Department of Transportation FY 2014 Performance Report and FY 2016 Performance Plan

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Agency Priority Goals

Reduce roadway fatalities by the end of calendar year 2016 to 1.02 per 100 Million Vehicle Miles Traveled. **Supporting Modes: FHWA, FMCSA, NHTSA**

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Reduce US commercial aviation air carrier fatalities by 50 percent over an 18-year period (2010-2018), to no more than 6.2 per 100 million persons on board in FY 2018. **Supporting Mode: FAA**

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

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

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By September 30, 2015, initiate construction on 65 passenger rail construction projects and substantially complete 74 planning, preliminary engineering/ environmental analysis, and construction passenger rail projects. **Supporting Mode: FRA**

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By September 30, 2015, achieve Operational Readiness Dates (ORD) at all 20 Air Route Traffic Control Centers (ARTCC). **Supporting Mode: FAA**

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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 1.1— Improve Safety of 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 OVERVIEW

Our 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. 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.

DOT Operating Administrations: The following DOT Operating Administrations contribute to DOT's safety goals: All modes.

DOT Safety Council: The U.S. DOT Safety Council provides a forum for information exchange, discussion and collaboration to enable coordinated, multimodal approaches to advancing the safety mission. The Safety Council leverages Departmental expertise and leadership of the Chief Safety Officers, Associate Administrators for Safety and other senior safety leaders to provide advice and technical support to the Secretary and Operating Administrations on the most important Departmental safety issues.

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
ROADWAY SAFETY (FHWA, FMCSA, NHTSA)								
AGENCY PRIORITY GOAL: Highway fatality rate per 100 million vehicle-miles traveled (VMT). (NHTSA, FHWA, FMCSA)	**1.15**	**1.11**	**1.10(r)**	**1.14(r)**	**1.10***	**1.02**	**N/A**	**Not Met (2013)**
Passenger vehicle occupant fatality rate per 100 million VMT.	1.97	0.89	0.84	0.81(r)	0.83 – 0.89*	0.85	N/A	Potentially Met* (2013)
Motorcyclist rider fatality rate per 100,000 motorcycle registrations.	68.52	56.36	54.82	54.66	56-58**	63	N/A	Potentially Met (2013)
Non-occupant (pedestrian and bicycle) fatality rate per 100 million VMT.	0.18	0.17	0.17	0.19(r)	0.19	0.16	N/A	Not Met (2013)
Large truck and bus fatality rate per 100 million total VMT.	0.153	0.122	0.133	0.141(r)	0.137*	0.114	N/A	Potentially Not Met (2013)
*Statistical projection **Motorcycle registrations for 2013 are not yet available.								
AVIATION SAFETY (FAA)								
AGENCY PRIORITY GOAL: Number of US-registered, commercial air carrier fatalities per 100 million persons onboard.	6.7	0.3	0.0	0.0 (r)	1.1*	7.2	0.6*	**Potentially Met**
AGENCY PRIORITY GOAL: Number of fatal general aviation accidents per 100,000 flight hours.	1.17	1.10(r)	1.12*	1.09 (r)	1.11	1.05	1.09*	**Potentially Not Met**
AGENCY PRIORITY GOAL: Category A&B runway incursions per million operations.	0.227	0.117	0.138	0.356	0.220 (r)	0.395	0.309*	**Potentially Met**
* Preliminary data from NTSB								
RAILROAD SAFETY (FRA)								
Rail-related accidents and incidents per million train-miles.*	16.874	16.697	16.072	15.194	15.028	16.160	15.748*	Met
* Actual results are subject to change and might differ from previous materials to reflect subsequently obtained information.								

TRANSIT SAFETY (FTA)								
Transit fatalities per 100 million passenger-miles traveled.	N/A	0.533	0.547	0.613	0.609*	0.543	0.487*	Potentially Met
This measure was not established until 2010. * Preliminary								
PIPELINE AND HAZARDOUS MATERIALS SAFETY (PHMSA)								
Pipeline incidents involving death or major injury.	48	38	34	32	26	39	29*	Potentially Met
Hazardous materials incidents involving death or major injury.	29	23	32	32	25	33	19*	Potentially Met
*Preliminary estimate								
TRANSPORTATION SAFETY POLICY (OST)								
Cumulative number of States and localities that adopt roadway designs that accommodate all road users (complete streets).	N/A	214(r)	246(r)	398(r)	398*	270	652	Met
(r) Revised * Preliminary								

Progress Update

Roadway Safety (FHWA, NHTSA, FMCSA)

Over the past 10 years, there has been a reduction of nearly 25 percent in the number of fatalities on the Nation's roadways. In 2013, there were 32,719 fatalities on U.S. highways, a 3.1 percent decrease from 2012. The number of people injured on the Nation's roads decreased in 2013 as well, falling from 2.4 million to 2.3 million. Fatalities and injuries declined in almost all segments of the population—passenger vehicle occupants, large-truck occupants, pedestrians, young drivers, and with alcohol-impaired driving fatalities. This decline shows a continuation in the general trend downward in fatalities that started in 2006, except for a one-year anomaly in 2012.

The Department attributes the overall decline in roadway fatalities over the last several years to a variety of factors including:

- 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 FHWA's *Every Day Counts* initiative;
- High visibility enforcement campaigns such as *Click It or Ticket* to increase seatbelt use; drunk driving prevention initiatives such as *Drive Sober or Get Pulled Over*; and
- Better oversight of licensing for young drivers and commercial operators.

Safer vehicles also played an important role in reducing crashes, injuries and fatalities A new report estimates that from 1962 through 2012, seat belts alone have saved nearly 330,000 lives. Other safety technology and equipment, such as air bags, child safety seats and electronic stability control, have saved an additional 280,000 lives. Advanced new crash avoidance technology, such as automatic emergency braking systems (AEB) represents the next generation of vehicle safety. These AEB systems, along with promising innovations such as vehicle-to-vehicle communications (V2V) and automated vehicle technologies hold great promise to save even more lives, building upon the successes of technologies available today. As these new technologies mature, NHSTA will continue to keep raising the bar on safety, and accelerate its push on innovative and effective solutions to reduce the staggering toll of motor vehicle crashes in the U.S.

Large truck and bus-related mileage grew 30% from 2002-2012. Over this period, registrations for large trucks and intercity buses increased 27%. Despite this growth in commercial vehicle traffic miles, there was a 24% reduction in fatalities in crashes involving large trucks and intercity buses, from 5,539 fatalities in 2005 to 4,183 in 2012.

FMCSA is taking action to decrease large-truck and bus fatalities. Actions taken in 2014 include:

Safety Measurement System (SMS) Effective August 23, 2014, the Agency implemented a new process for addressing adjudicated citations in FMCSA's data systems such as SMS and the Pre-employment Screening Program. Likewise, the Agency continues to support the expanded suite of intervention tools to enable investigators to systematically evaluate why safety problems are occurring in order to recommend remedies, encourage corrective action(s), and, where corrective action is inadequate, invoke strong penalties. FMCSA's June 30, 2014, Motor Carrier Safety Progress Report shows that the mode transmitted 24,126 Warning Letters in FY 2012 and 20,480 in FY 2013. A total of 15,693 Warning Letters were sent out during the first three quarters of FY2014 (10/01/2013 - 06/30/2014).

New Entrant Safety Assurance Program (NESAP) In FY 2013, FMCSA-trained NESAP safety auditors conducted an estimated 32,886 safety audits. 22,905 safety audits were conducted through June 30, 2014 and 13,210 Out of Service Orders were issued.

Enhanced Investigative Techniques (EIT) Over the first three quarters of FY 2014, 196 FMCSA Field Operations personnel participated in an intensive four-day Enhanced Investigative Techniques (EIT) training course. The EIT training was initially developed for the Motorcoach Safety Initiative known as Quick Strike. The impressive safety results from the Quick Strike initiative included a 75-percent enforcement rate, a 26-percent average vehicle OOS rate, and 14 Imminent Hazard Out of Service (OOS) orders served to motor carriers investigated under the initiative.

National Registry of Certified Medical Examiners 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. To date, nearly 37,000 healthcare professionals have been certified to conduct driver medical exams and more than 1,742,265 examinations have been completed in FY 2014. 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.

Aviation Safety

Commercial aviation continues to be one of the safest forms of transportation. However, while rare, commercial aviation accidents have the potential to result in large loss of life. In FY 2014, with a result of 0.6 fatalities per 100 million persons on board, FAA achieved its target of not exceeding 7.2 fatalities per 100 million persons on board. The number of passenger fatalities in large, US registered air carrier fatal accidents has continued to drop dramatically since the late 1960s. The number of US registered civil aviation accidents fell from 1,539 in 2012 to 1,297 in 2013, a decrease of almost 16 percent.

The FAA published **Qualification, Service, and Use of Crewmembers and Aircraft Dispatchers** on November 12, 2013, a final rule which revises the training requirements for pilots in air carrier operations. The rule enhances air carrier pilot training programs by emphasizing the development of pilots' manual skills at handling the aircraft and adding safety-critical tasks, such as recovery from aircraft stall and upset. The final rule also requires that enhanced runway safety training and monitoring of pilot training performance be incorporated into existing scenario-based flight training. Moreover, it requires air carriers to implement remedial training programs for pilots.

Additionally, the final rule revises recordkeeping requirements for communications between the flight crew and dispatch, ensures that personnel identified as flight attendants have completed flight attendant training and qualification requirements, provides civil enforcement authority over crewmembers and aircraft dispatchers making fraudulent statements, and provides a number of conforming and technical changes to existing air carrier crewmember training and qualification requirements. The final rule also enables air carriers to modify training program requirements for flight crew members when the air carrier operates multiple aircraft types with similar design and flight-handling characteristics.

In July 2014, the FAA published **Flight Simulation Training Device (FSTD) Qualification Standards for Extended Envelope and Adverse Weather Event Training Notice of Proposed Rulemaking**. The primary purpose of the proposed rule is to improve existing technical standards and introduce new technical standards for evaluating:

- an FSTD for full stall and stick pusher maneuvers;
- upset recognition and recovery maneuvers;
- maneuvers conducted in airborne icing conditions;
- takeoff and landing maneuvers in gusting crosswinds; and
- bounced landing recovery maneuvers; and
- Safety Management Systems for Domestic, Flag, and Supplemental Operations Certificate Holders (January 2015)

These new and improved technical standards are intended to fully define FSTD fidelity requirements for conducting new flight training tasks introduced through recent changes in the air carrier training requirements, as well as to address various NTSB and Aviation Rulemaking Committee (ARC)

recommendations. The proposal also updates the FSTD technical standards to better align with current international FSTD evaluation guidance and introduces a new FSTD level that expands the number of qualified flight training tasks in a "fixed-base" flight training device. The proposed changes would ensure that the training and testing environment is accurate and realistic, codifies existing practice, and provides greater harmonization with international guidance for simulation. In August 2014, the FAA also published new testing materials for the Pilot Certification and Qualification rule, which was made final in July 2013. These materials support the Airline Transport Pilot Certification Training Program, which incorporates an introduction to stall and upset prevention recovery concepts and procedures in large transport airplanes.

In January 2015, the FAA published the **Safety Management Systems for Domestic, Flag, and Supplemental Operations Certificate Holders,** required under P.L. 111- 216, sec. 215. This rule requires each certificate holder operating under Part 121 to develop and implement a Safety Management System (SMS) to improve the safety of its aviation-related activities. In advance of this regulatory requirement, commercial airlines are voluntarily implementing SMS. SMS gives operators a set of business processes and management tools to examine data from daily operations, isolate trends that may be precursors to incidents or accidents, and develop and carry out appropriate risk mitigation strategies. These systems are a formal approach to managing an organization's safety through four key components—safety policy, safety risk management, safety assurance, and safety promotion.

Aside from rulemaking, the FAA announced in November 2013 the establishment of a joint government and industry steering group—the Air Carrier Training Rulemaking Committee (ACT ARC)—composed of safety experts from the airlines, crewmember unions, government, and the aviation community. The purpose of the ACT ARC is to evaluate best practices from across the industry, review recommendations from previous FAA rulemaking advisory committees on training issues, and examine newly identified areas of risk in order to develop voluntary training guidelines for air carriers. Quarterly meetings of the ACT ARC began in April 2014. The ACT ARC provides a forum for the United States aviation community to discuss, prioritize, and provide recommendations to the FAA concerning operations conducted under Part 121 (commercial air carrier operations); Part 135 (commuter and on demand operations); and Part 142 (training centers). The group's work builds on FAA rules for commercial air carrier pilot training and qualifications.

With a result of 1.05 fatal accidents per 100,000 flight hours in FY 2014, 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 (June 2006–May 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.

Reducing GA fatalities is a top priority of the agency, as reducing fatal accidents in commercial aviation. Efforts have been intensified to reduce the GA fatal accident rate by using a primarily non-regulatory, proactive, and data-driven strategy to get results. The GA Joint Steering Committee (GAJSC)—a government and industry group—is using data to identify risk, pinpoint trends through root cause analysis, and develop safety strategies. Loss of control (LOC) accounts for most fatal GA

accidents. To date, the GAJSC has proposed 32 safety interventions to address LOC. This work has led to coordinated outreach campaigns to the GA community on LOC related topics.

The FAA Safety Team (FAASTeam) has been integral to this effort. Comprised of nearly 100 FAA employees and 2,500 trained volunteer representatives, the FAASTeam sponsors an average of 250 local safety seminars or webinars each month. On average, these events attract 26,000 airmen per month. The FAASTeam also engages airmen by sending them safety information via email. The FAASTeam sends an average of three three million email messages to airmen each month by means of the FAASTeam's website, www.FAASafety.gov.

The FAASTeam has dedicated 90 percent of FY 2014 and FY 2015 GAJSC Topics of the Month safety seminars to safety enhancements developed by the GAJSC Loss of Control Work Group. LOC has also figured prominently in the National FAASTeam Performance Plan (NPP) for the last four years. The FY 2015 NPP requires at least 12 LOC outreach events per FSDO –even more if events, based on data, point to local LOC issues. These grass-root initiatives target the GA community and cover topics of particular interest to these pilots, including LOC prevention.

FAA is moving toward using de-identified GA operations data in the Aviation Safety Information Analysis and Sharing (ASIAS) program to help identify risks before they become accidents. ASIAS enables users to perform integrated queries across multiple databases, search an extensive warehouse of safety data, and display pertinent elements in an array of useful formats. Data from these programs are also used for GAJSC initiatives and research conducted by the GA Center of Excellence.

Additionally, two new programs were developed in FY 2014 to enhance safety and reduce accidents, specifically in areas of weather hazards and data sharing. An online course, "Aviation Weather Data: A Targeted Approach," is now available on www.FAASafety.gov. It is designed to increase a GA pilot's ability to analyze weather situations in order to make smarter decisions. FAA also launched a safety campaign titled "Got Weather? #GotWx" to help GA pilots prepare for potential weather challenges they may encounter during the 2014 and 2015 flying seasons.

The safe and expeditious flow of air traffic at an airport is the product of a complex, disciplined interaction of people, aircraft, and vehicles, all supported by increasingly sophisticated processes, communications and control technologies, and regulatory oversight. Maintaining this safe flow of airport traffic defines the runway safety mission of the FAA.

In FY 2014, with a result of 0.309 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.

This year FAA completed the development of a stand-alone Airport Safety Database, which integrates data from internal FAA and other government organizations. The FAA's Office of Airports is using the data to investigate existing taxiway geometrics at hub airports and identify potential problematic taxiway designs, in order to help mitigate runway incursions.

Pipeline Safety (PHMSA)

Pipeline incidents with death or major injury (serious incidents) have declined an average of 10 percent every three years between 1988 and 2014. In 2014, PHMSA saw an estimated 29 incidents involving death or major injury projected, which is below the target of 39. While pipelines are by many measures the safest mode for transporting hazardous liquid and natural gas, the nature of their cargo 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. 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 hazardous liquid 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. 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. Additionally, PHMSA is working to socialize 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 industry-led Recommended Practices (RP) guidance document on SMS for the industry.

In 2015, 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 including field staff by 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 our engineers, scientists, educators, and other safety personnel can assist in expanding their understanding of underground damage prevention – 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.

PHMSA learns from past incidents while also using preventative practices to mitigate future risk and is 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.

Railroad Safety (FRA)

FRA's activities, and those of the rail industry, are reflected in the following positive statistics—the number of rail-related accidents and incidents declined by 16 percent between fiscal years

(FY) 2005 and 2014; train accidents dropped by 46 percent; casualties fell by 8 percent; and highway-rail grade crossing incidents decreased by 24 percent. In response to several high-profile accidents and incidents, FRA conducted two in-depth safety assessments—Metro-North and Metra—of the railroads' compliance with Federal regulations and their safety cultures.[1] Following the assessments, FRA made recommendations to the railroads that will improve their safety performance. Other major activities and accomplishments in FY 2014 include:

- Adding to the Confidential Close Call Reporting System (C^3RS) five short-line and passenger railroads and expanding Amtrak's participation to its mechanical and engineering crafts.
- Issuing a final rule requiring emergency notification systems at highway-rail grade crossings, so the public can promptly report safety issues.
- Issuing a final rule on rail integrity that will help identify rail flaws and further reduce the risk of track-caused derailments.
- Issuing final rules on passenger train emergency systems and preparedness, critical incident stress plans, and roadway worker protection.
- FRA began developing a rulemaking on train securement to help prevent accidents similar to the one in Lac-Mégantic, Quebec.

Transit Safety (FTA)

Preliminary numbers for 2014 are showing a transit related fatalities per 100 million passenger miles rate that is much lower than the target of .543.

Over the past year, FTA has made great strides in carrying out the new 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 along with 12 new safety employees.

FTA also embarked on substantial rulemaking and program guidance. The cornerstone is the National Public Transportation Safety Program which will define supporting rules such as the National Safety Plan, the Public Transportation Agencies Safety Plans, the Safety Certification Training Program, and the State Safety Oversight Program.

Finally, FTA has successfully aided 27 States in developing work plans to achieve MAP-21 safety compliance. FTA has also published a final apportionment notice making approximately $44 million in grants available to those States. This money will be used to facilitate development of their safety programs. MAP-21 requires that States ensure that their State Safety Oversight Agency (SSOA) meet a very high standard of safety professionalism, with independent funding and powers to investigate and enforce safety.

Information Gaps

[1] Safety culture refers to shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands.

Pipeline and Hazardous Materials Safety (PHMSA)

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 pipeline incidents with death or major injury 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 pipeline incidents with death or major injury lags by 30 days. Accident/incident reports for all pipeline incidents with death or major injury in 2014 would not be received until the end of January 2015.

The generic goal for public risk management is to manage risk to acceptable levels at acceptable costs. PHMSA has baseline data for the number of deaths, injuries and incidents, and the overall trend is downward, despite an increase in the number of hazardous material shipments. The relatively low number of annual deaths and injuries is testimony to the success of PHMSA mission effectiveness, particularly considering that the number of hazardous materials shipments have dramatically increased over the years.

The residual risk in the system is defined as the annual deaths and major injuries due to hazardous materials transportation. The goal is to manage residual risk to acceptable levels at acceptable costs, but current outcome measures look to incidents and losses without regard to system exposure or commodity flow. Additionally, these outcome measures focus on residual risk as opposed to managed system risk (i.e., risk mitigated as a result of PHMSA programs). PHMSA does not currently measure incidents, deaths, or injuries as rates relative to commodity flow and does not currently measure the program's impact on outcome goals. Risk managed might be measured as the degree of compliance with regulations, as an intermediate program outcome, so that improvements in compliance over the years can be used as a measure of how much risk has been taken out of the system. Similarly, a risk model could be used to estimate the impact of various PHMSA efforts on hazmat transportation system risk. Improved mission performance metrics in the form of incident rates and risk reduced outcomes would help to better define and communicate the program's impact.

PHMSA is pursuing a Risk Management Framework (RMF) and data visualization technologies that will utilize existing and new data sources to illuminate patterns and trends for consequential incidents, and identify potential areas of concern for PHMSA. By enhancing our understanding of the hazardous materials transportation system, the RMF will support better allocation of our limited resources to most effectively promote the safe transportation of hazardous materials in commerce. The results will be useful in prioritizing regulatory and policy evaluations; developing areas for further exploration with risk models; focusing training and outreach on high consequence events; and identifying safety and budgetary priorities.

PERFORMANCE PLAN

Roadway Safety (FHWA, NHTSA, FMCSA)

***Agency Priority Goal*: Reduce the Roadway Fatality Rate Per 100 Million VMT.**		
Indicator: Roadway Fatalities per 100 Million Vehicle Miles Traveled	2015	2016
Performance Target	1.02	1.02

Supporting Performance Goal: Reduce the Passenger Vehicle Occupant Fatality Rate Per 100 Million Passenger VMT

Indicator: Passenger Vehicle Occupant Fatalities per 100 Million Passenger Vehicle Miles Traveled	2015	2016
Performance Target	0.82	0.82

Supporting Performance Goal: Reduce the Non-Occupant (pedestrian and bicycle) Fatality Rate Per 100 Million VMT.

