

The Maritime Security Act of 2003 authorized the enrollment of 60 ships in the MSP, and the National Defense Authorization Act of 2013 (H.R. 4310) extends MSP from FY 2016 through FY 2025. MSP acknowledges the importance of a strong partnership with the commercial maritime industry to maintain an international presence in foreign commerce. Without MSP, there could be a significant reduction in the number of U.S.-flag ships. In addition, MSP fleet provides employment for 2,400 skilled U.S. mariners and approximately 5,000 shore-side maritime professionals each year to meet the Nation's needs to crew Government-owned reserve sealift vessels (i.e., RRF).

Each enrolled ship is required to operate in U.S. foreign commerce for a minimum of 320 operating days each fiscal year to receive full MSP payments. MARAD tracks each MSP ship operator's compliance in meeting the minimum required 320 operating days a ship per year, which equates to 19,200 operating days for all 60 vessels. MARAD monitors operating days on a monthly basis to verify that MSP ships are operating as required. In addition, MARAD approves changes in MSP contracts that improve the quality of the MSP fleet to ensure the retention of modern and efficient ships and U.S. citizen crews. Any ship offered as a replacement for an existing MSP vessel must be less than 15 years old and must be approved by MARAD and the U.S. Transportation Command as the most militarily useful and commercially-viable vessels available. Additionally, MSP vessels age out at 25-years-old and must be replaced.

PERFORMANCE REPORT

Maritime Security Program (MARAD)

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Total operating days U.S.-flagged, foreign commercial ships enrolled in the Maritime Security Program (MSP) are available to meet DoD requirements	21,436	21,557	21,593	21,794	21,600	19,200	21,659	Met 

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.2: Meet National Security Needs

Progress Update

The MSP was established to ensure that a core fleet of U.S.-flag commercial vessels operating in international trade with U.S. citizen mariner crews are available to meet the economic needs of the United States, while also providing the Department of Defense (DoD) with assured access to vessels and mariners. The program authorizes payments and MSP operating agreements for 60 ships. Each MSP ship is required to operate in international commerce a minimum of 320 days each fiscal year to receive full authorized MSP payments. If all 60 ships operate at least 320 days, this equates to 19,200 operating days each fiscal year. For FY 2015, MARAD reported 60 ships enrolled in the MSP. MARAD continued to monitor the agreements with the ship owners to maintain the 60 ships in the program and expects to achieve the agency target of 19,200 operating days.

PERFORMANCE REPORT

Maritime Security Program (MARAD)			
Goal	**Indicators**	**FY 2016 Target**	**FY 2017 Target**
Maintain the U.S. presence in foreign maritime commerce through ships enrolled in the Maritime Security Program (MSP) at 19,200 vessel operating days a year, ensuring availability of sealift capacity for the Department of Defense.	Number of operating days avoided.	19,200	19,200

Key Strategies and Next Steps

The emphasis of the MSP is to provide sustainment sealift capacity to the U.S. Armed Forces in the event of armed conflict or national emergency that requires humanitarian assistance and disaster response. Primary activities to accomplish this include:

- Monitor the agreements with the ship owners to maintain the 60 ships enrolled in the program.
- Approve changes to MSP contracts that improve the quality of the fleet to help ensure the retention of modern and efficient ships and U.S. citizen crews.
- Authorize payments on MSP operating agreements for 60 ships to provide DoD with assured access to vessels and mariners.

Responsible Official

Kevin Tokarski, Associate Administrator for Strategic Sealift, Maritime Administration

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.2: Meet National Security Needs

Maritime Training – U.S. Merchant Marine Academy (USMMA)

Overview

USMMA is an accredited Federal institution of higher education operated by DOT and MARAD. USMMA educates highly qualified Merchant Marine officers to crew U.S.-flagged cargo vessels and work throughout the maritime industry and military and reserve communities. USMMA offers a 4-year program based on a rigorous academic and practical maritime-based training program leading to a Bachelor of Science degree in either Marine Transportation or Marine Engineering, a USCG Merchant Marine Officer's credential as 3rd Mate (deck officer) or 3rd Assistant Engineer (engineering officer), and an officer's commission in the U.S. Navy Reserve or other uniformed service.