Indicator: Non-Occupant (pedestrian and bicycle) Fatalities per 100 million VMT.	2015	2016
Performance Target	0.15	TBD*
*This indicator will change in FY 2016 to fatalities per 100,000 population.		

Supporting Performance Goal: Reduce the Large Truck and Bus Fatality Rate Per 100 Million total VMT – OLD

Indicator: Large Truck and Bus Fatalities per 100 Million total VMT.	2015	2016
Performance Target	0.114	NA

Supporting Performance Goal: Reduce the Large Truck and Bus Fatality Rate Per 100,000 Population – NEW

Indicator: Large Truck and Bus Fatalities per 100,000 Population	2015	2016
Performance Target	0.114	0.114

Supporting Performance Goal: Reduce Motorcycle Rider Fatalities per 100,000 Motorcycle Registrations.

Indicator: Motorcycle Rider Fatalities per 100,000 Motorcycle Registrations.	2015	2016
Performance Target	62	62

Aviation Safety (FAA)

***Agency 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.**		
Indicator: Number of US commercial aviation air carrier fatalities per 100 million persons on board.	2015	2016
Performance Target	6.9	6.7
***Agency Priority Goal:* Reduce the general aviation fatal accident rate per 100,000 flight hours to no more than 1 in FY 2018.**		
Indicator: Number of general aviation fatalities per 100,000 flight hours.	2015	2016
Performance Target	1.04	1.02
Agency 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.		
Indicator: Category A&B runway incursions per million operations (takeoffs and landings).	2015	2016
Performance Target	0.395	0.395

Pipeline and Hazardous Materials Safety (PHMSA)

Performance Goal: Reduce natural gas and hazardous materials pipeline incidents involving death or major injury.

Indicator: Pipeline incidents involving death or major injury per year.	2015	2016
Performance Target	26-36	24-33

Performance Goal: Reduce natural gas and hazardous materials pipeline incidents involving death or major injury.

Indicator: Hazardous materials incidents involving death or major injury	2015	2016
Performance Target	20-31	20-31

Transit Safety (FTA)

Agency Priority Goal: Reduce transit fatalities to 0.5 per 100 million passenger miles traveled by FY 2016.

Indicator: Transit fatalities per 100 million passenger miles traveled.*	2015	2016
Performance Target	0.52	0.51
*Does not include commuter rail, which is under the authority of FRA.		

Railroad Safety (FRA)

Performance Goal: Reduce rail-related accidents and incidents.

Performance Measure: Rail-related accidents and incidents per million train-miles.	2015	2016
Target	15.90	15.89

Roadway Safety (FHWA, FMCSA, NHTSA)

Overview

The safety of our Nation's transportation system is a top priority of the Department of Transportation (DOT). Within DOT, the Federal Highway Administration (FHWA), the Federal Motor Carrier Safety Administration (FMCSA), and the National Highway Traffic Safety Administration (NHTSA) work together to address multiple dimensions of roadway safety, which represents 94 percent of all transportation-related fatalities in the U.S. Taken together, the roles of each Operating Administration (OA) address all 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; and
- NHTSA provides cost-effective behavioral safety campaigns and programs, advanced vehicle safety research, and development and enforcement of vehicle safety standards

These OAs support outreach, education, enforcement, and demonstration programs aimed at the public and specific transportation industries to reduce roadway crashes, injuries, and fatalities. 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 13 years of the 21st century, more than 540,000 people died and over 36 million were injured on the nation's roadways. Roadway crashes are the leading cause of death for Americans age 4 and 11

through 27 (based on 2009 mortality data from the CDC). DOT's goal is to reduce roadway fatalities by the end of calendar year (CY) 2016 to 1.02 per 100 million vehicle miles traveled. The total economic loss and societal harm financial burden of highway crashes is $871 billion per year, according to NHTSA estimates, which is a sign of the economic magnitude of highway crashes. Only the Federal government has the authority to establish national safety standards for vehicles, regulate motor carriers, and mandate roadway safety features. A coordinated and comprehensive approach is needed to address roadway safety challenges and issues.

Strategies

Distracted Driving: With the use of smart phones, navigation systems, and other mobile devices growing rapidly, distracted driving is now a serious safety issue. Distracted driving contributed to 3,328 fatalities in 2012, or 10 percent of all traffic fatalities during that year. The DOT Blueprint for Ending Distracted Driving is a comprehensive strategy to address the dangerous practice of using handheld cell phones behind the wheel. The plan outlines concrete steps that stakeholders around the country – from lawmakers and safety organizations to families and younger drivers – can take to reduce the risk posed by distracted driving. It also highlights the risk of drivers under the age of 25, who are two to three times more likely than older drivers to send text messages or emails while driving. MAP-21 includes authorization for a new distracted driving grant program to encourage States to enact and enforce laws banning texting by drivers.

Motorcyclists: There were 4,688 motorcycle fatalities in 2013, a 6.4 percent decrease over 2012. Since the late 1990s, the number of registered motorcyclists has doubled. As a result, DOT is seeing an increase in motorcycle crash fatalities, which has partially offset an overall reduction in highway fatalities. During the same time period, three States (FL, PA, and MI) repealed universal helmet laws. In 2011, only 60 percent of motorcyclists nationwide wore motorcycle helmets, an 11 percent decline from 2000 when 71 percent wore helmets. There were 11 times as many unhelmeted motorcyclist fatalities (1,704) in States without universal motorcycle helmet laws as in States with universal helmet laws (150) in 2013. The Department strongly supports and encourages all riders to wear DOT-certified motorcycle helmets on every trip. DOT is also working to increase awareness of motorcycle safety risks and identify best practices to improve the safety of motorcycle riding. In order to accomplish this, DOT needs to identify factors that contribute to motorcycle crashes and identify strategies for reducing crash frequency and severity.

Commercial Motor Vehicles: In 2012, commercial motor vehicles (CMV), or large trucks and buses, represented over 4 percent of all registered vehicles and 9 percent of total Vehicle Miles Traveled (VMT) on the Nation's roadways. In 2012, over 12 percent (or 4,183) of all motor vehicle fatalities in the U.S. involved crashes with CMVs. The fatality rate declined from 0.205 to 0.141 fatalities per hundred million VMT between 2000 and 2012. There was a small (0.5%) increase in the number of people killed in crashes involving large trucks in 2013. A total of 3,964 people were killed in large truck crashes in 2013 compared to 3,944 in 2012. Sixty-two percent of large-truck occupants killed in 2013 died in single-vehicle crashes. An estimated 314 people died in bus crashes in 2013 compared to 280 fatalities in 2012. Note that the number of fatal crashes involving large trucks and buses is relatively small compared to those involving other vehicles, so even small changes in the numbers of fatalities may result in large percentage changes.

Some portion of the overall improvement (since 2000) is a result of the steady implementation of the FMCSA Compliance, Safety, Accountability enforcement model, which is modernizing the effectiveness

and efficiency of motor carrier enforcement activities through early contact with a greater number of motor carriers. Targeted enforcement interventions, increased oversight of Commercial Driver's License programs, safety audits, and inspections of motor carriers and operators have contributed to reducing the fatality rate. The primary challenge in continuing to improve truck and bus safety is to make certain that a safety culture exists across the industry.

Pedestrians and Bicyclists: While the Nation has achieved many safety gains through traditional roadway safety design practices, there are too many roadways, especially in highly populated areas, that inconsistently provide adequate safety for pedestrians and bicyclists. The ten-year trend in pedestrian and bicycle fatalities is consistent with the downward trend in overall fatalities. Considered individually, pedestrian fatalities decreased slightly in 2013 1.7 percent while bicycle fatalities increased by 1.2 percent. Roadway designs that accommodate all users, referred to as complete streets, help to reduce fatalities and injuries. These roadway designs include features such as sidewalks, raised medians, turning access controls, better bus stop placement, better lighting, traffic calming measures, accessible sidewalks, curb cuts, accessible devices for individuals with sensory and cognitive disabilities, and other advances for travelers with disabilities. A safety review found that designing streets with these users in mind improves pedestrian, bicyclist, and motorist safety. Instituting policies that accommodate all roadway users ensures that every transportation project becomes a comprehensive safety project. These policies have the added benefit of making walking and biking more attractive options and of enhancing the aesthetic quality and commercial activity on local streets.

In addition, the Secretary's new pedestrian and bicycle initiative promotes design improvements to ensure safe and efficient routes for pedestrians and bicycles, promote behavioral safety, and provide education to help individuals make safer travel choices. The initiative will also encourage vehicle safety by drawing on current crash avoidance technologies to alert motorists to the presence of bicycles and pedestrians.

Agency Priority Goal: ***Reduce roadway fatalities by the end of calendar year 2016 to 1.02 per 100 Million Vehicle Miles Traveled (VMT).***

Overview

Over the past 10 years, there has been a reduction of nearly 25 percent in the number of fatalities on the Nation's roadways. While there was an uptick in motor vehicle crashes and fatalities in 2012, fatalities in 2013 decreased back down near to the historic low level achieved in 2011. The nation lost 32,719 people in crashes on roadways during 2013, compared to 33,782 in 2012.

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 negatively impact the upkeep of 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.

Distracted driving has emerged as a new threat over the past few years as the rise of portable electronic devices has swiftly expanded. Moreover, as in-vehicle electronic systems become

ever more sophisticated and complex, distracted driving could become an even greater threat if it is not addressed in a manner keeping pace with technological advancements.

Also, as the economy continues to gain momentum, more recreational travel and driving may result in higher crash rates. Finally, the repeal of proven life-saving traffic safety laws at the State level, such as universal motorcycle helmet or primary seat belt laws could also result in higher injuries and fatalities. Nevertheless, significant opportunities remain for continued progress in reducing roadway fatalities. The Department will seek new and innovative ways to serve the American people and keep our roadways safe.

Addressing the challenges of roadway safety requires the collective efforts of many people and organizations working together to significantly reduce crashes, fatalities, and serious injuries on our roadways. DOT works closely with partners at the Federal, State, tribal and local levels to address every facet of transportation safety. The Department provides guidance and technical assistance to State, tribal, and local governments, and Metropolitan Planning Organizations (MPOs) to help in the development of comprehensive safety programs and implementation of infrastructure countermeasures. DOT also develops effective countermeasures and enforcement programs to promote safe roads and safe driving behaviors for passenger and commercial vehicle drivers. Safety partner groups play an important role in disseminating and implementing training and educational efforts. DOT also works with partners in the private sector on the development of safer vehicles and roads and on improved business practices for commercial operators.

Key Strategies

NHTSA, FHWA, and FMCSA are working together to reduce roadway fatalities by the end of CY 2016 to 1.02 fatalities per 100 million vehicle-miles traveled (VMT), down from the 2005 rate of 1.46 fatalities per 100 million VMT.

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 2016 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 implementation of the Critical Immediate Safety Investments Program (CISIP) will make critical and immediate improvements to infrastructure condition and highway safety. This is part of the President's Fix It First initiative. CISIP will achieve its goals through three initiatives—the Interstate Bridge Revitalization Initiative, which will address structurally deficient bridges on the Interstate System; the Systematic Safety Initiative, which will address safety on non-State and rural roads; and the State of Good Repair Initiative, which will address bridge and pavement improvements and preservation on the National Highway System.

NHTSA:

NHTSA promotes safer automobile designs, roadway design and driver behaviors through partnerships with Federal agencies, States, localities, and Tribal governments. These include the following efforts:

- NHTSA has developed an ambitious vehicle research plan to further promote advances in crash avoidance technology, along with ongoing research on vehicle-to-vehicle (VSV) communication systems. The potential of these new safety systems, such as advanced braking or lane departure warning systems, along with V2V, could potentially prevent or reduce the severity of up to 80 percent of crashes involving non-impaired drivers.
- To provide consumers with the latest information on vehicle safety and new advanced avoidance technology, NHTSA also crash tests up to 89 percent of new vehicle models each year through its 5-Star Rating program.
- NHTSA also continues to implement the DOT Blueprint for Ending Distracted Driving and conduct vehicle and behavioral safety research on reducing distracted driving.
- NHTSA also continues to utilize proven high visibility enforcement (HVE) strategies to encourage people to buckle up. When combined with effective State seat belt laws, this approach has proven to be effective at changing motorist behavior. In fact, seat belt use in 2013 remained at a record high level of 87 percent nationally. NHTSA also conducts national HVE campaigns to reduce impaired and distracted driving.
- NHTSA provides funding, guidance and technical assistance to States to implement their Highway Safety Plans.
- To improve traffic safety data, NHTSA is continuing its Data Modernization. This ensures that regulatory and safety program decisions continue to be based on sound data.
- NHTSA is also promoting data-driven approaches to roadway safety problem identification, program implementation, and evaluation. This includes some targeted delivery of technical assistance and resources to eligible high priority States to address their most critical safety challenges.
- NHTSA also provides national leadership to promote and develop effective emergency medical services and Next Generation 911 systems which will improve post-crash care and survival rates.

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 (SHSP) and implement and improve the safety of roadway infrastructure on all public roads. FHWA continues to oversee the Highway Safety Improvement Program (HSIP), a core Federal-aid program under MAP-21. 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, strategic approach that focuses on performance. This includes the following efforts:

- FHWA provides technical assistance and expertise to research, design, and implement roadway infrastructure countermeasures and improvements; and to modernize highway geometric features and safety hardware as part of road and bridge construction, reconstruction, replacement, restoration, rehabilitation, and system preservation projects.

- FHWA manages the Focused Approach to Safety in order to better address the most critical safety challenges using infrastructure-oriented improvements, specifically for roadway departure, intersection-related, and pedestrian crashes. FHWA will work to implement the new regulatory requirements on safety performance management and the updated requirements for the HSIP. These regulations, in conjunction with NHTSA performance management requirements, will emphasize a data driven performance based approach to improving highway safety, provide transparency and accountability for highway safety investment decisions and assist states in improving roadway and safety data.
- FHWA will implement the Systemic Safety Initiative (SSI), which is part of the Critical Immediate Safety Investments Program (CISIP), to provide funding for States to use data-driven decision making and proactively apply systemic safety approaches on non-State owned roads. The systemic approach to safety targets locations with high-risk roadway features that are correlated with specific severe crash types. Systemic safety improvements are then proactively and widely deployed across a system to address those roadway features.

FMCSA:

FMCSA regulates all registered commercial motor vehicles (CMVs) that operate interstate or that carry hazardous materials (HM). As of December 2013, there were 539,033 interstate motor carriers and intrastate HM motor carriers with recent activity operating in the United States.

FMCSA regulates all drivers involved in interstate commerce or intrastate transportation of HM, as well as all Commercial Driver's License (CDL) drivers both interstate and intrastate. Approximately 5.6 million CMV drivers operate in the United States.

Over the past 10 years, total miles traveled by all vehicles grew 4%. Large truck- and bus-related mileage grew 30% from 2002-2012. Over this period, registrations for large trucks and intercity buses increased 27%. Despite this growth in commercial vehicles and traffic, there was a 24% reduction in fatalities in crashes involving large trucks and intercity buses, from 5,539 in 2005 to 4,183 in 2012.

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 CSA initiative. CSA will enhance the efficiency and effectiveness of enforcement activities through early contact with a greater number of motor carriers.

Other efforts include:

- Better oversight of licensing for young drivers and commercial operators.
- Upgrading the capacity of emergency response systems to utilize new forms of electronic communication.
- Research into new vehicle crash avoidance and vehicle-to-vehicle technology is equally important, and offers tremendous promise. This technology could potentially prevent or reduce the severity of up to 80 percent of crashes involving non-impaired drivers.

- New Motor Carrier Applicant Screening, part of the enhanced New Entrant Safety Assurance Process
- Improved information technology used to identify high-risk carriers
- Implementation of the final phase of the Compliance, Safety, and Accountability (CSA) enforcement model, Phase 3.
- Providing safety grant funding opportunities to State and local government agencies.

Scientific Basis for Strategies

DOT conducts extensive research, development, testing, crash investigation, and data collection and analysis to provide the scientific strength needed to support motor vehicle and traffic safety goals, and rulemaking initiatives. NHTSA's Office of Research and Program Development, http://www.nhtsa.gov/Driving+Safety/Research+&+Evaluation, seeks to identify and measure behaviors involved in crashes, and develop and refine countermeasures to deter unsafe behaviors and promote safe alternatives. Key areas of focus include: occupant protection, impaired driving, distracted driving, motorcycle safety, pedestrian and bicycle safety, older drivers, and teen drivers. *A Compendium of Traffic Safety Research Projects 1985-2013* (DOT HS 811 847) provides an overview and brief summary of its research reports dating back to 1985. NHTSA's *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, Seventh Edition* 2013 (DOT HS 811 727), is a compendium of evidence-based strategies for its State partners to provide guidance for developing effective traffic safety programs. NHTSA also has an extensive vehicle safety research program at http://www.nhtsa.gov/Research that serves as the foundation for all of its rulemaking and vehicle-related initiatives.

FHWA promotes a data- and performance-driven, evidence-based strategic approach to researching effective infrastructure-related safety investments. FHWA's Crash Modification Factors (CMF) Clearinghouse, http://www.cmfclearinghouse.org, is a web-based database of crash modification factors along with supporting documentation. Transportation engineers use the CMF Clearinghouse to identify the most appropriate countermeasure for their safety needs. FHWA also supports implementation of the *Highway Safety Manual*, which provides information and tools to facilitate roadway planning, design, operations, and maintenance decisions based on precise consideration of their safety consequences. Further, FHWA has developed a *Corporate Master Plan for Research and Development of Technology and Innovation Plan* (FHWA-RD-03-77). The Plan provides a blueprint to continue to improve the effectiveness and efficiency of research and technology, including implementing technologies and innovations that improve the quality, cost-effectiveness, and timeliness of products, procedures, processes, and practices.

FMCSA publishes quarterly the Motor Carrier Safety Progress Report (Motor Carrier Safety Progress Reports | Federal Motor Carrier Safety Administration) that includes enforcement outputs such as warning letters, CSA interventions, Hazardous Materials Reviews, Household Goods Reviews, Passenger Carrier and Motorcoach Reviews, Cooperative Safety Plans, Notice of Claims, Notice of Violations, Unsat/Unfit Out-of-Service orders, Imminent Hazard Out-of-Service Orders, New Entrant Audits and their Pass Rate and Hazardous Materials Package Inspections.

Next Steps

- Establishment of safety performance measures in each State for the following: number of fatalities and serious injuries and rate of fatalities and serious injuries per vehicle miles traveled.
- Improved targeting and an increase in the number of proven countermeasures States implement in the Highway Safety Improvement Program (HSIP).
- Improved coordination of departmental programs in the implementation of state Strategic Highway Safety Plans (SHSP).
- 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 HSIP reports.
- Support the Secretary's Safety Initiative by developing resources and providing technical assistance to address pedestrian and bicyclist safety.
- Promote EDC-3 Data-Driven Safety Analysis tools and resources to State and local agencies.
- More technical resources, guidelines and training will be available for State and local organizations seeking to develop or expand highway safety programs and initiatives. Groups such as State Highway Safety Offices, law enforcement agencies, child safety advocacy groups, school and youth groups, and drunk driving prevention organizations are most likely to utilize the resources.
- A modernized and more robust crash data collection system that will enhance all aspects of motor vehicle and roadway safety research, program development and education.
- NHTSA will crash test 89 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.
- Three national high-visibility enforcement campaigns in FY 2016 will engage approximately 10,000 State and local law enforcement agencies to promote seat belt use, and deter impaired or distracted driving.
- Publish the Final Rule on Electronic Logging Devices (ELDs).
- Complete implementation of the Unified Registration System (URS).
- Implement Compliance, Safety and Accountability (CSA) Phase 3.

Goal Leaders:

Greg Nadeau, Acting Administrator, FHWA
T.F. Scott Carling, III, Acting Administrator, FMCSA
Mark R. Rosekind, Ph.D., Administrator, NHTSA

Aviation Safety (FAA)

The 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's have ever had before. This provides an opportunity to be

more proactive about safety and use SMS principles to make smarter, risk-based decisions. FAA constantly need to raise the bar on safety, and this approach will help do that.

The FAA focuses on three areas of aviation safety: Commercial Aviation, General Aviation and Runway Safety.

Commercial Aviation Safety: In 2013, there were over 795 million persons on board United States domestic commercial passenger air carriers. (www.ntsb.gov/data/aviation_stats.html, preliminary statistics). Preliminary statistics indicate there were no fatalities.

The FAA continually works with aviation industry stakeholders to establish SMS within their operations. With these systems in place, the FAA and the aviation industry will work together to address risks. The Commercial Aviation Safety Team (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 developed 96 safety mitigations which will be voluntarily adopted by its community, the last 14 of which have been based on non-accident data, demonstrating its progress from reactive safety enhancements to proactive risk mitigation.

Additionally, FAA has undertaken several prominent rulemaking projects to address risks identified during the investigation of the fatal Colgan Air accident in 2009. These include Pilot Certification and Qualification Requirements for Air Carrier Operations (July 2013) and Qualification, Service and Use of Crewmembers and Aircraft Dispatchers (November 2013). FAA also revised requirements for air ambulance operations (February, 2014) and more recently, published a final rule requiring Part 121 air carriers to implement a Safety Management System by March 2018

General Aviation Safety: In 2013, there were 387 fatalities (www.ntsb.gov/data/aviation_stats.html, preliminary statistics). The FAA works with industry to help reduce the GA accident rate. The General Aviation Joint Steering Committee (GAJSC) continues to take a data-driven approach to understand fatal accident causes and contributing factors. This government-industry group meets to review GA accident trends, establish areas for special emphasis, and share information. As of FY 2014, fhe GAJSC has developed 29 safety interventions to address the number one cause of fatal accidents, which is loss of control.

Our Flight Standards organization is spearheading several initiatives to decrease the rate at which general aviation fatal accidents are occurring. One initiative focuses on our efforts related to GA outreach and education.

The FAASTeam is an integral part of providing this GA outreach and education. The FAASTeam's goal is twofold: to improve upon the nNation's aviation accident rate by conveying safety principles and practices through training, outreach, and education, and to ; while establishing partnerships and encourageing the continual growth of a positive safety culture within the aviation community. As previously mentionedmentioned the FAASTeam conducts safety seminars throughout the country and promotes on-line aviation courses on the

FAASafety.gov website. This website also provides the foundation for both the WINGS (pilot proficiency program) and the Aviation Maintenance Technicians (AMT) Awards program,

To support these safety initiatives a major overhaul, equipment upgrade, and transition of the FAAsafety.gov website will occur over the next few years. The website, and all its safety outreach features, will transition from contractor development and maintenance to FAA development, oversight, and ongoing maintenance.

Another GA initiative involves addressing the operating limitations for amateur-built aircraft to include support and training of not only the builder of an amateur-built aircraft, but transition-training requirements for second owners since that is where data reveals a disproportionate number of accidents occur.

FAA Aircraft Certification Service has streamlined the approval of angle of attack indicators for general aviation aircraft that provide a pilot with a visual aid to prevent the LOC of the aircraft in critical phases of flight. Previously, because of cost and complexity, these indicators were primarily limited to military and transport aircraft. The Aircraft Certification Service is also working with Flight Standards to streamline the retrofit of the existing GA fleet with this indicator.

Runway Safety: The FAA's top priority is maintaining safety in the National Airspace System (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.
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 Safety Management System (SMS).

Agency Priority Goals:

Reduce US commercial aviation air carrier fatalities by 50 percent over an 18-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.

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

Overview

Aviation fatality rates are at historic lows and continue to drop over time. However, FAA recognizes the need to continue addressing precursors to accidents in order to continue to improve the current level of safety in the national airspace.

In the past, the 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 measure. FAA is developing alternate methods to identify and address emerging safety risks and accident precursors to reduce the likelihood of such events. The ASIAS initiative is one of the key programs maintained by the FAA, and frequently partners with 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 the FAA and industry can leverage voluntarily provided safety data from operators that represent 96percent 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 NAS. CAST leverages data from ASIAS to understand the underlying contributing factors and develop mitigation strategies.

Strategies

Safety Management System: The FAA SMS integrates the management of safety risk into business planning, operations, and decision making. The overarching goal of the SMS is to improve safety by helping to ensure that the outcomes of any management or system activity incorporate safety considerations. The FAA SMS builds on existing processes, procedures, and tools and introduces new capabilities as necessary to meet the requirements in FAA Order 8000.369A, Safety Management System. It also meets most of the tenets of both the International Civil Aviation Organization (ICAO) State Safety Program (SSP) and SMS frameworks.

An SMS is a standardized approach to managing safety that incorporates organizational structures, accountabilities, policies, and procedures. An SMS establishes a formalized, safety risk-based approach to the management of an organization, whereby every process, decision, activity, acquisition, procedural change, or program modification is examined from a safety risk perspective in order to ensure that all of the potential associated hazards are uncovered, examined, and mitigated.

An SMS is composed of four components—Safety Policy, Safety Risk Management, Safety Assurance, and Safety Promotion—that enable better informed decisions from a safety perspective.

Adoption of SMS as a standard for managing safety activities is present throughout the aviation community. ICAO recognizes it as well as the FAA's NextGen Office (ANG) and Air Traffic Organization (ATO), and other Civil Aviation Authorities (CAAs), Air Navigation Service

Providers (ANSPs), and product/service providers as the next step in the evolution of air transportation safety.

Safety is the FAA's top priority. The FAA will not only maintain safety as the aerospace system evolves, but actually increase it by transforming the way it assures safety through the FAA 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 the 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 these challenges by developing and implementing an SMS. Thus, the Risk Based Decision Making (RBDM) initiative flows from SMS principles by proactively addressing emerging safety risks using consistent, data-informed approaches to support system-level, risk-based decisions.

The RBDM initiative will enable the FAA to make smarter, risk-based decisions to improve safety in the aviation 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 decision makers—those people who are in the best position to manage the safety risk and make the aviation system even safer.

In order to do this, the RBDM initiative will establish data taxonomies that will 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 cross-cutting hazards and predict the risk associated with those hazards. 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 in a measured and coordinated manner focused on reducing safety risk. The FAA will continue to regulate, but will be much more efficient and effective by targeting our resources to those areas of greatest safety risk. Current FAA processes and systems have created a safe and efficient aviation system. Using safety management principles, the FAA will make smarter, risk-based decisions both throughout the agency and with industry and global stakeholders. This will result in reduced risk in the system, making the National Airspace System (NAS) even safer than it is today.

Next Steps: In FY 2014 and through FY 2015, RBDM activities focused on: alignment of modeling assumptions in systems that simulate and predict NAS safety risks; development of functional requirements and competencies for the safety data and risk analytics workforce and identification of current personnel with relevant skills; and the development and implementation of processes to identify and mitigate the safety risk of cross-organizational issues that are found

to exist as a result of incidents in the system. The primary focus for FY 2016 will be on: establishing common data taxonomies to be used consistently across the FAA, with industry, and internationally; obtaining greater access to sources of data both internally and external to the FAA; and developing and implementing processes to identify safety hazards of planned changes in the aerospace system.

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. The Next Generation Air Transportation System (NextGen) is a comprehensive overhaul of our National Airspace System 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 (ADS-B), moves air traffic control from ground-based radar surveillance to a point-to-point broadcast surveillance.

Runway Safety Focus Airports: The FAA, using risk-based decision-making principals, is drawing on safety data to identify "Runway Safety Focus Airports" where the Agency can pursue runway safety improvements. In FY 2014, the FAA established the Runway Safety Focus Airport Program to address hazards specific to individual airports. This focuses attention based on risk indicators such as runway incursions and excursions, plus potential or latent risk indicators such as airport design, management and operational changes. Using this methodology, the FAA's Runway Safety Group is assessing and improving policy, guidance, engagement, and training strategies to address risk at the focus airports. Each Runway Safety Focus Airport receives a comprehensive Runway Safety Action Plan (RSAP) to address risk at that location. Specific improvements are implemented at the airport and then monitored. The FAA is also using airport grants to target areas of risk based on airport geometry. Funding to change runways and taxiways to meet national design standards and reduce confusing intersections reduces risk at these hot spots.

Goal Leaders:

Michael P. Huerta, Administrator, Federal Aviation Administration
Margaret Gilligan, Associate Administrator for Aviation Safety, Federal Aviation Administration
Teri Bristol, Chief Operating Officer Air Traffic Organization, Federal Aviation Administration

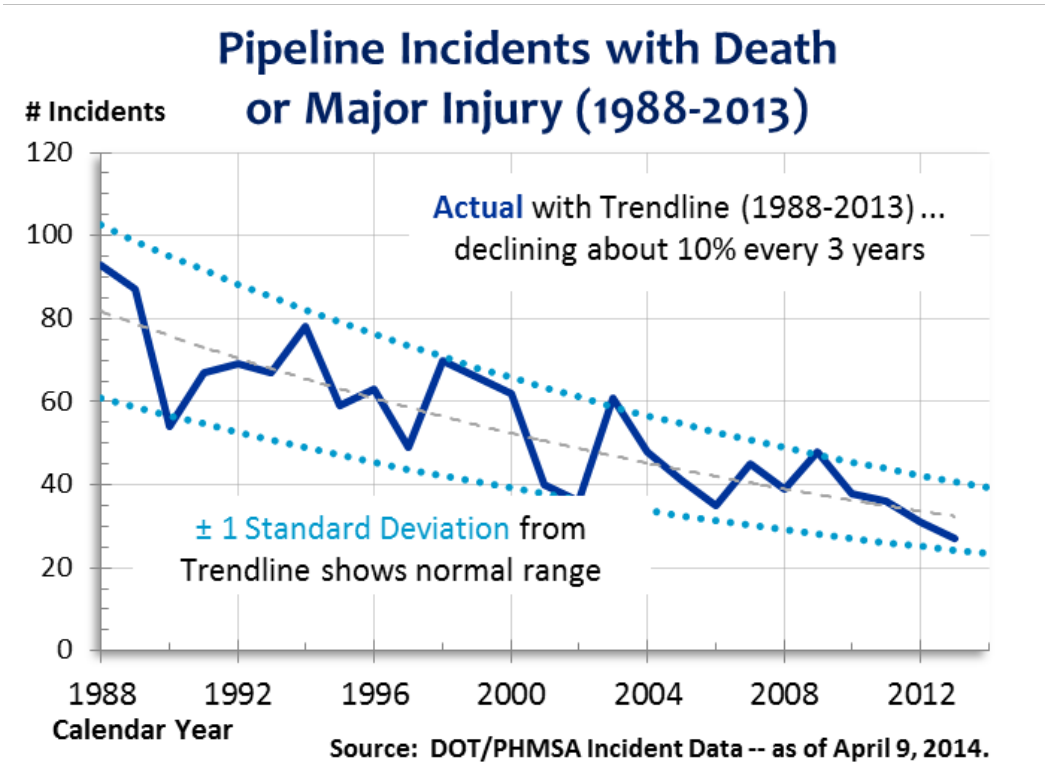
Pipeline Safety (PHMSA)

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 2.6 million miles of pipelines. While pipelines are 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 2013. At the same time, most measures of risk exposure—U.S. population, energy consumption, 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 households and businesses (about 66 million). 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:

- 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.

Strategies and Next Steps

Aging/obsolete pipeline infrastructure: Over 800,000 miles of pipelines were installed before 1970. Many 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 are 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 forces damage that compromise pipeline integrity remain one of the leading causes of incidents resulting in death or major injury. Our strategy for dealing with this challenge 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.

Responsible Officials:

Jeff Wiese, Associate Administrator for Pipeline Safety (PHMSA)

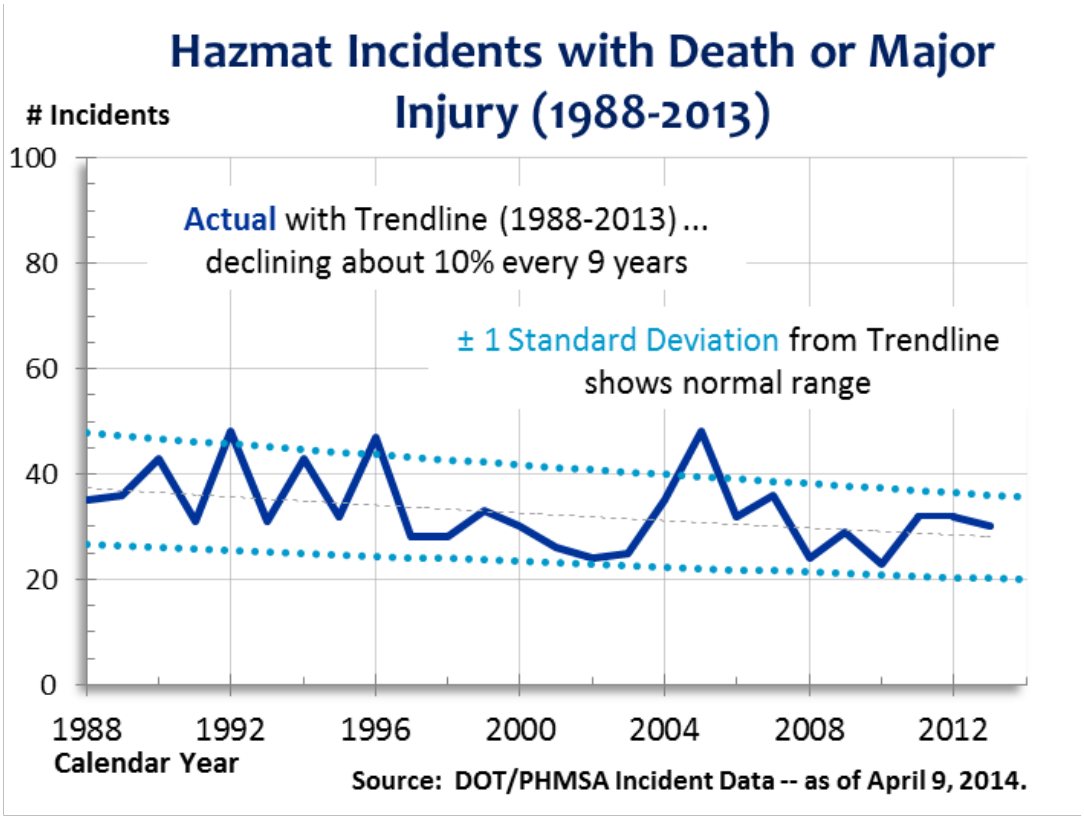
Hazardous Materials Safety (PHMSA)

Overview

On a typical day, more than 6 million tons of hazardous materials (hazmat), valued at about $4 billion, are moved nearly 900 million miles on the nation's interconnected transportation network. Petroleum products are used to heat and cool homes and businesses, produce electricity, transport virtually all commercial products, travel to work or recreation, and provide raw materials for many products such as plastics, fibers and paints. A variety of chemicals are used to purify water, fertilize crops, create medicines, and manufacture clothing. While these chemicals and energy products are essential to Americans' quality of life, they also introduce some inherent risk to the public, the environment, and property when transported.

Most of the incidents with death or major injury occur on highways, and most of these incidents involve crashes or rollovers of tank trucks. There is also a risk of low-probability high-consequence events in rail (especially with materials that are toxic-by-inhalation) and in aviation

(especially with materials that present a fire risk aboard aircraft). DOT is focused on protecting people and the environment from these risks in commercial transportation of hazardous materials.



Strategies and Next Steps

The Department is focused on protecting people and the environment from these risks in transportation of hazardous materials in commerce. PHMSA's strategic plan identifies many of the challenges the agency faces that require accurate and sufficient incident data to develop and adapt strategies to overcome. These include:

1. *Expansion of Existing hazmat programs to address Safe transportation of energy products*. The emergence of the United States as a leading energy producer has undoubtedly changed our transportation system and provided 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 (i.e. Casselton, ND; Aliceville, AL; and Lac-Mégantic, Quebec). To lessen the frequency and consequences of train incidents PHMSA plans the following activities:

    - Regulatory. PHMSA will revise the general requirements for offerors to ensure proper classification and characterization of mined gases and liquids.

- Outreach. PHMSA will conduct outreach to emergency response communities and rail road industry in an effort to ensure preparedness and proper response to incidents involving bulk shipments of energy products by rail. The intent of this outreach effort is to deliver best practices, lessons learned, and accessible training resources for responding to incidents involving high hazard flammable liquids such as crude oil and ethanol.

- Enforcement. The U.S. energy sector is expected to grow substantially over the next decade which will continue to reshape the economy due to large scale increases in oil and gas production across many parts of the country. The shale play drilling industry alone depends on a combination of radioactive, corrosive, toxic, flammable, and explosive materials in order to survey and fracture the rock before the oil or gas can start flowing. All these materials are regulated for transport by the PHMSA

- Hazardous Material Regulations (HMR). There is expected to be tremendous growth of these support industries to keep pace with the boom in the oil and gas industries. These support industries require a high level of oversight since they are in the business of transporting, packaging and warehousing regulated hazardous materials. The oversight/enforcement role falls squarely on PHMSA investigators to perform. PHMSA will acquire additional inspection staff to ensure the safety of transporting these energy products but also to provide oversight of all the supporting industries to measure compliance with the HMR.

Responsible Officials:

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

Transit Safety (FTA)

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 2011 when fatalities totaled between 220 and 230. The Federal Transit Administration (FTA) is committed to pursuing a flexible safety management system (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.

Key Strategies:

FTA is working diligently to stand up the National Public Transportation Safety Program under the Moving Ahead for Progress in the 21 Century Act (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 safety management systems.

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 a Safety Management System pilot program for transit agency implementation.

Responsible Officials:

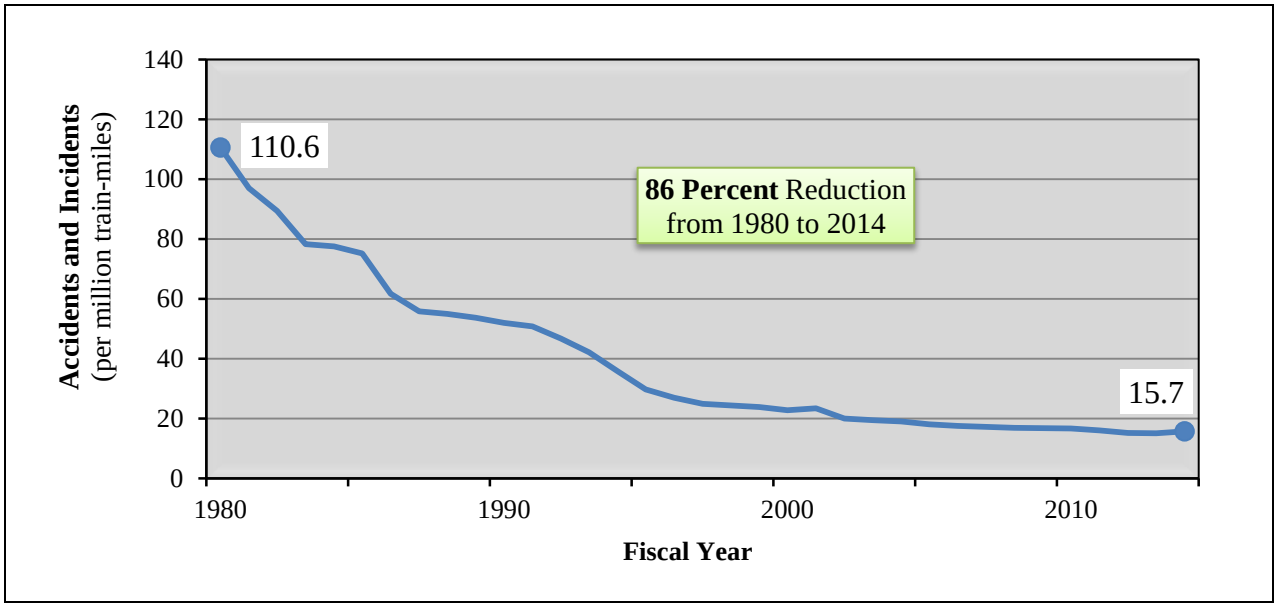
Thomas Littleton, AA, Office of Safety, Federal Transit Administration

Railroad Safety (FRA)

To enable safe rail operations and infrastructure, the Federal Railroad Administration (FRA) develops and enforces safety regulations, administers selective investments in passenger and freight rail services and infrastructure, and conducts research and technology development. FRA's activities, and those of the rail industry, have resulted in one of the safest decades ever—the number of rail-related accidents and incidents declined by 23 percent since fiscal year (FY) 2004; train accidents dropped by 46 percent; casualties fell by 8 percent; and highway-rail grade crossing incidents decreased by 24 percent. Nevertheless, rail-related incidents contributed to 790 deaths and 8,692 injuries in FY 2014. To make further gains, FRA is focused on continuous safety improvement, which requires a comprehensive three-pillar strategy consisting of:

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

Number of Train Accidents and Incidents, Fiscal Years 1980 to 2014
(per million train-miles)



Source: FRA data.