The Academy's retention rate of 85 to 90 percent plays an important role in achieving the goal of attracting high quality students. The Academy has engaged in robust recruitment and retention programs aimed at attracting a diverse population of Midshipmen, faculty and staff and ensuring that the Academy community retains its best and brightest members. This effort will continue to allow the Academy to meet its mission of educating and graduating USCG credentialed merchant mariners and leaders of exemplary character who will serve America's marine transportation and defense needs in peace and war. The Academy graduates one-quarter of the total of new highly skilled, entry-level Merchant Marine officers needed yearly to support the manpower demands of the U.S. Merchant Marine and national maritime industry infrastructure.

The Merchant Marine industry is vital for our national defense, national economy, and national industrial base. Academy graduates are vital to ensuring that the Nation has a homegrown source of manpower in the event that U.S.-flag ships are required to transport war materials, and perform critical maritime-related functions in a national emergency. USMMA graduates help fuel the Nation's economy by operating the ships that transport American products from coast to coast or to and from foreign shores. They oversee the safe movement of cargo and goods on ships, supervise the operation of ports and shipyards, and work a variety of jobs in support of the maritime shipping infrastructure. USMMA graduates help fill the Nation's long-term need for a viable merchant fleet capable of responding to any call for maritime transportation in peace or war.

MARAD tracks the number of graduates receiving USCG credentials from the USMMA and the State Maritime Academies its program supports. MARAD targets a total of 862 graduates from the USMMA and State Maritime Academies in FY 2016 and 838 graduates in FY 2017. The reduced FY 2017 target reflects a smaller USMMA Class of 2017, owing to significant barracks renovation in past fiscal years.

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.2: Meet National Security Needs

PERFORMANCE REPORT

Maritime Training – U.S. Merchant Marine Academy (MARAD)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Number of U.S. Merchant Marine Academy (USMMA) graduates.	198	205	219	189(r)	224	229	227	Not Met 

Progress Update

MARAD's maritime academy programs support the competitiveness of a viable and robust Merchant Marine to support strategic sealift and serve the Nation's commercial maritime transportation needs. In working to maintain the Nation's pool of capable and well-skilled merchant mariners in FY 2015, the U.S. Merchant Marine Academy (USMMA, or the Academy) graduated 227 midshipmen with U.S. Coast Guard (USCG) credentials, just shy of the target of 229. Additionally, the State Maritime Academies (SMAs) graduate cadets several times within the year, some of which have the option of earning USCG Merchant Mariner Credentials. The total number of SMA graduates for 2015 will be available in January 2016. These graduates support numerous components of the maritime industry. America depends on its U.S. maritime industry and U.S. Merchant Marine to move cargo and goods by maritime transportation systems through the country and the world. Over 75 percent of our Nation's exports and imports by volume move on ships. This industry is vital for our national defense, national security and national industrial base.

PERFORMANCE REPORT

Maritime Training – U.S. Merchant Marine Academy (MARAD)			
Goal	Indicators	FY 2016 Target	FY 2017 Target
Educate and graduate licensed merchant mariners and leaders of exemplary character who will serve America's marine transportation and defense needs in peace and war.	Number of USMMA graduates with USCG credentials	202	178

Key Strategies and Next Steps

Though USMMA seeks to improve the overall percentage of students who graduate within 4 years of entering the program, there are many factors that impact the number of graduates each year. These factors include the number of students admitted to the Academy, the number of Midshipmen who resign, and the number of Midshipmen who are disenrolled for academic, disciplinary, or medical reasons. Key activities planned/undertaken to graduate highly-qualified mariners include:

- Developing a comprehensive leadership development program that integrates academic and regimental student experiences and places leadership development at the forefront of the Academy experience. A new leadership development course is being taught and will be evaluated for permanent inclusion in the Academy curriculum. The Academy is working on methods of integrating this course with regimental student experiences.
- A Midshipmen activities Director has been hired and is currently working to plan both internal social events and excursions off campus with the goal of reducing disciplinary incidents.
- Renovating academic buildings with upgraded infrastructure and providing state-of-the-art teaching tools to support an environment conducive to learning.

Centralizing simulator management and updating the Academy's simulator plan in order to ensure long-term simulator support of academic requirements.