Strategies and Next Steps

While maintaining ongoing safety programs, FRA is targeting three pressing rail safety issues:

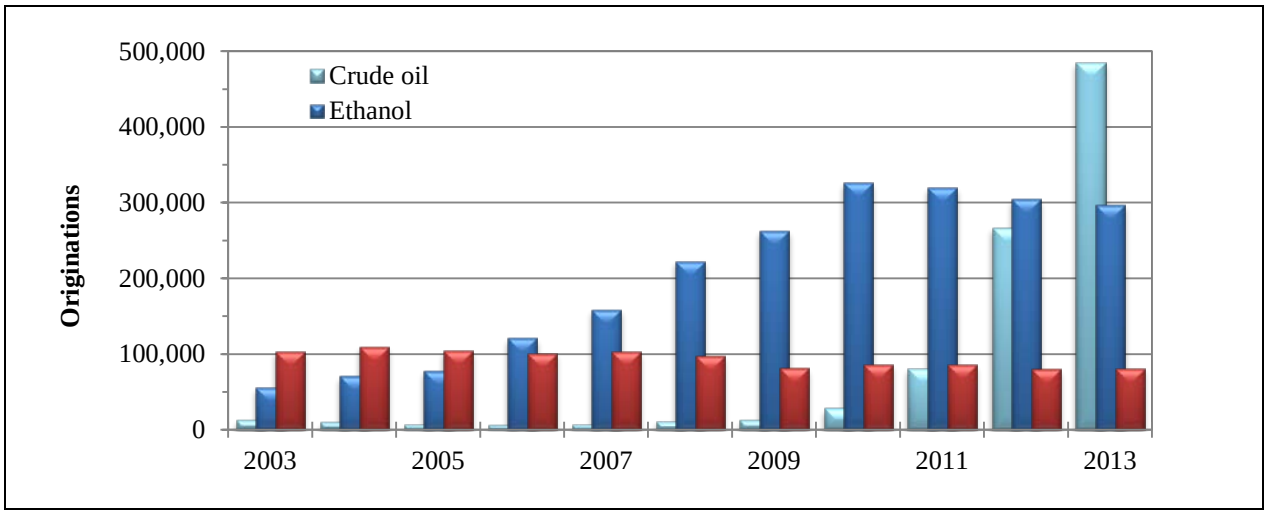
- Increasing movement of crude oil and other energy products, including ethanol and liquefied natural gas;
- Passenger railroad safety issues that surfaced in the wake of Metro North accidents; and
- Deteriorating highway-rail grade crossing and pedestrian safety performance.

Movement of Crude Oil and Other Energy Products
No single approach will make transporting crude oil and other energy products safer. Improved tank car design, crude oil route infrastructure, track conditions, and braking effectiveness are all elements of the solution. To address these issues, FRA plans to combine dedicated oversight personnel with financial resources and research to improve oversight, infrastructure, and technology.

Crude oil transportation by rail has increased significantly and rapidly, primarily 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. Bakken output represents over 70 percent of crude oil that moves by rail, which then becomes a national transportation phenomenon as energy products move to refineries on the East, West, and Gulf Coasts. On average, a carload of North Dakota crude oil travels more than 1,600 miles, ethanol travels 990 miles, and poison inhalation hazard commodities (such as chlorine and anhydrous ammonia) travel 590 miles. These increased shipments increase safety risks, which

include potentially catastrophic consequences. The single accident in Lac Mégantic, Quebec, killed 49 people in 2012.

North American Originations of Crude Oil, Ethanol, and Poison Inhalation Hazardous Material, Calendar Years 2003 to 2013



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

FRA plans to increase its focus on the Nation's five main energy shipping corridors. While large railroads generally have sufficient resources to maintain and improve their infrastructure, small railroads and local governments often do not. Federal grants and loans dedicated to safety projects, including those involving crude oil and energy products, will encourage small railroad investment in capital, such as electronically controlled pneumatic brakes, which greatly improve stopping performance and train dynamics.

To produce greater safety improvements, FRA plans to develop new technologies for scanning the internal conditions of track components; and to model, analyze data, and perform testing on track safety to support future rulemaking.

Passenger Railroad Safety

In 2013, four high-profile accidents occurred on the Metro-North railroad that killed 4 people and injured more than 100 others.[2] Following the four accidents, FRA undertook an unprecedented examination of the railroad called Operation Deep Dive. This examination revealed Metro-North's emphasis on on-time performance at the expense of safety and concluded that a lack of an internal safety culture was the underlying cause of the series of accidents.
The Metro-North experience was a wakeup call to the Nation and revealed as much about FRA's approach to regulating safety as it did about Metro North. Prior to 2013, the railroad's safety

[2] 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.

record offered no indication that it was headed towards a calamitous year. Therefore, FRA must address safety differently. FRA must advance proactive programs based on system safety that identify hazards, analyze risks, and put in place customized plans to eliminate those risks. This is especially critical for improving the safety of passenger railroads, which carry millions of passengers daily in cities across the nation.
As a result, FRA will develop and implement passenger rail risk reduction system safety programs for all aspects of rail operations: equipment and vehicles, track, signal and train control, and hazardous material.

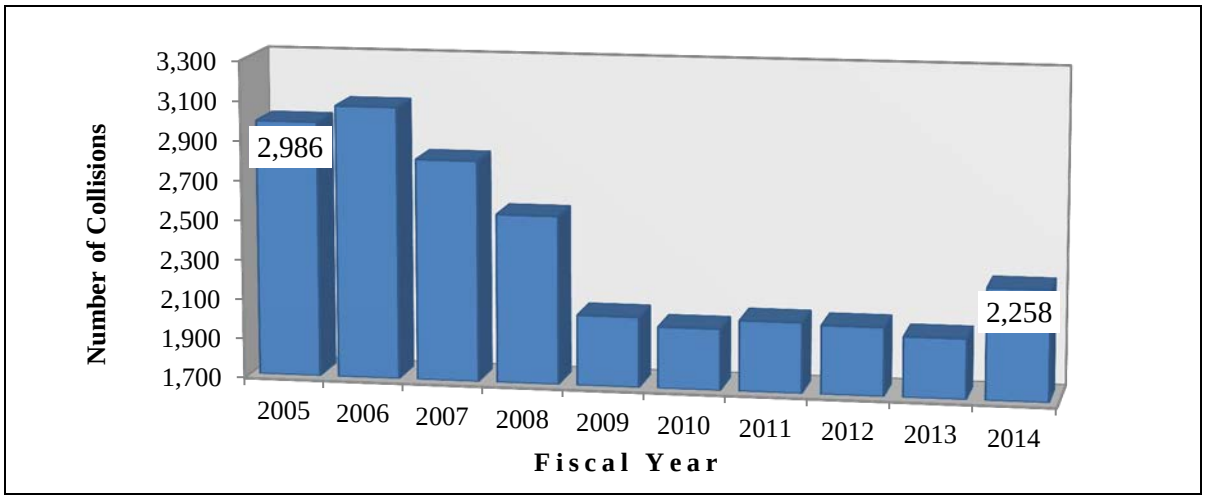
Investment and research will also contribute to better passenger rail transportation safety particularly in passenger rail implementation of positive train control systems, operator fatigue, occupant protection, and shared freight and passenger corridor safety measures.

Highway-Rail Grade Crossing and Pedestrian Safety

FRA is proud that the number of highway-rail grade crossing collisions and related fatalities has decreased over the last 10 years by 34 percent and 32 percent, respectively. However, in recent years that trend has reversed – during the past 5 years, the number of collisions has increased by 8 percent and the number of fatalities has remained unchanged. Moreover, highway-rail grade crossing collisions are the second leading cause of rail-related deaths and the top cause of all railroad accidents.

Similarly, the trend for trespass incidents is unacceptable. They are the leading cause of rail-related deaths and accounted for 64 percent of all rail-related fatalities in 2013. Over the past 5 years, trespassing fatalities have significantly increased 12 percent and 2014 preliminary data indicate that trend is continuing.

Highway-Rail Grade Crossing Collisions, Fiscal Years 2005 to 2014



Source: FRA data

FRA plans to expand its commitment to the "3 Es" approach to improving crossing safety and trespass prevention: education, engineering and enforcement. FRA plans to use new staff to

educate the public about the dangers of trains by conducting nationwide safety outreach with the trucking industry, communities, local planners, and schools. FRA also seeks collaboration with the Federal Transit and Federal Highway Administrations to bring together freight, commuter, and transit experts to share and develop prevention initiatives. New infrastructure funds would help local communities build safer or close dangerous highway-rail grade crossings, among other critical improvements. Promising areas for research include a pilot program of targeted and sustained community outreach; integration of positive train control systems with highway control and crossing warning devices; and studies on measures to prevent and detect trespassing.

Responsible Officials:

Robert C. Lauby, Associate Administrator for Railroad Safety and Chief Safety Officer, Federal Rail Administration
Paul Nissenbaum, Associate Administrator for Railroad Policy and Development, Federal Rail Administration
John Tunna, Director of Research and Development, Federal Rail Administration

Strategic Goal 2--

State of Good Repair

Ensure the U.S. 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 Overview

Recent reports on the condition of our highways, bridges, transit assets, and passenger rail facilities reveal that many fall short of state of good repair, and as a result, they compromise the safety, capacity, and efficiency of the U.S. transportation network. DOT's role in achieving state of good repair varies from mode to mode. The Department can influence the condition of Federally-funded highway, transit and airport infrastructure through program guidance and technical assistance provided to State departments of transportation, transit agencies, and airport authorities, and through research and development to produce the knowledge, guidance and innovations needed to more effectively address the Nation's infrastructure challenges. DOT also helps protect and preserve airports through safety regulations for airport safety certification, oversight and safety data programs.and financial assistance programs. While DOT has some influence on state of good repair through our safety regulations in other modes like railroads, seaports, and pipelines, our influence over the level of state of good repair investment is limited because much of the infrastructure is funded and maintained by the private sector.

DOT Operating Administrations: The following DOT Operating Administrations contribute to DOT's strategic objective of maintaining the Nation's transportation infrastructure: Federal Highways Administration, Federal Transit Administration, Federal Aviation Administration, Pipelines and Hazardous Material Safety Administration, and Federal Rail Administration.

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Roadway Conditions (FHWA)								
Percent VMT on NHS with good to very good ride quality (FHWA).	n/a	55.0% (r)	54.3% (r)	57.1% (r)	57.6%	58.4% (r)	59%*	Met
Percent of Deck Area on NHS Structurally Deficient Bridges (FHWA).	8.2% (r)	8.3% (r)	7.8% (r)	7.1%	6.7%	6.6%	6.0%	Met
Transit Conditions (FTA)								
Backlog of transit capital assets in need of replacement or refurbishment (as defined by an estimated condition rating of 2.5 or lower). ***This is a biennial measure.***		$77.7 billion		$85.9 billion		$94 billion	N/A^	Met (2012)
Runway Conditions (FAA)								
Percent of runway pavement in excellent, good, or fair condition for paved runways in the National Plan of Integrated Airport Systems.	97%	97.2%	97.4%	97.5%	97.5%	93%	97.6%	Met

Notes:
(r) Revised
* Preliminary Estimate
^ Actuals Available Following Release of Conditions and Performance Report in 2015

Progress Update

Roadway Conditions

Properly maintained roads that meet the standard of a good rated ride tend to stay smoother for longer periods of time, are safer because drivers are less likely to lose control of the vehicle and save money for both the user and taxpayers. A large increase in Federal highway capital investment under the Recovery Act, combined with a decrease in construction materials prices, resulted in a significant improvement in the smoothness of pavements between 2010 and 2014. Working with the States, FHWA monitors and reports the condition of pavement on the NHS through measures of ride quality. The share of NHS travel occurring on pavements with good ride quality rose significantly from 48 percent in 2001 to 58 percent in 2013, despite an increase in NHS mileage of over 50,000 miles with MAP-21.

FHWA continued to support the development, deployment and implementation of pavement, materials, and construction innovation. In addition, FHWA provided support for the continued development of Mechanistic-Empirical Pavement Design Guide (MEPDG) tools and calibration; as well as forensic assessments of failed pavements, training and quality assurance for materials

and testing, advancing pavement preservation and management, and construction and maintenance management. FHWA provided funding incentives to States to use accelerated bridge construction, intelligent compaction and construction as well as to continue making advances in the use of warm-mix asphalt and various accelerated concrete paving projects. Program dollars are also used to deploy new non-destructive testing tools and advance construction worksite safety measures, including construction and maintenance peer-exchanges and workshops.

As part of the Long Term Pavement Performance program (LTPP), FHWA has collected high quality, consistent data characterizing the performance of over 2,500 in-service highway pavement test sections. To date, the most significant advancement made possible by this database and test methods developed to support its creation, is the current American Association of State Highway & Transportation Officials (AASHTO) guide for pavement design, and the software that supports its application (AASHTOWARE Pavement ME Design). It has been estimated that implementation of this tool could save the State highway agencies $1 billion per year (FHWA HRT-10-071). It is also the primary analytical tool used in the ongoing Comprehensive Truck Size and Weight Study to assess the pavement performance impacts of alternative truck configurations as well as other nationally strategic models such as the Highway Economics Requirements System (HERS), to name just two. The LTPP program has been identified as a key research activity in the US DOT RD&T Strategic Plan. LTPP's goal is to understand how and why pavements perform as they do. As highway agencies transition to a performance-based approach to managing highway investments this goal is, if anything, more important than ever.

Deficient bridge conditions can impact the movement of people and goods through reduced load carrying capacity and geometric constraints. FHWA reports conditions on structurally deficient bridges on the NHS, on a subset of all publicly-owned deficient bridges that are most critical to efforts to move the overall number. In 2001, it is estimated that the deck area on 9,700 structurally deficient bridges on the enhanced NHS was 8.9 percent. At the end of 2014, the total deck area on 5,936 structurally deficient bridges on the enhanced NHS was estimated at 6.0 percent. The net change, or decrease in deck area from 2013 to 2014, was approximately 14.43 million square feet of deck area, which is equivalent to a bridge some 55 miles long and 50 feet wide. Despite the positive trends in bridge condition, the challenge of continuing the improvement trends and preserving existing assets remains.
FHWA continued to develop, update and/or deploy elements of bridge and tunnel design, inspection and rating programs that address structural, geotechnical and hydraulic features. In the past year, several Hydraulic and Geotechnical Engineering Circulars were issued that provide the most current criteria that should be used by practitioners. Program funds were also used to support the implementation of the revised National Bridge Inspection Standards (NBIS) oversight program consisting of 23 metrics. This has successfully evolved the NBIS program providing a greater level of accountability, increased level of awareness of bridge safety issues and the overall integrity of the bridge inspection program. FHWA continued to work with States to complete plans of corrective actions needed to return to compliance with the NBIS. Assistance was provided to several States to improve bridge load ratings and scour practices per their negotiated plans of corrective action.

In collaboration with Rutgers University Center for Advanced Infrastructure and Transportation, FHWA researchers envisioned, planned, designed, and constructed a novel robotic system, the RABIT™ bridge deck assessment tool, to enhance assessment of concrete bridge decks by integrating multiple non-destructive evaluation and analysis tools and technologies. This enables the FHWA to better understand concrete bridge deck performance and to create improved asset management tools for state departments of transportation. LTBP dData collection is currently underway in 24 states but additional funds are needed to collect and analyze data throughout the United States.

Transit Conditions

In the most recent Conditions & 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 the 2015 publication of this report using 2012 data.

During FY 2014, FTA continued to implement new MAP-21 asset management requirement by publishing an Advanced Notice of Proposed Rulemaking (ANPRM) on Safety and Asset Management. The ANPRM follows an Online Dialogue on Asset Management conducted in FY 2013. FTA received over 2,500 pages of comments from over 146 respondents on the ANPRM and is using the comments to help formulate a Notice of Proposed Rulemaking (NPRM) to FTA also completed several asset management technical assistance projects to help the transit industry understand and better prepare for the upcoming requirements.

Runway Conditions

FY 2014 performance results indicate our nation's airports continue to remain in a state of good repair. FAA has been able to meet the FY 2014 and prior fiscal year targets due to the success of multiple efforts by the agency and our nation's airports. The FAA prioritizes investments to preserve 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 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 (AIP) funding as part of the annual update of the three-year Airports Capital Improvement Plan (ACIP) process. Funding runway pavement projects directly contributes to the goal of maintaining a certain level of runways in excellent, good, or fair condition.

Information Gaps

Continued support for two of FHWA research programs, the Long-Term Pavement Performance (LTPP) and Long-Term Bridge Performance (LTBP) programs, is critical to advancing our understanding and prediction of infrastructure performance. In a continuing partnership with the

State transportation agencies that own the LTPP test sections, the Association of State Highway and Transportation Officials (AASHTO) and the Transportation Research Board (TRB), LTPP 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 Long-Term Bridge Performance program (LTBP), FHWA is working with its partners to advance the understanding of bridge performance. This work includes state-of-art condition assessment of concrete bridge decks, joints, bearings, pre-stressed 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.

Through another RT&E program, the Every Day Counts (EDC) initiative, FHWA has a number of projects underway to accelerate infrastructure construction and preservation. For example, research is underway 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. Research initiatives supported by FHWA also investigate the state-of-the practice to identify effective strategies and tools that provide quality assurance.

PERFORMANCE PLAN

Roadway Conditions (FHWA)

Performance Goal: 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.

Indicator: Percent VMT on NHS with good to very good ride quality	2015	2016
Performance Target	60.3%	61.6%

Performance Goal: Decrease the percentage of deck area NHS structurally deficient bridges to less than 6.0% by 2018.

Indicator: Percent of Deck Area on NHS Structurally Deficient Bridges	2015	2016
Performance Target	5.9%	5.8%

Transit Conditions (FTA)

Performance Goal: Keep the nation's state of good repair backlog to less than $100 billion (current-year dollars) through 2018.

Indicator: State of Good Repair backlog (current year dollars)	2015	2016
Performance Target	$96B	$98B

Runway Conditions (FAA)

Performance Goal: Maintain runway pavement in excellent, good, or fair condition for at least 93 percent of the open, paved runways in the NPIAS.

Indicator: Percentage of NPIAS airports with runway pavement in excellent, good, or fair condition.	2015	2016
Performance Target	93%	93%

Roadway Conditions (FHWA)

Overview

The condition of pavement and bridges across the country varies considerably, with many States struggling to maintain current conditions. DOT will continue to make the State of Good Repair goal a top priority in its ongoing commitment to advance strategies and initiatives to improve the safety and condition of the Nation's roads and bridges.

Under MAP-21, the NHS was redefined to reflect highways of national significance. This is known as the enhanced NHS, which also added nearly 3000 bridges with approximately 7 million square meter of deck area. With an increase in funding through the National Highway Performance Program (NHPP), it is expected that ride quality on the NHS will continue to improve to 64.3 percent by 2018. DOT has met its 2018 target to decrease the percentage of deck area of structurally deficient bridges on the NHS to 6.0 percent or lower.

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 FHWA's Research, Technology and Education (RT&E) has:

- Enabled the development of the AASHTO Mechanistic Empirical Pavement Design Guide 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; and
- 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, the NHPP Program will support important activities associated with implementing MAP-21 including:

- Dedicated funding for maintaining and improving the condition and performance of the expanded 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.

To support and supplement NHPP funds, CISIP funds will be apportioned to States for the Interstate Bridge Revitalization Initiative (IBRI) to improve the condition of our Nation's highest priority bridges by making available specific funding for bridges to decrease the number of structurally deficient bridges on the Interstate System. FHWA will also apportion CISIP funds for the State of Good Repair Initiative (SGRI) to ensure resources are directed to pavements and bridges that need immediate preservation or rehabilitation work in order to avoid further deterioration in these critical assets and more costly repairs in the future.

Surface Transportation 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 Research, Technology, and Education (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; and
- Development of guidelines for the expanded use of reclaimed asphalt pavement and fly ash in infrastructure materials.

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. It 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.

Responsible Officials:

Walter Waidelich, Associate Administrator for Infrastructure, Federal Highways Administration
Joyce Curtis, Associate Administrator for Federal Lands Highway, Federal Highways Administration
Michael Trentacoste, Associate Administrator for Research, Development and Technology, Federal Highways Administration

Transit Assets (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 under-investment. 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 & 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..

Next Steps

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

- Continue to develop the rulemaking for the National Transit Asset Management System established by the Moving Ahead for Progress in the 21st Century Act (MAP-21), 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; and
    - 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 Leader

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

Runway Conditions (FAA)

Overview

As FAA works to ensure a good state of repair for runways at the Nation's public-use airports, it faces a number of challenges. Smaller primary airports that do not serve as hubs for major airlines and non-primary airports often lack sufficient revenue sources to finance routine maintenance. Airports of all sizes rely on our financial assistance for significant rehabilitation, resurfacing, and reconstruction of runways and major taxiways.

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. FAA helps fund a broad range of capital infrastructure development at most airports in the National Plan of Integrated Airports System (NPIAS) including more significant rehabilitation, resurfacing or reconstruction projects. 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. FAA's goal is to maintain at least 93 percent of the Nation's 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. FAA typically exceeds its goal; in FY 2014, 97.6% of runways were maintained in excellent, good, or fair condition.

Strategies

- Assessing pavement condition via annual safety inspector inspections of certificated airports;

- Collect safety and pavement condition data under a contract program to inspect non-certificated public use airports every three years;
- Maintain a 5-year, forward-looking analysis of airport capital requirements that includes runway rehabilitation requirements, published in a biennial report to Congress ("National Plan of Integrated Airport Systems"); and
- Enforce requirements to have pavement preventive maintenance programs at Federally obligated airports.

FAA's Regional Airports Division and Airports District Offices partner with 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 assess the impact of pavement conditions on aircraft; 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 the 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 the 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 the 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. The 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) focuses primarily on improving rigid concrete airfield pavement performance. http://www.iprf.org The Airfield Asphalt Pavement Technology Program (AAPTP) focuses 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. In this regard, FAA will complete construction of a high temperature pavement test facility at the FAA Technical Center by August 2015.
- Issue FY 2015 grants for pavement improvement projects.
- Continue to monitor airport pavement condition on an annual basis for certificated airports and on a three year basis for other public use airports.

Responsible Officials:

Michael P. Huerta, Administrator, Federal Aviation Administration
Eduardo Angeles, Associate Administrator for Airports, Federal Aviation 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

Moving Ahead for Progress in the Twenty-first Century (MAP-21) requires States to develop and implement asset management plans and performance plans specifically for highways and bridge infrastructure. MAP-21 expands the National Highway System (NHS), an approximate 223,000-mile network composed of the Interstate Highway System (IHS), all principal arterial routes including border crossings, intermodal connectors including toll facilities, and a strategic highway network and its connectors that are important to national defense. The NHS provides mobility to the vast majority of the Nation's population and to almost all of its commerce, supports national defense, and promotes intermodal connectivity. MAP-21 also establishes 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 Transportation Secretary (OST).

PERFORMANCE REPORT

Progress Update

Highway Infrastructure

MAP-21 requires States to develop and implement asset management plans and the USDOT to establish performance measures for the IHS and NHS. It is expected that States and MPOs will use the results to establish targets for IHS and NHS pavement and bridge condition measures that are defined through the rulemaking process.

FHWA co-sponsored a transportation asset management peer exchange and hosted a series of web-based briefings with State partners to advance concepts and principles of asset management. FHWA also conducted a gap analysis in 10 states and reviewed Asset Management Plans submitted by three pilot states. In addition, FHWA provided on-site 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.

Performance Information Gaps:

Highway Infrastructure (FHWA)

FHWA co-sponsored a transportation asset management peer exchange and hosted a series of web-based briefings with State partners to advance concepts and principles of asset management. FHWA also conducted a gap analysis in 10 states and reviewed Asset Management Plans submitted by three pilot states. In addition, FHWA provided on-site technical assistance to States working through the process with senior managers and executives to establish an asset management program.

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PERFORMANCE PLAN

Highway Infrastructure (FHWA)

Overview:

MAP-21 requires the development of national condition and performance measures for the NHS. States will be required to set targets for each of the national measures will be expected to make significant progress toward the achievement of their 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 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.

MAP-21 also requires the development of pavement and bridge condition performance measures and targets that support the Federal Lands Tribal and Transportation Program (FLTTP). 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 Federal Land Management Agencies, are supported by the use of the funds.

Key Strategies

Currently, States select 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 American Association of State Highway Transportation Officials (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.

MAP-21 also requires the development of pavement and bridge condition performance measures and targets that support the FLTTP. 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 Federal Land Management Agencies, are supported by the use of the funds.

Next Steps

MAP-21 requires States to develop and implement asset management plans and performance measures. FHWA is currently a rulemaking to support these asset management efforts. FHWA is currently engaging with stakeholders to better understand how the processes and measures can be established and implemented. More than 10 States have participated in a gap analysis of their current asset management process and plan and are developing recommendations to assist in making their processes and plans more useable.

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 corporate decision-making. This funding will help States establish standards for data collection and analysis. MAP-21 requires an assessment of those efforts approximately every two years after the rule is published.

Specifically, the NHPPP will 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.

The Performance Management Data Support Program (PMDSP) funds will update the Highway Performance Monitoring System (HPMS) to more realistically report on the condition of the Interstate 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.

Responsible Officials:

Walter Waidelich, AA for Infrastructure, Federal Highway Administration

Joyce Curtis, AA for Federal Lands Highway, Federal Highway Administration
Michael Trentacoste, AA for Research, Development and Technology, Federal Highway Administration

Strategic Goal:

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 OVERVIEW

Based on current economic and demographic forecasts, it is likely that the movement of people and goods within the U.S. 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 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 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 of Transportation (OST).

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
High Performance Passenger Rail (FRA)								
Agency Priority Goal: Number of individual construction projects that will achieve initial construction.	N/A	N/A	N/A	27	41	60	60	Met
Agency Priority Goal: Number of planning, preliminary engineering, environmental analysis, and construction projects that are substantially complete.	N/A	N/A	N/A	N/A	N/A	51	51	Met
Modernizing the Automation Platform at the ARTCCs (FAA)								
Agency Priority Goal: Cumulative number of continental U.S. En Route air traffic control centers achieving initial operating capability on ERAM. (FAA)	2	2	2	9	17	N/A	20	N/A
Agency Priority Goal: Cumulative number of U.S. En Route air traffic control centers achieving an operational readiness decision on ERAM. (FAA) (Added in FY 2014)	N/A	N/A	N/A	2	11	15	16	Met
Roadway Congestion (FHWA)								
Maintain Travel Time Reliability in urban areas as measured by a reduction in the Travel Time Index to No More Than 1.20 in 2018.	n/a	n/a	n/a	1.32	1.36	1.36	N/A	Met
Maintain Travel Time Reliability in Top 25 Domestic Trade Corridors at or below 17.0 through 2018.	n/a	16.1	16.0	15.4	17.0	17.0	18.6	Not Met
Domestic and International Commerce (MARAD & SLSDC)								
Total Operating Days U.S.-flagged, foreign commercial ships enrolled in the Maritime Security Program are available to meet DOD requirements. (MARAD)	N/A	21,436	21,557	21,593	21,794	19,200	22,050	Met

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Number of Twenty Foot Equivalent (TEU) containers transported across America's Marine Highway routes. (MARAD)	N/A	N/A	1,061	8,221	9,498	12,000	19,655	Met
Percent of time the U.S. portion of the St. Lawrence Seaway is available to commercial users. (SLSDC)	99.4%	99.8%	99.0%	99.7%	98.3%	99.0%	97.2%	Not Met
Notes: (r) Revised; * Preliminary Estimate								

Progress Update

High-Performance Rail (FRA)

Initial Investment Decisions. Between August 2009 and April 2011, FRA evaluated nearly 500 applications submitted by 39 states, the District of Columbia, and Amtrak, requesting more than $75 billion. In its report, GAO-11-283, the Government Accountability Office commended FRA's review and selection process, stating, "FRA established a fair and objective approach for distributing [Recovery Act] funds and substantially followed recommended discretionary grant award practices used throughout the government." The table below highlights the key corridors in which Federal investments have been made.

Federal High-Speed And Intercity Passenger Rail Program Investments, through FY 2013

Type of Corridor	Miles Under Development		Federal Investment		Population Served	
	Number of Miles	Percentage of Total	Millions of Dollars	Percentage of Total	Millions of People	Percentage of U.S. Population
Core Express	1,250	20%	$ 4,919	48.8%	74	24%
Regional	3,127	50%	$ 4,578	45.4%	102	33%
Feeder	1,911	30%	$ 555	5.5%	39	8%
Other	*N/A*	*N/A*	$ 25	0.2%	*N/A*	*N/A*
TOTAL	6,288	100%	$10,077	100.0%	135	44%*

* Cumulative figure excludes double counting of populations served by more than one corridor type.

N/A Not applicable.

Projects Completed and Rail Services Improved. Project sponsors have substantially completed 61 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 underway on 37 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 $25 billion of private capital in the Nation's rail network in both 2012 and 2013.

Future Projects. Seventy-six planning, environmental analysis, and engineering projects are completed or underway across the country. The products that result from these efforts will lay the foundation for future construction projects and service improvements.

Modernizing the Automation Platform at the ARTCCs (FAA)

As of September 30, 2014, the FAA has achieved Initial Operating Capacity (IOC) at all 20 centers. FAA was able to achieve IOC during FY 2014 at the three centers (Atlanta, Miami, and Jacksonville) where it was delayed due to sequestration.

Achieving IOC is the first major step in deploying ERAM at a center. It demonstrates that the system can be operated and maintained at a facility. When a center believes that the system is fully operational, it declares Operational Readiness Decision (ORD) which is the final milestone to achieving full operational capability.

Prior to FY 2014, 11 of the 20 centers had achieved ORD. Our FY 2014 goal was to achieve ORD at 4 centers (bringing the total to 15). By achieving ORD in 5 centers (bringing the total to 16) in FY 2014, we exceeded our goal.

Highway Congestion (FHWA)

In FY 2014, the Travel Time Index (TTI) in 52 metropolitan statistical areas (MSAs) was 1.36. TTI represents the extra time a driver spends in traffic during congested traffic as compared to light traffic. A TTI of 1.36 represents an extra 10 minutes, on average, for a trip that usually takes 30 minutes. The measure, which was developed as part of the new *Urban Congestion Report* program, uses probe-based travel time data provided by FHWA's National Performance Management Research Data Set on Interstates and other freeways, and expressways. The TTI was 0.04 points higher than the TTI of 1.32 in FY 2013, which is based on data from Interstates only. It appears that congestion is increasing slightly based on these results.

In FY 2014, 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 2 urban areas. In addition, FHWA conducted 53 Strategic Highway Research Program 2 (SHRP2) TIM Responder Train-

the-Trainer (T-t-T) sessions in urban areas in 20 States; prepared nearly 2,291 individuals to serve as trainers; and reached over 44,000 students through post-classroom sessions led by the new trainers and through a major T-t-T session at the National Fire Academy for 233 new trainers from 45 States. By the end of FY 2014, FHWA had completed or scheduled SHRP2 TIM Responder Training in all but one State and reached the deployment goal of training 50,000 responders six months earlier than the target date.

FHWA conducted 26 SHRP2 capability maturity assessment workshops to assess organizational capabilities for transportation systems management and operations with 13 implementation plans completed and being advanced. In addition to the assessment workshops, the Agency began providing direct technical assistance to 27 States and large metropolitan areas to better focus on improving operation of the transportation system.

FHWA provided States and MPOs with access to a national travel time data set for congestion analysis on the NHS. A total of 158 MPOs and States are now using the data. The Agency is currently assisting Florida DOT and Arizona DOT on freight performance measure projects using FHWA probe data, working with Canada and Mexico to apply a fluidity analysis for North America using probe data, and supporting the National Freight Advisory Committee and the development of the Freight Conditions &Performance Report and National Freight Strategic Plan;

FHWA continued to support MAP-21 implementation by working with Vermont, Indiana and Georgia on Section 1116 freight projects. Supported truck size and weight research and operational needs, supported state freight planning efforts and peer to peer/technical assistance for freight planning.

In FY 2014, travel time reliability for freight was significantly above the anticipated target. To better understand the causes and specific points of freight congestion, DOT uses additional measures with the buffer index reported here. The results reveal that most congestion is occurring in urban areas and at known freight highway bottlenecks. Urban mobility and interstate mobility decreased due to more traffic congestion, which is commensurate with increased goods movement due to improved economic conditions. However, intermodal mobility (movement at ports and intermodal facilities) and border crossing mobility actually improved. FHWA continues to analyze highway data on freight corridors, interstates, intermodal areas, border crossings and urban areas to monitor performance. This is aligned with research efforts to understand emerging freight trends and issues that will enable us to develop a more comprehensive understanding of freight flow in the U.S. and to work with States and MPOs on improving freight infrastructure investments.

To aid States and MPOs with freight system improvements, FHWA provides significant policy, program delivery, research and analytical efforts. FHWA continues to work with States, MPOs, and private sector partners for the improvement of performance of the freight system and provides numerous outreach and training opportunities including courses and webinars on freight planning, engaging the private sector, and freight and land use. In addition to workshops and webinars, FHWA hosts a Freight Partnership meeting and coordinates research and outreach in conjunction with AASHTO to engage States and MPOs in discussion of freight issues and collaborative solutions. 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 prioritizing freight improvement efforts.

DOT is actively supporting the implementation of MAP-21 freight provisions. These focus on encouraging development of state freight plans and state freight advisory committees, freight performance measurement, development of new or improved data and analytical tools, assessment of truck parking needs, as well as establishing a National Freight Network, including designation of a Primary Freight Network and identification of Critical Rural Freight Corridors to focus resources on key freight corridors and regions.

Credit Assistance Program

DOT offers innovative financing resources that can help meet critical needs for congestion reduction, intermodal and other similar projects. Through the TIFIA Program, the DOT provides Federal credit assistance to highway, transit, rail, and intermodal freight projects including seaports. As of July 31, 2014, TIFIA had financed 45 projects across the United States, including 5 intermodal projects, 30 highway projects, and 10 transit projects. These projects represent approximately $64 billion in infrastructure investment spread across the country. The commitments total nearly $17 billion in Federal assistance with a budgetary cost of over $1 billion.

Additionally, FHWA produced a Public-Private Partnership (P3) toolkit that will help to ensure that P3 procurements are executed in a manner that serves the public. Additionally, FHWA expanded the number of analytical tools and guidance documents that comprise its P3 toolkit, the foundation of a P3 capacity-building program for public sector policymakers and transportation professionals. The toolkit will soon include two significant MAP-21-directed initiatives: a P3 model contract guide and a P3 best practices report.

FHWA implemented a robust awareness, capacity building, and technical assistance program that included webinars engaging over 3,000 participants; individually tailored technical assistance events for five States; a National Project Oversight Managers conference that provided 25 technical training sessions for more than 90 attendees; project management training for over 25 FHWA employees; and publication of resource materials.

Domestic and International Commerce (MARAD and SLSDC)

Maritime Security Program (MARAD)

For FY 2014, MARAD reported 60 vessels enrolled in the MSP program. MARAD continued to monitor the agreements with the ship owners to maintain the 60 ships in the program and achieve the agency target of 19,200 operating days, and reports a total of 22,050 operating days at the end of FY 2014.

America's Marine Highway Program (MARAD)

MARAD's program for America's Marine Highway (AMH) 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 TEUs, moved by grant-program-assisted services, which is a direct indicator of grant-related 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 2014, MARAD reported an accumulative total of 19,655 TEUs transported by program assisted marine highway projects.

Domestic and International Commerce (SLSDC)

The U.S. Seaway System reliability rate for Fiscal Year 2014 was 97.2 percent. Severe weather and ice conditions at the end of the 2013 season and start of the 2014 season caused significant system-wide delays. December 2013 delays totaled more than 53 hours, while April 2014 delays totaled 17 hours. The historic winter weather conditions and ice levels in the Seaway System were the primary cause of these delays. The SLSDC has the most control over the proper functioning of its lock equipment. In FY 2014, lock-related delays totaled only 15 percent of all FY 2014 System delays.

Information Gaps

Highway Congestion (FHWA)

There are a variety of operations strategies that can be employed to reduce congestion and improve reliability of the transportation system especially during peak travel periods. For example, FHWA is encouraging the use of the relatively new strategy of Adaptive Signal Control Technology (ASCT), in which the timing of traffic signals is adjusted to accommodate variability in traffic demand. Traditional traffic signal systems rely on manual updates of traffic signal timing that are generally updated every 2-3 years. The main benefits of ASCT over conventional signal systems are that it can evaluate current demand conditions continuously to distribute capacity in the form of green time equitably for all traffic movements; improve travel time reliability and reduce congestion by creating smoother flow to prolong the effectiveness of traffic signal timing.

FHWA recently funded a review of Active Traffic Management strategies that have in common the use of technology to optimize operational improvements. A meta-analysis was used to review the results of previous studies evaluating the benefits of eight different strategies including signal coordination. The other strategies included HOV lanes, HOT lanes, ramp metering, dynamic speed limits, reversible lanes, park and ride, and the use of temporary shoulders. Based on before and after measures of congestion (e.g. percent change in travel time), the results showed that the use of each of the strategies can lead to reductions in traffic congestion. While promising, the researchers also noted that the results vary widely and depend to a great extent on local conditions and the way in which each strategy is deployed. For a number of reasons, the findings are also limited by a paucity of high quality, before-and-after treatment studies that could be compared. FHWA is currently developing an Operations Benefits-Cost Analysis tool that will help to clarify the relative impacts of various operations strategies. Data and findings from this study are being incorporated into the tool currently under development.

Credit Assistance Program

As noted earlier, FHWA has developed a Research and Technology Agenda to determine whether FHWA is conducting the right research to meet current and future transportation needs, and identify research gaps. To address one of the identified challenges, FHWA is developing tools and support to enable agencies to pursue innovative approaches to financing and revenue generation, such as through conducting Value for Money (VfM) State-of-the-Practice research.

Value for Money analysis is a methodology used by public agencies to compare conventional procurement approaches such as design-bid-build with public-private partnership (P3) options for high-cost projects. This method incorporates life-cycle costs, risks, and other considerations. To help agencies considering a public-private partnership approach make more informed decisions, the FHWA is documenting the methodology and the state-of-the-practice for Value for Money analysis in the U.S. and abroad; developing primers on Value for Money analysis, risk assessment, and financial structuring assessment; and developing a suite of analytical tools called P3-VALUE to help States learn how to determine if a public-private partnership is appropriate for specific projects. Research is now underway to refine P3-VALUE to incorporate benefit-cost analysis; and to develop concept guidebooks on risk assessment and Value for Money analysis to help determine values for key inputs.

Despite record levels of investment in surface transportation infrastructure in recent years, traditional funding sources have not kept pace with the investment demands of an aging and increasingly complex U.S. transportation system. The Project Finance Primer describes those techniques and provides examples of their application by State and local partners. The techniques described in the primer will continue to evolve and lay the groundwork for the identification of additional innovative strategies for financing surface transportation investments.

PERFORMANCE PLAN

High Performance Passenger Rail (FRA)

Agency Priority Goal: By September 30, 2015, initiate construction on 65 passenger rail construction projects.		
Indicator: Number of passenger rail construction projects.	2015	
Performance Target	65	
Agency Priority Goal: By September 30, 2015, substantially complete 74 planning, preliminary engineering/environmental analysis, and construction projects.		
Indicator: Number of projects completed.	2015	
Performance Target	74	

Modernizing the Automation Platform at the ARTCCs (FAA)

Agency Priority Goal: By September 30, 2015, achieve Operational Readiness Date at all 20 ARTCCs.		
Indicator: Number ARTCCs achieving Operational Readiness Dates.	2015	
Performance Target	20	

Highway Congestion (FHWA)

Performance Goal: 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		
Indicator: Travel Time Index	2015	2016
Target	1.36 (r)	1.36 (r)
Performance Goal: Maintain Travel Time Reliability in Top 25 Domestic Trade Corridors at or below 18.5 through 2018. - NEW		
Indicator: 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.)	2015	2016
Target	18.5	18.5
Performance Goal: 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 five years. – NEW		
Indicator: Percent of TMAs using CMPs in making programming and project decisions (currently there are 181 TMAs).	FY 2015	FY 2016
Target	20%	40%

International and Domestic Commerce (MARAD & SLSDC)

Performance Goal: Maintain the US 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. (MARAD)		
Indicator: Number of days	FY 2015	FY 2016
Target	19,200	19,200

Performance Goal: Maintain availability of the St. Lawrence Seaway is available to commercial users. (SLSDC)		
Indicator: Percent of time the U.S. portion of the St. Lawrence Seaway is available to commercial users.	FY 2015	FY 2016
Target	99%	99%

High-Performance Passenger Rail (FRA)

Agency Priority Goal: *By September 30, 2015, initiate construction on 65 passenger rail construction projects and substantially complete 74 planning, preliminary engineering/ environmental analysis, and construction passenger rail projects.*

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, the U.S. Department of Transportation has a comprehensive program to develop high-speed and intercity passenger rail. FRA manages an approximately $20 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.

Strategies

The 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.

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 on-site 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 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.

Responsible Officials:

Corey Hill, Director of the Office of Passenger and Freight Programs, Federal Railroad Administration

Modernizing the Automation Platform at the ARTCCs (FAA)

Agency Priority Goal: *By September 30, 2015, achieve Operational Readiness Dates (ORD) at all 20 Air Route Traffic Control Centers (ARTCC).*

Overview and Next Steps

The En Route Automation Modernization (ERAM) System is central to our ability to transform our nation's airspace from radar-based to satellite-based operations. ERAM replaces the 1970s era "Central Computer Complex HOST" used at Air Route Traffic Control Centers (ARTCCs) around the country to guide airplanes flying at high altitudes. The FAA uses site milestones to measure progress toward this goal. A center declares an Operational Readiness Date (ORD) when it is using the new equipment full-time and does not intend to return to operations using the old system. At ORD declaration, the process of decommissioning and removing the old system begins.