Responsible Official

Rear Admiral Susan L. Dunlap, Deputy Superintendent, U.S. Merchant Marine Academy

Maritime Training - State Maritime Academies (MARAD)

Overview

MARAD's SMA program provides approximately 75 percent of the entry-level licensed mariners trained annually that begin working in various positions within the maritime industry. This program supports the competitiveness of a viable and robust U.S. Merchant Marine and contributes to national defense and homeland security.

MARAD's SMA program provides direct support and training ships to the six SMAs: California Maritime Academy, Great Lakes Maritime Academy, Maine Maritime Academy, Massachusetts Maritime Academy, State University of New York Maritime College and Texas A&M Maritime Academy. Federal funding supplements SMA State government funding. The SMA program has historically supported three major program components: (1) annual direct assistance to select SMA students through the Student Incentive Payment program, or SIP program; (2) annual direct assistance to each of the six SMAs for maintenance and support and training ship fuel; and (3) training ship maintenance and repair. These training ships play a critical role in providing the necessary sea time that Cadets and midshipmen need for their respective USCG officer licensing requirements.

This industry is vital for our national defense, national economy and national industrial base. The SMA Program ensures that competent U.S. Merchant Mariners are available for the safe movement of cargo and goods on ships, working in ports and shipyards, as well as shipping infrastructure. These mariners are needed to safely operate U.S.-flag vessels that contribute to the economic competitiveness of our Nation, and perform critical maritime-related functions in a national emergency. This is what makes the SMAs valuable partners to the DoD, Department of Homeland Security/Federal Emergency Management Agency, and other Federal agencies.

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.2: Meet National Security Needs

PERFORMANCE REPORT

Maritime Training - State Maritime Academies (MARAD)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Number of State Maritime Academy (SMA) graduates	575	545	642(r)	658(r)	734	660	TBD	TBD 

Progress Update

MARAD's maritime academy programs support the competitiveness of a viable and robust Merchant Marine to support strategic sealift and serve the Nation's commercial maritime transportation needs. In working to maintain the Nation's pool of capable and well-skilled merchant mariners in FY 2015, the SMAs graduate cadets several times within the year, some of which have the option of earning USCG Merchant Mariner Credentials. The total number of SMA graduates for 2015 will be available in January 2016. These graduates support numerous components of the maritime industry. America depends on its U.S. maritime industry and U.S. Merchant Marine to move cargo and goods by maritime transportation systems through the country and around the world. Over 75 percent of our Nation's exports and imports by volume move on ships. This industry provides a vital capability for our national defense, national security and national industrial base.

PERFORMANCE REPORT

Maritime Training - State Maritime Academies (MARAD)			
Goal	Indicators	FY 2016 Target	FY 2017 Target
Provide the highest quality USCG credentialed officers and other personnel for the merchant marine and national maritime industries.	Number of SMA graduates (participating in the program) with USCG credentials.	660	660

Key Strategies and Next Steps

The SMA program effectively targets Federal resources in a well-defined, cost-shared partnership with the six SMAs to produce highly qualified officers for the U.S. Merchant Marine. The program has met performance targets for officer graduates each year. Primary key activities include:

- Continue public outreach to support recruitment efforts.
- Administer student incentive payments for enrollment of students at the SMAs.
- Direct support assistance to each of the six SMAs for maintenance, support and fuel for training ships.
- Maintain training ships in a safe and seaworthy condition, and in full compliance with Federal laws and regulatory requirements.

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.2: Meet National Security Needs

Responsible Official

Kevin Tokarski, Associate Administrator for Strategic Sealift, Maritime Administration.

MARAD- Ready Reserve Force (RRF)

Overview

MARAD's RRF provides sealift capacity to meet the Nation's needs for national security and emergency response. The RRF was first initiated in 1976 as a subset of the National Defense Reserve Fleet (NDRF) to provide a rapidly deployable sealift capability and supplement the U.S. Merchant Marine in times of national crisis. The program is comprised of various ship types, some with special capabilities to carry heavy and oversized military cargoes and perform unique cargo operations.

When the RRF program first began there were only six ships. Today, the program consists of 46 ships berthed at various U.S. ports. RRF ships meet approximately one-half of the U.S. Transportation Command's surge sealift requirement during a mobilization. Without the RRF ships, DoD would have insufficient sealift capacity in times of emergency or to meet operational contingencies. MARAD's MSP and VISA programs also provide sustainment sealift via commercial U.S.-flag vessels.