Four centers are schedule to achieve ORD in FY 2015 in order for ERAM to be fully deployed across the nation's airspace.

Goal Leaders

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

Highway Congestion (FHWA)

Overview

Highway congestion adversely affects the Nation's economy, communities, and quality of life. According to the 2012 Urban Mobility Report, traffic congestion remained relatively unchanged during the past year in American cities. It is estimated that congestion creates a $121 billion annual drain on the U.S. economy in the form of 5.5 billion lost hours resulting from travel delay and 2.9 billion gallons of wasted fuel. Congestion has significant effects on individual travelers, causing the average peak-period traveler to spend an extra 38 hours of travel time and to consume an additional 19 gallons of fuel annually, which amounts to a cost of $818 per traveler. 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 2012 Urban Mobility Report estimates the costs of overall truck congestion to be $27 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 metrics to measure congestion: the Travel Time Index (TTI) and the Freight Buffer Index. The TTI represents the extra time a driver spends in traffic during congested traffic as compared to light traffic. A TTI of 1.20 means that a trip that normally takes 20 minutes in light traffic would take 24 minutes, or 4 minutes longer, on average in congested traffic. Therefore, a lower TTI is better.

In 2014, FHWA enhanced its Travel Time Index (TTI) measure with a new data source and expanded coverage. The new measure will cover travel on Interstates, freeways and expressways in 52 urban areas, up from 19 in previous years. The new data source is vehicle-probe based data from the National Performance Management Research Data Set (NPMRDS). The data set includes both passenger and freight probe data, reported as an average travel time every 5 minutes when probes are available on the National Highway System (NHS). The NPMRDS provides FHWA and its State DOT and MPO partners with a rich source of travel time data, reported monthly, that can be used to develop a wide range of performance measures. It will allow for before-and-after analyses of project impacts, operational strategy implementation, and more. The 52 urban areas that will be included are all of the urban areas over 1 million population in the 2010 Census.

The Freight Buffer Index, expressed as a percentage, represents the extra time, or time cushion, that would have to be added to the average travel time to ensure on-time arrival 95 percent of the time. This measure of travel time reliability in key freight corridors is derived from measured commercial vehicle average speeds for 25 freight significant domestic trade routes annually. The trade routes are determined by identifying the top 25 trading partners within the nation using latest update to the Freight Analysis Framework. In FY 2014, FHWA revised its Freight Buffer goal based on an analysis of 2011-2013 data for these corridors obtained from American Transportation Research Institute. The analysis shows more congestion on these new critical freight corridors due to an increase in economic activity and, therefore freight flow, in recent years. Based on continued analysis of the data for the 25 freight significant corridors, FHWA is increasing the target for FY 2016 to 18.5 to more accurately capture the sensitivity of the buffer index. The current target of 17.0 is too low and will continue to show congestion on the freight corridors. A target of 18.5 will provide a more accurate understanding of reliability as it is closer to the point of fluctuation for current freight conditions.

FHWA will monitor the efforts of Metropolitan Planning Organizations (MPOs) serving TMAs to develop a congestion management process (CMP) that identifies and evaluates strategies to support decision-making on transportation investments that will improve congestion. By ensuring that all States and MPOs are utilizing the CMP as part of their decision-making process within five years, more effective strategies can be selected to address traffic congestion during the planning and programming phase. Currently there are 181 TMAs, approximately ten percent of which are using the CMP in making programming and project decisions.

Strategies

FHWA has made significant progress on congestion reduction efforts. These efforts have led to a number of programs and analytical tools to improve traffic operations and strategically target capital investments to improve congestion. These include:

- 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; and
- Developing a model that links population, freight demand, driver behavior, and other data to vehicle-miles traveled (VMT).

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 non-recurring congestion problems and include increasing the availability of real-time traveler information, and 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, traffic incidents, special events and emergencies, as well as international border crossings; and intermodal connectors.

FHWA also seeks to improve the capacity of States and MPOs serving Transportation Management Areas (TMAs) to develop congestion management strategies through the transportation planning and Congestion Management Processes. The FHWA will work to enhance tools 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 underway 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.

Additionally, FHWA's efforts continue to support the significant focus on freight in MAP-21/ Title 23 for the development of national freight policy, the prioritization of projects to improve freight movement, the establishment of freight stakeholder advisory committees, the development of statewide freight plans, and Section 1203 requiring reporting on freight performance. With such focus on freight flow improvements, 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;
- 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; and
- Foster a more balanced transportation supply and demand through ridesharing, parking demand management, and congestion pricing.

The Surface Transportation 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;
- Demonstrating innovative practices that speed construction, reducing traffic delays;
- Providing useful, real-time information to travelers; and,
- 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 (RT&E) Program.

Metropolitan Transportation Planning will allow each MPO to carry out a coordinated transportation planning process and develop long range transportation plans and transportation improvement programs that make effective use of limited transportation funding.

Responsible Officials:

Jeff Lindley, AA for Operations, FHWA
Gloria Shepherd, AA for Planning, Environment, and Realty, FHWA
Michael Trentacoste, AA for Research, Development and Technology, FHWA

Domestic and International Commerce (MARAD)

Overview

Maritime Administration's (MARAD) Maritime Security Program (MSP) works to ensure that the United States will have a fleet of active, commercially viable, militarily useful, privately owned U.S.-flag vessels to maintain a presence in foreign commerce. 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 Department of Defense. The MSP also contributes to security and preparedness strategic objectives. These MSP vessels are the backbone of the sealift capability needed by military forces to deliver the critical supplies and equipment necessary to support, protect and defend the nation when called upon.

The Maritime Security Act of 2003 authorized the enrollment of 60 ships in the MSP through FY 2015. The National Defense Authorization Act of 2013 (H.R. 4310) extends the MSP from FY 2016 through FY 2025. The MSP acknowledges the importance of a strong partnership with the commercial maritime industry to maintain an international presence in foreign commerce. Without the MSP, there could be a significant reduction in the number of U.S. flag ships. In addition, the MSP fleet provides employment for 2,700 skilled U.S. mariners and other maritime workers each year to meet the Nation's needs to crew government owned reserve sealift vessels when activated.

Each enrolled ship is required to operate in the 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 the MARAD and the U.S. Transportation Command as the most militarily useful and commercially viable vessels available.

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 which 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 the Department of Defense with assured access to vessels and mariners.

Goal Leaders:

Kevin Tokarski, Associate Administrator for Strategic Sealift, MARAD.

Credit Assistance Program (FHWA)

Overview

Traditional funding sources are often inadequate to support the implementation of major sustainable transportation projects. Innovative financing and revenue generation options can sometimes offer a way to bridge the gap between the currently available funds and investment requirements. Federal credit support from sources such as the Transportation Infrastructure Finance and Innovation Act (TIFIA) program can provide tremendous leveraging opportunities. In addition, public-private partnerships can attract private sector financial participation in major, costly, and complex projects.

Under MAP-21, TIFIA lending capacity was increased significantly, and the DOT will close a record number of loans during the two-year authorization period. In FY 2014 alone, the Department has already extended over $4 billion in credit assistance for nine loans – 7 highway and 2 transit projects - that will stimulate over $17 billion in transportation infrastructure investment across the U.S. In addition to the nine projects already closed in FY 2014, the DOT is positioned to close three or more additional projects totaling over $3 billion in credit assistance to support more than $9 billion in infrastructure investment.

Strategies and Next Steps

Through the TIFIA program, DOT will continue to provide flexible financing to help advance critical infrastructure investment around the country. FHWA will support TIFIA by

- Developing analytical tools to assess innovative finance and revenue generation strategies;
- Implementing outreach and capacity-building programs focused on innovative project finance, revenue generation, and procurement strategies; and
- Providing tailored technical assistance to advance the financing of major projects and ensure that stewardship protocols related to cost estimates, financing, revenue generation, and procurement practices are in place.

Responsible Officials:

Regina McElroy, Director, Office of Innovative Program Delivery, FHWA

St. Lawrence Seaway System Reliability (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. The St. Lawrence Seaway directly serves the eight-state, two-province Great Lakes region, which represents the world's fourth largest economy. 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 the SLSDC be open and navigable continuously during the navigation season.

The 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.

Strategies and Next Steps

The 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.

The 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, the SLSDC coordinates closely with the U.S. Coast Guard on safety, security, and environmental programs.

Responsible Officials:

Thomas Lavigne, Associate Administrator for Infrastructure Management and Strategic Programs, SLSDC

Strategic Objective 3.2—Increase Access to Foreign Markets

Increase access to foreign 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 OVERVIEW

The recent trend towards 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 MAP-21, we will focus transportation infrastructure investments on projects that will particularly benefit U.S. exports.

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

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Bilateral Agreements (OST)								
Reach new or expanded bilateral and multilateral agreements to remove market-distorting barriers to trade in transportation.	4	7	4	4	5	3	N/A	Met (2013)

PERFORMANCE PLAN

Bilateral Agreements (OST)

Performance Goal: Reach 3 or more bilateral and multilateral aviation agreements to remove market-distorting barriers to trade in transportation.		
Performance Measure: Number of bilateral and multilateral aviation agreements.	2015	2016
Performance Target	3	3

Overview

The U.S. achieved Open Skies with over 100 aviation partners and incremental liberalization with others. DOT is continuing its Open Skies outreach to aviation partners around the globe including China, Vietnam, South Africa, Mexico, Russia and the former Commonwealth of Independent States (CIS) republics. A best practices template is also being developed for the implementation of Open Skies agreements to enhance the prompt usability of negotiated rights with minimum governmental intervention.

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, private sector stakeholder events;
- Recurring international forums with key partners, with a growing emphasis on priority countries under the President's National Export Initiative; and
- Senior level trips to key partner countries, during which multiple meetings normally take place.

Technology transfer and capacity building program is a key component of: The Safe Skies for Africa Program;

Transportation interests advanced in targeted markets around the world through:

- Conducting face-to-face formal negotiations with foreign governments;
- Coordination with the Department of State in developing U.S. negotiating positions; and
- Working with U.S. aviation stakeholders to identify liberalization targets and resolve business issues.

Partners include the Department of State, Department of Commerce; aviation community industry groups, including Air Transport Association, National Air Carrier Association, Airports Council International North America; individual airlines, airports, Homeland Security (Transportation Security Administration), the U.S. Trade and Development Agency, communities and labor unions.

Responsible Officials:

Susan 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 of Transportation (OST).

PERFORMANCE REPORT

Progress Update

Highways Research and Development (FHWA)

In 2009, Federal Highway Administration (FHWA) launched Every Day Counts (EDC) in cooperation with the American Association of State Highway and Transportation Officials (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.

Proven innovations and enhanced business processes promoted through EDC facilitate greater efficiency at the state and local levels, saving time and resources that can be used to deliver more projects for the same money. By advancing 21st century solutions, the highway community is making every day count to ensure our roads and bridges are built better, faster and smarter. 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 share best practices. These summits begin the process for states, local public agencies and Federal Lands Highway Divisions to focus on the innovations that make the most sense for their unique program needs, establish performance goals and commit to finding opportunities to get those innovations into practice over the next two years.

Throughout the two-year deployment cycle, specifications, best practices, lessons learned and relevant data are shared among stakeholders through case studies, webinars and demonstration projects. The result is rapid technology transfer and accelerated deployment of innovation across the nation.

EDC employs a focused, state-based approach for rapid innovation deployment. The EDC process brings national attention to innovation, elevates the conversation to decision-makers and provides technical support through various forms of interaction. The top-down and bottom-up engagement of highway stakeholders raises awareness of various innovations and increases the knowledge base to support implementation.
Since EDC's inception, every State department of transportation has used two or more of the innovations promoted under EDC. The following highlights provide a glimpse of innovation deployment by state and local transportation agencies along with the resulting benefits:

- Since October 2010, transportation agencies have designed or constructed more than 2,500 replacement bridges using accelerated bridge construction technologies. For example, the Nevada DOT replaced two bridges in Mesquite using slide-in bridge construction. The roadway was shut down for just 56 hours before traffic resumed as normal, compared to the months of construction zone delays under traditional construction methods. The slide-in approach saved an estimated $12.7 million in time and fuel costs for commuters. The Rhode Island DOT replaced the 57-year old Frenchtown Brook Bridge using a prefabricated superstructure, substructure and foundation systems. The new bridge was completely prefabricated off-site and installed in place. This innovative approach increased safety, enhanced quality and allowed the contractor to replace the bridge during a 33-day road closure instead of the six months required under traditional methods. A comprehensive economic analysis including user costs shows that the project saved road users about $2 million.

- During 2011-2012, the time period often referred to as EDC-1, over 150 new or updated programmatic agreements were initiated to establish a streamlined process for handling routine environmental requirements. Currently, 37 states have at least two programmatic agreements in place. For example, the District of Columbia DOT reports using programmatic agreements on about 50 projects a year, resulting in time and cost savings estimated at about 1,500 person-hours annually. The Oregon Endangered Species Act Programmatic Agreement with National Marine Fisheries Service reduces 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 5 to 30 percent of the total asphalt produced as an innovation promoted through EDC. The use of warm-mix asphalt is estimated to have saved over $600 million in fuel use during production. These are savings that contractors can pass on to state and local public agencies. In the next three to five years, warm-mix asphalt is expected to increase to over 75 percent of total production. Forty-seven 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 (ASCT) to adjust the timing of red, yellow and green lights to accommodate changing traffic patterns and ease traffic congestion. Now, over 100 agencies are implementing this technology

To institutionalize the deployment of these innovative technologies and practices, FHWA is encouraging each state to a create State Transportation Innovation Council (STIC). A STIC is an established group of representatives from various levels of the highway community in each state tasked with comprehensively and strategically considering sources of innovation. The STIC puts the state in the driver's seat to select the innovations that best fit its unique program needs and quickly put those innovations into practice. As of September 2014, 45 States had 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.

To help STICs institutional innovations within their State, 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. Example activities may include developing standards and specifications, preparing standard operating procedures or technical guidance, developing training, etc. In FY 2014, a total of $3,517,420 was awarded to 36 STICs 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 $30 million has been allocated to fund the program. As of September 2014, thirteen awards have been issued totaling $7,999,121.

The second Strategic Highway Research Program (SHRP2) complements the EDC and STIC initiatives. In coordination with AASHTO, FHWA is encouraging transportation agencies to field test proven research results, referred to as SHRP2 Solutions, to determine if they will ultimately be adopted as standard business processes and practices. Through the Implementation Assistance Program (IAP), FHWA provides financial and technical assistance to eligible state departments of transportation, MPOs, local transportation entities and others to help offset the costs and risks of early adoption of innovation. Highlights of FHWA's FY 2014 achievements with SHRP2 implementation are described below:

- The first four rounds of the IAP have been very successful, putting 24 SHRP2 solutions to work on approximately 200 projects in 49 states and the District of Columbia. In addition to state DOTs, MPOs, and local agencies, IAP participants include tribal agencies and FHWA Federal Lands Divisions. Rounds 5 and 6 are planned for FY2015.

- FHWA and AASHTO have instituted a programmatic process to evaluate the success of SHRP2 solutions based on outcome, output, and impact metrics. Baseline data has been gathered for many of the SHRP2 products under implementation, and will be collected via various methods for those products not yet under implementation or for which no data was originally gathered.

- FHWA and AASHTO have broadened the target audience for marketing, communications, and education of SHRP2 solutions, with a greater emphasis on local governments, the consultant/contractor communities, and universities. Information about SHRP2 is widely disseminated through ongoing outreach to transportation agencies and other practitioners, both directly and through numerous national associations and organizations. Outreach to the academic community has begun as well, and preparations are underway to launch a SHRP2 education initiative in FY 2015 to recognize universities that demonstrate ways to integrate SHRP2 innovations into undergraduate and/or graduate transportation-related curricula. On the international front, FHWA shares SHRP2 updates with the Forum of European Highway Research Labs (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 (ARRB) is currently reviewing selected SHRP2 Solutions for implementation by road agencies in Australasia.

The success of the Research, Training, and Education (RT&E) program can be illustrated through the following examples of innovations:

- The increased use of High Friction Surface Treatments (HFST) to improve highway safety is (in part) a result of research and evaluations conducted by FHWA, industry partners, and leveraging research conducted by foreign countries. This research has shown the use of HRST resulted in decreases in overall crashes, and in many cases, severe crashes. HFST has been tried and proven in 11 States with a total of 23 installations as part of FHWA's Surface Enhancements at Horizontal Curves (SEAHC) demonstration program. Crash data from the U.S. sites from Pennsylvania, Kentucky and South Carolina DOTs report a before/after total crash reduction of 100 percent, 90 percent and 57 percent, respectively, for their respective signature trial projects, for which the after periods equal approximately three to five years. Kentucky has installed 25 additional HFST applications, and after at least one year these sites have witnessed crash reductions of 69 percent.

- Research and evaluations conducted by FHWA, TRB/NCHRP, state DOTs and others on various alternative intersection and interchange geometries have documented decreases in overall crashes, and in many cases, severe crashes (those resulting in injury or fatality), when compared to conventional intersections. For example, roundabouts are becoming increasingly common across the United States. They are consistently proving their ability to reduce severe crashes in those locations by an overall average 80 percent according to the AASHTO Highway Safety Manual. Other alternative designs, such as the diverging diamond interchange, are quickly becoming popular for many reasons, particularly their ability to reduce crashes.

- FHWA has been working with partners from various universities in cooperation with State DOTs and industry to advance the state-of-practice in condition assessment of concrete bridge decks, pre-stressed girders, and post-tensioned bridges through automation using advanced technologies. The data collected benefits bridge owners, who can use these data to make decisions for planning, operations, and for prioritizing their asset's maintenance and rehabilitation plans. FHWA's Long-Term Bridge Performance program (LTBP) envisioned, planned, designed, and constructed a novel robotic system, the RABIT™ bridge inspection tool, to enhance assessment of concrete bridge decks by integrating multiple non-destructive evaluation technologies, in collaboration with Rutgers University. This allows the FHWA to provide bridge owners with a better understanding of concrete bridge deck performance by characterizing three of the most common deterioration types in concrete bridge decks: rebar corrosion, delamination, and concrete degradation. The system has also been complemented by an advanced data analysis, data interpretation and 3D visualization platform.

- Since 1989, the Long Term Pavement Performance program (LTPP) has collected high quality, consistent data characterizing the performance of nearly 2,500 in service highway pavement test sections. Analysis of the collected data has yielded findings concerning the factors that influence pavement performance that highway agencies can apply to make evidence-based decisions concerning pavement design and rehabilitation. For example, based on LTPP findings that the use of skewed joints does not improve the performance of jointed concrete pavements, Pennsylvania discontinued the use of skewed joints, thereby reducing pavement construction costs. More recent LTPP findings provide the evidence of positive performance to support recycling asphalt pavement. The FHWA is developing improved test methods to support evidence-based decision-making during construction. For example, through a Cooperative Research and Development Agreement (CRADA), FHWA is developing an asphalt binder tester that will enable road agencies to easily test more samples and reduce or eliminate more costly testing. This will cut costs and catch possible contaminated materials before they are placed thereby improving performance.

- FHWA has been conducting research to explore the benefits of connected vehicles. Recent field testing at Turner-Fairbank Highway Research Center (TFHRC) has shown that up to 12 percent emissions reduction and 10 to 20 percent fuel savings can be achieved when a traffic signal communicates its timing information, such as when it will change from red to green, to a connected vehicle. Modeling and simulation research conducted at TFHRC has shown that if all vehicles on the road were connected with each other and the roadside, the effective handling capacity of a freeway can be doubled.

- FHWA's National Household Travel Survey data and information has provided all State and local agencies the foundational information for estimating future travel demand and resolving transportation air quality analysis issues.

- New technology developed at FHWA's TFHRC can survey streets, sidewalks, and curb ramps with great precision, allowing for quick evaluation for Americans with Disabilities

Act compliance, improving sidewalk access and the livable community experience for everyone.

Railroad Research and Development (FRA)

FRA's R&D program produces long-term benefits. The work that began 5 to 10 years ago contributes to today's safety record. 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.

FRA's Train Control and Communication activity has been developing positive train control related technologies for several years to help ensure implementation is achieved. Notable successes to date include creation of an adaptive braking enforcement algorithm and development of interoperability standards in collaboration with the railroad industry. With these developments, the railroads were able to implement positive train control systems, such as Amtrak's system in Michigan and BNSF Railway's system in Illinois and Texas.

Information Gaps:

Highway Related Research (FHWA)

Most projects undertaken using Research and Development (R&D) program funds have built-in methods to track performance. In the short-term, the use of expert reviews and feedback from program stakeholders ensure program performance is on the right track. In the mid-term, tracking transition of research results into practice is a good measure of research success. In the long term, retrospective studies and analyses are designed to better understand how FHWA-sponsored research has an impact on DOT and societal goals.
In addition, FHWA is in the process of developing a performance and evaluation system for its R&T program to assess and communicate the value and effectiveness of FHWA R&T, to ensure stakeholders and Congress understand their return on investment of Federal funds. However, several steps need to take place before the R&T program performance can be evaluated: data and information gathering, target setting, and documenting investment decisions. Reports for the first set of programs and projects that will be evaluated as part of this new framework are scheduled to be ready by the end of FY 2015.

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, science, technology, engineering and mathematics (STEM) 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 Rail Administration (FRA), Maritime Administration (MARAD), Federal Aviation Administration (FAA), and Office of the Transportation Secretary (OST).

PERFORMANCE REPORT

Performance Measure	Actual					2014		2014 Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Maritime Academy (MARAD)								
Number of U.S. Merchant Marine Academy (USMMA) graduates.	198	198	205	219	189 (r)	210	224	Met
Number of State Maritime Academy graduates.	N/A	575	545	642(r)	658 (r)	657	734	Met

Note: (r) Revised

Progress Update

Maritime Academy (MARAD)

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 2014, the USMMA graduated 224 midshipmen with US Coast Guard

(USCG) credentials and the state maritime academies graduated 734 cadets all of whom also earned USCG Merchant Mariner Credentials (MMC). 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 90 percent of our Nation's exports and imports move on ships. This industry is vital for our national defense, national security and national industrial base.

FHWA

In FY 2014, the National Highways Institute provided training to 36,638 individuals across 178 course offerings of instructor led, web-based and blended training approaches. Instructor-led training sessions accounted for 12,605 participants in 548 hosted sessions.

Eisenhower Program fellowships were awarded to 175 university graduate and undergraduate students. Of the total, 87 were awarded to the non-minority institution students, and 88 were awarded to Minority Institutions of Higher Education.

PERFORMANCE PLAN

United States Merchant Marine Academy (MARAD)		
Performance Goal: 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.		
Indicator: Number of USMMA graduates with USCG credentials	2015	2016
Performance Goal	229	238
State Maritime Academy Program (MARAD)		
Performance Goal: Provide the highest quality USCG credentialed officers and other personnel for the merchant marine and national maritime industries.		
Indicator: Number of SMA graduates (participating in the program) with USCG credentials	2015	2016
Performance Goal	660	660

United States Merchant Marine Academy (MARAD)

Overview

The U.S. Merchant Marine Academy (USMMA or Academy) is an accredited Federal institution of higher education operated by DOT and MARAD. The 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. The USMMA offers a four-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 License 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 security and national industrial base. Academy graduates are vital to ensuring that the Nation has a home grown source of manpower in the event that U.S. flagged 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.

Strategies and Next Steps

Though the USMMA seeks to improve the overall percentage of students who graduate within four 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;
- Hiring of a midshipmen activities director 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; and
- Centralizing simulator management and updating the Academy's simulator plan in order to ensure long term simulator support of academic requirements.

Responsible Officials:

RDML Susan L. Dunlap, Deputy Superintendent, U.S. Merchant Marine Academy

State Maritime Academies (MARAD)

Overview

MARAD's State Maritime Academies (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 merchant marine and contributes to national defense and homeland security.

MARAD's SMA program provides direct support and training vessels 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 Program (SIP); (2) annual direct assistance to each of the six SMAs for maintenance and support and school ship fuel; and (3) training school 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 merchant marine officer licensing requirements.

This industry is vital for our national defense, national security 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 Department of Defense, Department of Homeland Security/Federal Emergency Management Agency and other Federal Agencies.

Strategies and Next Steps

The SMA program effectively targets federal resources in a well-defined, cost-shared partnership with the six state maritime academies 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 state academies for maintenance, support and fuel for training vessels.
- Maintain school ships in a safe and seaworthy condition, and in full compliance with federal laws and regulatory requirements.

Responsible Officials:

Kevin Tokarski, Associate Administrator for Strategic Sealift, MARAD

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.

Strategies

Women, minorities, disadvantaged individuals and returning military veterans are under-represented in highway construction. FHWA's On-the-Job Training/Supportive Services program partners with the transportation construction industry targets to provide training and apprenticeship opportunities designed to move them into journey-level positions in skilled and semi-skilled crafts. The Ladders of Opportunity program will provide $30 million for each year under GROW AMERICA to help build a skilled and diverse transportation workforce and create career pathways for disadvantaged populations, leveraging existing funding including FHWA's existing On-the-Job Training/Supportive Services program (OJT/SS) and workforce, adult and higher education, and apprenticeships.

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 6-12 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 (NHI) 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 Dwight David 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 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.

- 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 (TEDP) 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 TEDP provides for innovation in workforce development.

Next Steps

The On-the-Job Training 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 the National Highway Institute, Local Technical Assistance Program, Eisenhower Fellowships, Transportation Education Development Program (TEDP) 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 TEDP 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 Ladders of Opportunity program provides incentives and resources for States to enhance their efforts to ensure that a skilled and diverse workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

Responsible Officials:

Amy Lucero, Director of Technical Services, FHWA.
Warren Whitlock, Associate Administrator, Office of Civil Rights, FHWA.

Strategic Goal:

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 towards 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 of all income levels with unprecedented choices in where they can live, and the ability to own a single-family home. 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. The Department of Commerce estimates that the average American household spends $7,658 annually to buy, maintain, and operate personal automobiles. Many communities lack alternatives to auto travel. Fewer than 5 percent of households are located within a half-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 easy 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 of Transportation (OST).

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Pedestrian and Bicycle Access (FHWA)								
States with policies that improve transportation choices for walking and bicycling. Discontinued	N/A	21	24	26	28	N/A	**	**
Number of created and/or significantly improved pedestrian and bicycle transportation networks. New	N/A	N/A	N/A	N/A	N/A	25	**	**
Increasing Passenger Rail								
Number of intercity passenger rail miles traveled.	6.16 billion	5.90 billion	6.33 billion	6.80 billion	6.80 billion	6.90 billion	6.65 billion	Not Met
** Data will be available in March 2015								

Progress Update

Pedestrian and Bicycle Access (FHWA)

More than 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 2014, 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 is preparing updated guidance for the Transportation Alternatives Program (TAP) in a Question and Answer format that addresses implementation issues identified as States and communities moved forward with eligible projects. Some of these projects may have formerly been done under SAFTEA-LU Transportation Enhancements, Safe Routes to School, and the Recreational Trails Program. 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.

To build on this progress, FHWA increased efforts to promote best practices related to quality of life in communities, multimodal transportation, and collaboration with non-traditional 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 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.

In addition, FHWA is advancing a research project focused on the planning and design of separated bicycle lanes, which are exclusive bike facilities physically separated from motor traffic and distinct from the sidewalk. The project will include a detailed safety analysis of existing separated bike lanes throughout the U.S. and cover issues such as design flexibility, accessibility, maintenance, and intersection design. The final report will offer planning considerations and a flexible menu of design recommendations related to separated bicycle lanes.

FHWA continued to support the Partnership for Sustainable Communities by developing a master list of livability-related decision support tools 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 Livability 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 and Streets as Places reconnect transportation agencies with their customers and their mission, while creating great communities; and 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 Context Sensitive Solutions.

Increasing Passenger Rail Ridership (FRA)

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 to previous years and projections. As recently funded service improvements take effect—new 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.

Information Gaps

Pedestrian and Bicycle Access (FHWA)

As the recent Non-motorized Transportation Pilot Program (NTPP) demonstrated, the variety of potential economic benefits of pedestrian and bicycle infrastructure and programming investments 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. However, there is only limited data available for this type of analysis. 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 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 will also be 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.

Pedestrian and Bicycle Access (FHWA)		
Performance Goal: 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 connections and enhance transportation choice to 65 by FY 2018.		
Indicator: Number of new or significantly improved pedestrian and bicycle transportation networks that provide functional connections and transportation choices.	2015	2016
Performance Target	25	35
Increasing Passenger Rail (FRA)		
Performance Goal: Increase intercity passenger rail ridership to at least 7.5 billion miles traveled by the end of FY 2018.		
Indicator: Intercity passenger rail miles traveled.	2015	2016
Performance Target	6.90 billion	7.05 billion

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 special needs, as well as greater use of alternate 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 has 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, which demonstrated how communities benefit from policies and investments that support walking and bicycling. FHWA recently 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.

Strategies:

FHWA is developing performance measures and indicators 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 U.S. 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 U.S.

FHWA will lead bicycling and walking assessments in 35 states in support of the Department's Pedestrian and Bicycle Safety Initiative. The Pedestrian and Bicycle Safety Initiative aims to improve the safety of the growing number of Americans who are using non-motorized means of transportation to travel to and from work, to reach public transportation, and to reach other important destinations.

Next Steps

Transportation Alternatives Program (TAP) will be used to support projects that create safe and affordable transportation choices in communities across the country. FHWA will 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 Transportation Alternatives Program (TAP) performance evaluation. FHWA will also be 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's proposed 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 the Pedestrian and Bicycle Information Center and the National Center for Safe Routes to School to provide technical resources, online tools, and training opportunities.

Responsible Officials:

Gloria Shepherd, AA for Planning, Environment, and Realty, FHWA

Integrated Planning (FHWA)

Overview

Building quality of life in communities involves a whole of government approach. FHWA and other modal administrations in the Department work 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 that 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 (i.e., local, regional, and state) that provide functional connections and enhance transportation choice.

Strategies

FHWA has developed numerous tools, as well as provided training and capacity building for livability including:

- 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;
- Case studies covering a broad range of policy areas such as expanding transportation choices; 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; and
- 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.

Next Steps

FHWA RT&E will address quality of life in all aspects of transportation, including:

- 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;
- FHWA's Livable Communities Discussion Board, an online forum for practitioners to share information, and engage in questions and ideas on livability; and
- A Community Vision metric tool that will allow practitioners to search for performance measures relevant to their specific circumstances, community and quality of life goals. The tool will include specific livability areas of interest such as accessibility, housing, land use, and economics.

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.

Responsible Officials:

Gloria Shepherd, AA for Planning, Environment, and Realty, FHWA
Joyce Curtis, AA for Federal Lands Highway, FHWA

Increasing Passenger Rail (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.[3] 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.

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

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.[4]

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.

During the last 50 years, poor coordination of U.S. transportation investments, housing, and commercial development increased the prevalence of automobile dependent, inaccessible communities and disinvestment in urban centers and first suburbs. Federal road construction programs promoted wide, high-speed roadways that are poorly suited to pedestrian and bicycle use. 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.

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* 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.

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

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 (and funding in some cases), 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.

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

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
ADA Compliance (FHWA, FTA and FRA)								
States that have developed an Americans with Disabilities Act (ADA) transition plan that is current and includes the public rights-of-ways. (FHWA)	N/A	N/A	13	17	23	25 (r)	24*	Potentially Not Met
Number of Key Rail Stations Verified as Accessible and Fully Compliant. (FTA)	N/A	N/A	513	522	567	531	607	Met
Percent of intercity passenger rail stations that comply with the requirements of the ADA (FRA)	N/A	N/A	N/A	N/A	0%(r)	2%	**	Not Met
Notes: (r) Revised; * Preliminary Estimate; ** Not Available at this time.								

Progress Update

ADA Compliance, FHWA

ADA transition plans are developed after a comprehensive inventory of a State's public right-of-way (PROW) facilities including sidewalks and curb ramps. The entire process including the inventory plus development of a transition plan, takes approximately 18 to 24 months. Although it was projected that at least 6 supplementary States would have ADA transition plans by the end of FY 2014, only 24 had transition plans in place. States having constrained resources, issues or delays with consultants, changes in personnel (e.g., loss of key ADA coordinator), administrative delays, and systematic encounters in accomplishing the PROW portion of the transition plan that is required by 28 CFR 150(d).

A national webinar was held in April with a focus on how to develop an ADA transition plan, as well as how to conduct the inventory. FHWA has established a working group to ensure that all of ADA program instructions meet current standards and are advanced in such a way as to make them easier for our internal and external partners to successfully manage. FHWA has added performance metrics to advance equality, diversity and inclusion under these programs. This will be realized by increasing the number of States with Transition Plans.

ADA Compliance, FRA

ADA compliance projects were funded under the previous Amtrak capital grants program and the Capital Assistance for High Speed Rail Corridors and Intercity Passenger Rail Service program. 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

underway at 110 stations. Amtrak did not make more progress as it reorganized its management structure and approach for addressing remaining accessibility issues.

Accessible Rail Stations, FTA

As of 2013, FTA has continued to exceed its target for key rail stations verified as accessible and fully compliant under the Americans with Disabilities Act of 1990/

Through involvement in several important legal decisions in FY 2014, FTA continued its work to ensure equal access to public transportation. FTA issued four chapters for public comment for its soon-to-be finalized ADA Circular. The four chapters covered “Introduction and Applicability”; “General Requirements”; “Equivalent Facilitation”; and “Complementary Paratransit.” During the year FTA also prepared the final seven chapters (of 12 in total) and expects to finalize the Circular in spring 2015.

PERFORMANCE PLAN

ADA Compliance (FHWA, FTA)		
Performance Goal: 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 (FHWA).		
Indicator: Number of State DOTs with ADA transition plans that include the Public Rights of Way.	2015	2016
Performance Target	31	37
Increase the number of key transit rail stations verified as accessible and fully compliant with ADA from 513 in 2010 to 605 in 2016 (FTA).		
Indicator: Number of Key Rail Stations Verified as Accessible and Fully Compliant	2015	2016
Performance Target	607	607

Intercity Passenger Rail Station Accessibility (FRA)		
Performance Goal: 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]		
Indicator 1: Percentage of intercity passenger rail stations* that are functionally accessible. [New]	2015	2016
Performance Target	94%	96%
Indicator 2: Percentage of intercity passenger rail stations* that have accessible restrooms. [New]		
Performance Target	87%	97%
Indicator 3: Percentage of intercity passenger rail stations* that have ADA-compliant passenger information display systems installed where required. [New]		
Performance Target	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.).

ADA Compliance (FHWA)

Overview

ADA transition plans are required by law and regulation. State and local governments with 50 or more employees are required to perform a self-evaluation, or inventory, of their current services, practices, and facilities such as curb ramps and sidewalks that do not or may not meet ADA requirements. The transition plan, which follows this self-evaluation, describes in detail the methods that will be used to make the public entity's facilities accessible. The plan also specifies the schedule for taking the steps necessary to achieve compliance, which are prescribed in 28 CFR 35.150(d). To date, 23 States have current ADA transition plans that include the public

rights-of-ways. FHWA continued to provide technical assistance to States in developing and implementing their transition plans.

Strategies and Next Steps

An additional 24 States are actively developing ADA transition plans, with the majority of those States projecting a completion date within the next two to three years. Further, FHWA continues to track queries from States requiring a technical assistance response concerning an ADA issue, as well as Section 504 of the *Rehabilitation Act of 1973*. This approach will help FHWA identify specific challenges that create obstacles for the States in developing and/or implementing an ADA transition plan and in meeting regulatory requirements for both the ADA and Section 504.

Goal Leaders

Gloria Shepherd, AA for Planning, Environment, and Realty, FHWA
Warren Whitlock, AA for Civil Rights, FHWA
Robert Arnold (Acting), AA for Federal Lands Highway, FHWA

Accessible Intercity Passenger Rail Stations (FRA)

The *Americans with Disabilities Act of 1990* (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.

Strategies and Next Steps

FRA's National High-Performance Rail System 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 Intercity Passenger Rail Service program, as well as Amtrak's capital and operating grants.

The Current Passenger Rail Service program supports efforts to bring all intercity passenger 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 Intercity Passenger Rail Service program.

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

ADA Compliance (FTA)

Overview

The Americans with Disabilities Act (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 who are still working to meet their extended deadlines for completion of their key station obligations.

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; and
- Continue to provide research and technical assistance on best practices in transit asset management.

Goal Leader

Linda Ford, Associate Administrator for Civil Rights

Strategic Goal:

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 U.S. 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 emissions. About 27 percent of all U.S. greenhouse gas (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 our is 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 greenhouse gas emissions of transportation systems.

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

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Aviation Energy Efficiency (FAA)								
Percent reduction in aviation fuel burned per revenue-ton-mile from the FY 2000 energy use baseline.	19.41%	19.08%	22.28%	22.72%	21.66%	18%	22.4%	Met
Alternative Fuel and Hybrid Vehicles (FTA)								
Percent of Alternative-Fuel and Hybrid Vehicles in the Transit Revenue Service Fleet.	42%	43%	44%	45%*	46%	46%	TBD^	Met (2012)
Sustainable Practices at DOT (OST)								
Percent reduction in greenhouse gas emissions from facilities and fleets.	N/A	7.9%	15.4%	29%	29.4	7%	**	Met (2013)
Percent reduction in green-house gas emissions from employee business travel and commuting. (OST)	N/A	N/A	(4.7%)	0.1%	27.3%	5%	**	**
Percent reduction of vehicle fleet petroleum use.	14%	5%	4.9%	14.5%	22.1%	14%	**	Met (2013)
Alternative Fuel and Hybrid Vehicles (FTA)								
Percent of Alternative-Fuel and Hybrid Vehicles in the Transit Revenue Service Fleet.	42%	43%	44%	45%*	46%	46%	TBD^	Met (2012)

Notes:
* Preliminary Estimate; **Data will be available in February, 2015; ^ Actuals Available Following Release of Conditions and Performance Report

Progress Update

Aviation Efficiency (FAA)

FAA's current energy efficiency target is based on a two percent per year improvement, relative to a CY 2000 baseline (i.e., CY 2000 = 0 percent). For FY 2014, the target in terms of fuel consumed by payload (the load carried by an aircraft that is not necessary for its operation, for example, passengers or cargo) transported and distance flown decreased18 percent relative to the baseline. With a result of 22.4 percent decrease, FAA was successful in achieving its energy efficiency goal.

In FY 2013, supported by research aimed at improving confidence in accurately representing aviation's energy efficiency, FAA modernized its energy efficiency metric by including payload transported, whereas in the past, due to lack of payload data, included were only fuel consumption and distance flown. In addition, the metric was updated to gather better information about efficiency by relating actual distance flown on real operations to the shortest possible distances between all origin and destination pairs. Results clearly show the influence of including payload and relating the actual distance flown to shortest distance between origin and destination in the computation for demonstrating NAS energy efficiency.

Alternative Fuel and Hybrid Vehicles (FTA)

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 46% of the transit revenue fleet being comprised of alternative-fuel and hybrid vehicles in 2012 and continued to exceed this goal in 2013. The calculation of this metric is based on data received through the National Transit Database. The performance for 2014 will be available in fall of 2015.

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 1,085 Rail vehicles and 6,802 buses. Of the 6,802 buses that were in grants, 2,429 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.

Energy Use and Emissions Reduction (FHWA)

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. The analytic model has been used by several State departments of transportation to inform policy analysis. FHWA is developing a spreadsheet calculator to estimate energy use and greenhouse gas emissions from the construction and maintenance of transportation infrastructure. The calculator will facilitate the comparison of transportation plan alternatives, NEPA project alternatives, and alternative construction and maintenance practices. The calculator was pilot tested by several State departments of transportation and MPOs in late 2013. A final version was released in 2014 along with a handbook on addressing greenhouse gas emissions through performance-based transportation planning.

Sustainable Practices at DOT (OST)

OSSM completed the following accomplishments in fiscal year 2014:

- Used the *Greenhouse Gas and Sustainability Data Report* template developed by the Department of Energy, submitted DOT's Greenhouse Gas (GHG) inventory to the Department of Energy 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 13514.

- Submitted updates and additional supportive data for bi-annual OMB Sustainability and Energy Scorecard.

- Provided ongoing technical support and guidance to each of the 10 Operating Administrations regarding activities such as Energy Efficiency and Renewable Energy Consumption, High Performance Sustainable Buildings, 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.

Performance Information Gaps:

Energy Use and Emissions Reduction (FHWA)

FHWA recently examined 72 projects selected from the more than 8,100 projects funded through the Congestion Mitigation and Air Quality (CMAQ) Improvement 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 healthcare, education, jobs, nutritional food, and safe recreational areas.

FHWA has also been conducting research to explore the benefits of connected vehicles. Recent field tests show that up to a 12 percent emissions reduction and a 10 to 20 percent fuel savings can be achieved when a traffic signal communicates its timing information, such as when it will change from red to green, to a connected vehicle. [5] Modeling and simulation research conducted by FHWA shows if all vehicles on the road were connected with each other and the roadside, the effective handling capacity of a freeway can be doubled.