The Nation's defense is also dependent upon port capacity. There are 16 U.S. commercial strategic ports that provide required capabilities to assure that DoD meets its national security missions and timelines. DOT, through MARAD, is responsible for establishing DoD's prioritized use of port facilities and related intermodal services and facilities during DoD mobilizations, and ensuring the safe, secure and smooth flow of military cargo through the commercial U.S. transportation system while minimizing commercial cargo disruptions.

The RRF is used to help maintain the level of national security for the American public. The RRF is relied upon to help meet DoD requirements for a surge of U.S. military forces as needed when a situation rapidly deteriorates anywhere in the world. Resources for support for national defense capabilities have declined, which necessitates that military planners more effectively use the resources they have. The RRF is an example of how DoD can rely on a small program to globally project military power rapidly.

The American public also benefits when the RRF is called to provide humanitarian assistance and disaster response in times of national emergency. This was the case on the U.S. Gulf Coast following hurricanes Katrina and Rita landfalls in 2005. The Federal Emergency Management Agency used nine of MARAD's vessels to support relief efforts, including messing and berthing provided for refinery workers, emergency response teams and longshoremen. Other examples include the response to the 2010 Haiti earthquake with three MARAD vessels, and following the 2012 Super Storm Sandy in the New York City region with the use of one RRF vessel and two NDRF training ships.

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.2: Meet National Security Needs

PERFORMANCE REPORT

Ready Reserve Force (MARAD)								
Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	**Performance**
Percentage of DoD-required shipping capacity complete with crews available within mobilization timelines	N/A	N/A	N/A	N/A	96%	94%	97%	Met 
Percentage of DoD-designated commercial ports available for military use within DoD-established timelines	N/A	N/A	N/A	N/A	94%	87%	100%	Met 

Progress Update

MARAD's measure for shipping and crew availability is to ensure that the level of shipping capacity (both commercial and Government-owned) is sufficient to meet current and projected DoD requirements to transport cargo to support U.S. military during times of national emergency. Targets are based on readiness times that have historically met DoD requirements. The readiness represented by the Government-owned RRF, MSP, and Voluntary Intermodal Sealift Agreement (VISA) program provide the desired readiness capability to support U.S. national security interests as well as employment for U.S. citizen mariners to crew the commercial and Government-owned fleets. For FY 2015, MARAD expects to meet the target of 96 percent shipping and crew availability.

In FY 2015, the RRF supported Operation United Assistance by delivering and returning Ebola relief supplies to West Africa. This operation required the vessels to sail with their own stevedores to avoid direct contact with personnel at the discharge ports.

MARAD also had 16 designated strategic commercial port facilities in FY 2015 that were available to support the deployment, sustainment and redeployment of DoD and other national emergency requirements. The availability of these facilities will help ensure the secure, efficient and timely flow of military cargo through commercial ports with minimal cargo disruption. MARAD met the 94 percent commercial ports availability for FY 2014 and expects to achieve that target for FY 2015.

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.2: Meet National Security Needs

PERFORMANCE PLAN

Ready Reserve Force (MARAD)			
Goal	**Indicators**	**FY 2016 Target**	**FY 2017 Target**
Percentage of DoD required shipping capacity complete with crews available within mobilization timelines.	Percentage of shipping and crew availability	94%	94%
Percentage of DoD designated commercial ports available for military use within DoD established timelines.	Percentage of ports availability	87%	87%

Key Strategies and Next Steps

The ability to sustain readiness of shipping capacity to transport cargo and meet future military requirements will depend on maintaining a sufficient number of active MSP and VISA vessels and crews operating in U.S. international trade and the ability to maintain the RRF in a ready status at all times. Targets should be achievable based on cargo availability or major losses to vessels operating in these programs. DoD requirements help determine the size of both the government-owned and commercial fleets. The size and timeline of the deployment, available commercial port and intermodal capacity, readiness of the port, and weather conditions all affect this performance measure. RRF ships are expected to be fully operational within their assigned 5 and 10-day readiness status and sail to designated loading berths. Commercial U.S. ship managers provide systems maintenance, equipment repairs, logistics support, activation, manning, and operations management by contract. Ships in priority readiness have Reduced Operating Status (ROS) maintenance crews of about 10 commercial merchant mariners that are supplemented by additional mariners during activations. Readiness of the RRF is periodically tested by DoD directed activations of ships for military cargo operations and exercises.

MARAD works with its partners in the National Port Readiness Network (NPRN) to continue to improve the processes for military use of strategic commercial ports. These efforts are currently focused on revising and updating the Memorandum of Understanding that is the founding document of the NPRN and which guides the activities of its members, who provide coordination and cooperation to ensure readiness of commercial ports. Port readiness is dependent on training, exercises, deployment coordination and monthly and semi-annual readiness assessments.

Responsible Officials

Kevin M. Tokarski, Associate Administrator for Strategic Sealift, Maritime Administration

Strategic Objective 7.3—Expand Small Business Opportunities

Expand business opportunities for small and disadvantaged businesses in the transportation sector.

PERFORMANCE OVERVIEW

The Federal Government provides opportunities through its acquisitions to small businesses, which include small disadvantaged, women-owned, veteran-owned, service-disabled veteran-owned, and Historically Underutilized Business Zone small business concerns. These small businesses must also have the maximum practicable opportunity to participate in DOT contracts and subcontracts. In compliance with the *Small Business Act*, DOT has the responsibility to ensure that small businesses have an opportunity to compete and be selected for a fair amount of the Agency's contract dollars. DOT provides various types of assistance to ensure that small businesses have access to transportation-related projects. Through outreach events, we demonstrate a commitment to growing the small business supplier base and increasing their awareness of procurement opportunities.

DOT Operating Administrations: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Maritime Administration (MARAD), Federal Aviation Administration (FAA), and Office of the Secretary (OST).

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.3: Expand Small Business Opportunities

Expand Small Business Opportunities

Overview

The Office of Small and Disadvantaged Business Utilization (OSDBU) is responsible for ensuring that small have an opportunity to compete and be selected for a fair amount of the agency's contracting and subcontracting dollars. The OSDBU Program provides procurement opportunities, technical assistance, and financial services to the small business community.

PERFORMANCE REPORT

Expand Small Business Opportunities

Goal Description	2010	2011	2012	2013	2014	2015 Target	2015 Actual	Performance
Percent of total dollar value of DOT direct contracts awarded to small, disadvantaged businesses. (OST)	14.50% (r)	19.45% (r)	17.98 % (r)	19.30 %	21.05 %	5%	22.63 %	Met 
Percent of total dollar value of DOT direct contracts awarded to women-owned businesses. (OST)	7.85% (r)	11.14% (r)	8.77% (r)	11.44 % (r)	12.09 %	5%	6.09%	Met 

(r) revised

PERFORMANCE PLAN

Expand Small Business Opportunities

Goal	Indicators	FY 2016 Target	FY 2017 Target
Maintain the percent of total dollar value of DOT direct contracts awarded to women-owned businesses at 5 percent through FY 2018.	Percent of total dollar value of DOT direct contracts awarded to women-owned businesses	5%	5%
Maintain percent of total dollar value of DOT direct contracts awarded to small disadvantaged businesses at 5 percent through FY 2018.	Percent of total dollar value of DOT direct contracts awarded to small disadvantaged businesses.	5%	5%

STRATEGIC GOAL 7: Security, Preparedness and Others
Strategic Objective 7.3: Expand Small Business Opportunities

Key Strategies and Next Steps

- Ensure maximum practicable opportunities for small businesses to participate in DOT contracts and subcontracts.
- Participate in small business outreach events to include vendor outreach sessions to encourage small business participation in DOT procurements.
- Provide management and technical assistance for small businesses to work closely with State and local transportation agencies.
- Help small businesses gain the financing they need to participate in transportation-related contracts.
- Conduct bonding educational programs to help small businesses become bond ready.
- Increase awareness and participation in all stages of the DOT Small Business Innovation Research program.

Responsible Officials

DeVera Redmond, Supervisory Small Business Specialist, Office of Small and Disadvantaged Business Utilization, Office of the Secretary

Brandon Neal, Director, Office of Small and Disadvantaged Business Utilization, Office of the Secretary

APPENDICES

Files are posted separately on DOT's website at https://www.transportation.gov/budget/dot-budget-and-performance.