[5] University of California, Riverside, and Booz Allen Hamilton, AERIS Field Study Application: Eco-Approach to Signalized Intersections, Draft Task 3 Report, U.S. Department of Transportation, Federal Highway Administration, September 2012.

PERFORMANCE PLAN

Improve Aviation Energy Efficiency (FAA)

Performance Goal: Improve NAS efficiency by at least 26% by FY 2018, relative to the FY 2001 baseline.		
Indicator: Percent reduction in aviation fuel burned per revenue-ton-mile from the FY 2001 energy use baseline.	2015	2016
Performance Target	-20%	-22%

Alternative Fuel and Hybrid Transit Vehicles (FTA)

Performance Goal: Increase the percentage of alternative-fuel and hybrid vehicles in the total transit revenue service fleet to 44% in 2010 to 50% in 2016		
Performance Indicator: Percentage of alternative-fuel and hybrid vehicles	2015	2016
Performance Target	48%	50%

Sustainable Practices at DOT (OST)

Performance Goal: Reduce DOT building energy intensity use 30% from an FY2003 baseline by FY 2015. FY 2016 and beyond targets for building energy intensity are yet to be provided by OMB and the President		
Indicator: Percent reduction from the FY 2003 energy use baseline.	2015	2016
Performance Target	30%	30%
Performance Goal: Reduce DOT vehicle fleet petroleum use 30% from an FY 2005 baseline by FY 2020.		
Indicator: Percent reduction from the FY 2005 fleet petroleum use baseline.	2015	2016
Performance Target	20%	22%
Performance Goal: Obtain 20% of total energy from renewable sources by 2020. (NEW)		
Indicator: Percent of energy consumed from renewable resources.	2015	2016
Performance Target	10%	15%
Performance Goal: Reduce greenhouse gas emissions by 12.3% from facilities and fleets by 2020 from a FY 2008 baseline.		
Indicator: Percent of greenhouse gas emissions reduced from the FY 2008 baseline.	2015	2016
Performance Target	8%	9%
Performance Goal: Reduce greenhouse gas emissions by 10.9 % from employee business travel and commuting by 2020 from an FY 2008 baseline		
Indicator: Percent of greenhouse gas emissions reduced from employee business travel and commuting from an FY 2008 baseline.	2015	2016
Performance Target	6%	7%

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. However, there is growing concern over aviation's impact on the environment and public health. 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 greenhouse gas 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.

The 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 greenhouse gas 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.

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

Strategies

The strategic target is to improve NAS energy efficiency by 2 percent per year beginning in calendar year (CY) 2010. The performance targets indicate that aircraft flying in the NAS burn less fuel (synonymous with less CO2 emissions) per distance flown while moving revenue-generating weight (passengers + cargo).

From CY2000 through CY2012, the NAS energy efficiency has been better than government targets. This demonstrates continued progress in maintaining fuel efficiency of commercial aircraft operations within the airspace system, thereby minimizing environmental impact. The continuing economic challenges and its impact on commercial airline operations will affect this outcome; however, recovery is anticipated in the near term.

FAA anticipates smaller efficiency gains that do not keep pace with the more stringent target in future years of this performance indicator. FAA forecasts that aircraft and engine technology advancements and air traffic management improvements may not sufficiently offset traffic growth, congestion and delays.

Paramount to addressing fuel efficiency will be a continued focus by commercial airlines to modernize their fleets. The 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.

NAS energy efficiency is 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.
CLEEN industry participants may choose to end a technology development effort based on company needs, increasing level of technical and programmatic risk and significant changes in market demand.

The FAA's worldwide partners include the International Civil Aviation Organization, which is focused on developing environmental standards and recommended practices, as well as other Federal Agencies (i.e. the U.S. Environmental Protection Agency, 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 new Aviation Sustainability Center (ASCENT, the FAA Center of Excellence for Alternative Jet Fuels and Environment). NASA works with the 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 the FAA and NASA to commercialize technologies from the research phase and develop operational procedures to address environmental impacts. Airlines for America works with the FAA to identify fleet and air traffic procedural changes that improve fuel efficiency.

CLEEN has a partnership with industry. Industry funds at least 50% 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, the FAA has

also been a major partner in the Commercial Aviation Alternative Fuels Initiative (CAAFI, 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 aviation fuels.

Next Steps

The 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 energy 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.

Responsible Officials:

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

Energy Use and Emissions Reduction (FHWA)

Overview

The Congestion Mitigation and Air Quality (CMAQ) Improvement 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 the mobile source emissions for which an area has been designated nonattainment or maintenance of the ozone, carbon monoxide and particulate matter National Ambient Air Quality Standards (NAAQS) by the EPA. Since its inception, $30 billion in CMAQ has supported more than 29,000 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 greenhouse gas (GHG) emissions. FHWA continues to promote the use of the Energy and Emissions Reduction Policy Analysis Tool (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.

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

CMAQ programs will support eligible transportation projects that help to reduce emissions in EPA designated nonattainment or maintenance areas. MAP-21 emphasized the importance of reducing particulate pollution, setting aside a portion of CMAQ funds for that purpose.

FHWA is also conducting research to explore the implications of implementation of electric vehicle (EV) infrastructure on the Federal-aid Program to better understand how the deployment of EVs will impact the mission of the FHWA, the financial implications for available revenues, and potential infrastructure development needs for EV deployment in the U.S.

Responsible Officials:

Gloria Shepherd, Associate Administrator, FHWA Office of Planning, Environment, and Realty

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 non-rail. 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.

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. FTA previously had a Clean Fuels Bus Program to specifically fund such purposes, but that program was ended by Congress in 2012. 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 percent of alternative-fuel and hybrid vehicles in the transit revenue service fleet.

Goal Leader

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

Sustainable Practices at DOT (OST)

Overview

Under Executive Order (EO) 13514, DOT is required to increase efficiency; measure, report and reduce greenhouse gas emissions in its own facilities and operations. 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 improving energy efficiency, reducing petroleum consumption in vehicle fleets, using more renewable energy and using technology alternatives in place of travel to reduce the greenhouse gas 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 the U.S. Environmental Protection Agency's ENERGY STAR Portfolio Manager system. Finally, the Department is partnering with other Federal agencies to achieve a common goal. DOT continues to collaborate with the Department of Energy's Federal Energy Management Program (FEMP) to provide technical assistance with improving the design of new energy efficient buildings and the evaluation of existing buildings.

Strategies and Next Steps

Leadership in Sustainability Scorecard – The Department will continue to evaluate each Operating Administration'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 has completed nine sustainability policy orders and will continue working on supporting guidance documents which 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 greenhouse gas 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.

Energy 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.

The Department continues its strategic partnership with DOE's Federal Energy Management Program to implement energy, environmental, and sustainability activities. This partnership is identifying opportunities to enhance Energy Independence and Security Act (EISA) evaluations and water conservation measures at DOT buildings. It will also help to increase the number of High Performance Sustainable Buildings (HPSBs) within DOT. Finally, the partnership has already identified opportunities to improve fleet performance by reducing petroleum consumption and increasing alternative fuel use in DOT vehicles.

Other key partners are FAA Real Estate Management System (REMS) managers, the Environmental Protection Agency, the Office of the Federal Environmental Executive (OFEE), the Council on Environmental Quality (CEQ), the Office of Management and Budget (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 greenhouse gas emissions inventory, and the employee commuter choice survey. Conversely, DOE, CEQ, and OMB serve as oversight agencies, which issue guidance and review DOT's annual sustainability and energy-related reports.

Goal Leader:

Keith Washington, Acting Assistant Secretary for Administration & Senior Sustainability Officer

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 13604 to streamline infrastructure projects, and other related efforts.

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

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Ship Disposal Program (MARAD)								
Cumulative number of ships (2010-2017) safely removed from the Suisun Bay Reserve Fleet for disposal.	N/A	11	26	36	44	32	52	Met
Hazardous Liquid Pipeline Spills (PHMSA)								
Hazardous Liquid Pipeline Spills With Environmental Consequences.	112(r)	94(r)	117(r)	123	121(r)	107	146*	Not Met
Aviation Environmental Impacts (FAA)								
U.S. population exposed to significant aircraft noise around airports.	291,768	317,596	315,293	315,000	319,000	356,000	321,000	Met
DOT Environmental Impacts (OST)								
Percent improvement in water efficiency.	3.3%	(1.2%)	(9.7%)	0.9%	24.1%	14%	N/A	Met (2013)
Percent recycling and waste diversion.	N/A	N/A	N/A	11%	20%	40%	N/A	Met (2013)
Percent of All Applicable Contracts That Meet Sustainability Requirements.	N/A	N/A	95%	95%	95%	95%	**	Met (2013)

Notes:

(r) Revised; * Preliminary Estimate; ** Data Available in February 2015.

Progress Update

Hazardous Liquid Pipeline Spills (PHMSA)

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 2002-2013, the number of spills with environmental consequences declined by 10 percent every five years, on average, with fluctuations year to year. However, from 2011-2013, 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 2010-2013, 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 pipeline 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 environmental consequences of failures through improved leak detection and the use of product controls 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 pumps 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 our 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 socialize 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.

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.

Ship Disposal Program (MARAD)

The Ship Disposal program provides resources to properly dispose of obsolete government-owned merchant ships maintained by the Maritime Administration in the National Defense Reserve Fleet (NDRF). This program conducts ship disposal primarily through dismantling/recycling, for obsolete, Federally-owned, merchant-type 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 ensure that a costly backlog of obsolete ships do not accumulate at MARAD's fleet sites.

In FY 2014, MARAD exceeded its cumulative target and is reporting that a total of 52 of the 57 SBRF obsolete vessels identified in the consent decree have been removed from the Suisun Bay Reserve Fleet since FY 2010. In accordance with the California consent decree, MARAD has been expeditiously removed vessels from NDRF at Suisun Bay since 2010 in order of highest to lowest risk. Of the 57 vessels identified, five of the remaining SBRF ships are non-retention vessels, which are planned for removal this fiscal year and next, well ahead of the consent decree requirement to remove all 57 ships by the end of FY 2017.

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Aviation Environmental Impacts (FAA)

In FY 2014, with a result of 321,000, FAA achieved the noise exposure goal of keeping the number of people exposed to aircraft noise below 356,000. 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. 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 DNL 65 dB. In 1981, FAA issued 14 CFR Part 150, Airport Noise Compatibility Planning, and as part of that

regulation, formally adopted DNL. Day-Night Average Sound Level, abbreviated as DNL and symbolized as Ldn, is the 24-hour average sound level, in dB, obtained from the accumulation of all events with the addition of 10 decibels to sound levels in the night from 10 PM to 7 AM. 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.

Highway Environmental Impacts (FHWA)

A total of 29 transportation agencies including State departments of transportation, MPOs, and Federal land management agencies across the country are using the Infrastructure Voluntary Evaluation Sustainability Tool (INVEST). This has led to assess their level of implementation of sustainable practices in transportation planning; project development, design and construction, and operations and maintenance activities. Drawing from these success stories, FHWA developed several case studies for use by other States and transportation stakeholders in assessing the applicability of INVESTto their programs and projects.

FHWA pursued several other activities to encourage State departments of transportation, MPOs, and Federal land management agencies to consider mitigation needs early on in transportation planning process. These included promoting the Eco-Logical process that identifies opportunities for early coordination with resource agencies and supports the development of programmatic mitigation plans. FHWA developed and implemented the eNEPA online electronic collaboration and project development tool to help meet this need; and conducted training for State DOTs and other transportation and resource agencies. A prime example of the benefits of the coordination and collaboration with the resource agencies is the effort to establish regional programmatic agreements for the Indiana Bat, and for Atlantic and Shortnose Sturgeon with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, respectively.

FHWA completed numerous actions under MAP-21 that will help to accelerate project delivery. These included implementation of new categorical exclusions with associated training and technical assistance on the consistency in the application of these new provisions; development of guidance on all provisions that would help shorten project delivery timeframes; and advancing required rulemakings.

DOT Environmental Impacts (OST)

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 fiscal year 2014:

- Improved the process and quality of water and waste data collection throughout the OAs;

- Launched comprehensive, DOT-focused training for anyone involved with sustainable acquisition;

- Updated the Department's Strategic Sustainability Performance Plan as per Executive Order 13514; and

- Provided ongoing technical support and guidance to each of the 10 Operating Administrations. OST provides guidance regarding activities such as Energy Efficiency and Renewable Energy Consumption, High Performance 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 Information Gaps

Hazardous Liquid Pipeline Spills (PHMSA)

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 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.

Ship Disposal Program (MARAD)		
Performance Goal: Reduce risk of environmental contamination from disposal of Federally owned vessels by maintaining a 1:1 Ratio of incoming vessels to vessels disposed (Note: New performance goal in FY 2014).		
Performance Measure: Ratio of incoming vessels divided by the number disposed.	2015	2016
Performance Target	1.0	1.0
Hazardous Liquid Pipeline Spills (PHMSA)		
Performance Goal: Reduce hazardous liquid pipeline spills with environmental consequences		
Performance Measure: Hazardous liquid pipeline spills with environmental consequences	2015	2016
Target	83-104	N/A
Performance Goal: Reduce major hazardous liquid pipeline spills with environmental consequences. [New]		
Performance Measure: Major hazardous liquid pipeline spills with environmental consequences	2015	2016
Performance Target	N/A	TBD
Aviation Environmental Impacts (FAA)		
Performance Goal: Reduce the number of people exposed to significant noise around airports to less than 300,000 people in FY 2018.		
Performance Measure: Number of people exposed to day-night average sound levels of 65 dB or greater around US in the previous calendar year.	2015	2016
Performance Target	342,000	328,000
DOT Environmental Impacts (OST)		
Performance Goal: Divert 50 percent of non-hazardous solid waste annually from landfills (excluding construction and demolition waste).		
Performance Measure: Percent of solid waste diverted from landfills.	2015	2016
Performance Target	50%	50%
Performance Goal: Reduce DOT water use 22% from an FY 2007 baseline by FY 2020.		
Performance Measure: Percent reduction from the FY 2007 water use baseline.	2015	2016
Performance Target	16%	18%
Performance Goal: Meet sustainability requirements in 95 percent of all applicable contracts annually.		
Indicator: Percent of contracts that meet sustainability requirements	2015	2016
Performance Target	95%	95%

Ship Disposal Program (MARAD)

Overview

MARAD is the disposal agent for Federal government owned merchant-type vessels totaling 1,500 gross tons or greater (as required by Section 3502 of the National Heritage Act as amended) and has custody of a fleet of non-retention ships owned by the Federal government. These include obsolete merchant ships moored at NDRF 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, as identified in Section 203 of the Federal Property and Administrative Services Act of 1949. Vessels are domestically recycled only at pre-qualified 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 re-use. In 2011, MARAD renewed a Memorandum of Agreement with the U.S. Navy to dispose of its non-combatant 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.

Strategies and Next Steps

It is anticipated that approximately three to five ships per year will be downgraded to non-retention status and added to the disposal queue in FY 2015 and FY 2016. Fluctuations in the actual per ship disposal costs, as a result of regulatory, industry or market factors, will affect the number of ships that can be disposed. It is anticipated that all ship disposals will continue to follow the best practices of 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 on drydock or with approved in-water hull cleaning methods prior to removing ships from one biogeographical area to another for disposal; and

- Conducting open and competitive solicitations for ship disposal services in a best-value manner that 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 obsolete vessel disposal. Other tangible benefits include the continued sale of vessels for recycling that returns sales proceeds to MARAD which 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 United States Merchant Marine Academy and six state maritime academies.

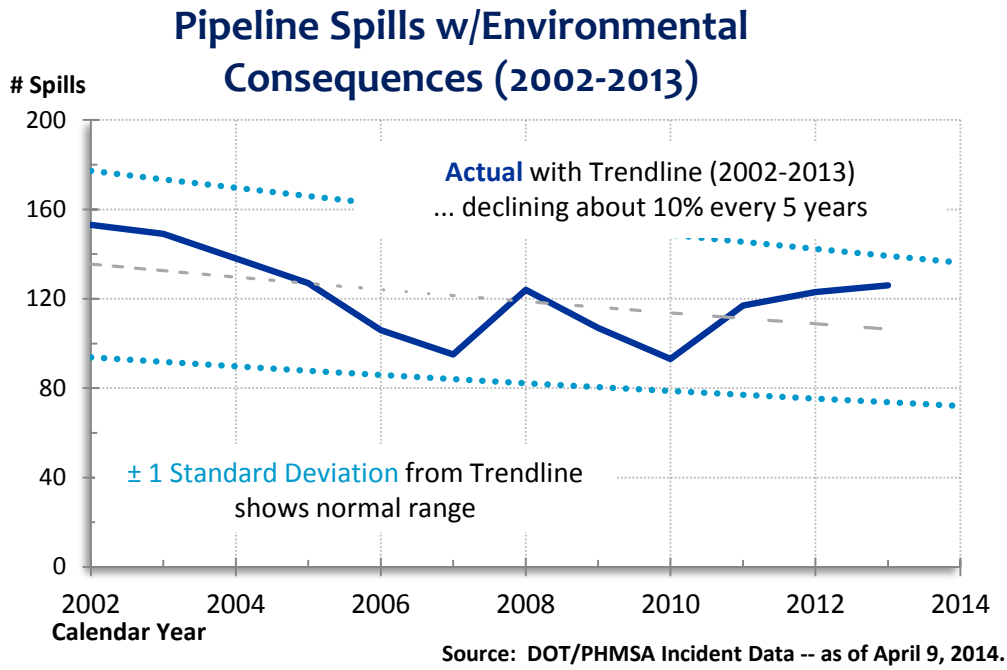
Goal Leader:

Kevin Tokarski, Associate Administrator for Strategic Sealift, Maritime 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 over 191,000 miles of pipelines and nearly 7,000 storage tanks. While this is the safest mode of transportation for hazardous liquids, the volume and nature of the cargo can present an environmental risk, particularly in high-consequence areas.



Strategies

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. Our 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 its primary focus is on prevention, PHMSA recognizes that accidents can still occur. PHMSA's general strategy for reducing consequences of failures is to:
Improve leak detection and the use of product controls 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; the National Pipeline Mapping System provides geospatial information on the national pipeline infrastructure; and the National Pipeline Information Exchange (NPIX) will provide a 360 degree profile of geographic information associated with 2.6 million miles of pipelines within the U.S.

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 many of the hazardous liquid pipelines in 14 States. State and local emergency responders play an important role in mitigating the consequences of incidents when they occur.

Next Steps

Most spills with environmental consequences occur within facilities that support the operation of the pipelines, such as pumps stations and tank farms. Our strategy for dealing with this challenge is 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.

Pipeline corrosion and material failure are the two leading causes of hazardous liquid pipelines. Our 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.

Goal Leader:

Jeffrey Wiese, Associate Administrator for Pipeline Safety

Highways Environmental Impacts (FHWA)

Overview

FHWA is employing multiple approaches that help avoid, minimize, and mitigate transportation-related impacts to ecosystems and communities. These strategies help partners make informed planning, and project development and implementation decisions through identification of alternatives, and analysis of acceptable alternatives, while strengthening environmental outcomes. These approaches include tools to help communities assess the sustainability of transportation plans and programs, and employ the Eco-Logical approach to the development and implementation of transportation projects.

Strategies

In 2012, FHWA launched INVEST, FHWA's sustainability self-assessment tool that enables state DOTs and Metropolitan Planning Organizations (MPOs) to evaluate and improve the sustainability of their transportation plans, projects, and programs. INVEST is now undergoing marketing and deployment on a broader basis, including training and outreach to improve the skills of States and MPOs in its use. INVEST is helping State DOTs, MPOs, and others consider sustainability through every phase of the transportation infrastructure lifecycle, including system planning, project management, maintenance, and operation. The tool helps transportation agencies make informed decisions with limited resources to balance economic, social, and environmental factors.

FHWA pursued several activities to consider mitigation needs early on in transportation planning process. These included promoting the Eco-Logical process that identifies opportunities for early coordination with resource agencies and supports the development of programmatic mitigation plans. FHWA developed and implemented the eNEPA online electronic collaboration and project development tool to help meet this need; and conducted training for State DOTs and other transportation and resource agencies. A prime example of the benefits of the coordination and collaboration with the resource agencies is the effort to establish regional programmatic agreements for the Indiana Bat, and for Atlantic and Shortnose Sturgeon with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, respectively.

FHWA completed numerous actions under MAP-21 that will help to accelerate project delivery. These included implementation of new categorical exclusions with associated training and technical assistance on the consistency in the application of these new provisions; development of guidance on all provisions that would help shorten project delivery timeframes; and advancing required rulemakings.

Next Steps

FHWA will continue efforts in the following priority areas:

- Encouraging the use and implementation of INVEST by State DOTs, MPOs, and other transportation stakeholders. FHWA is collecting feedback from INVEST deployment

program participants with the goal of using this information to make refinements and improvements to the tool. FHWA will also continue to highlight the use of sustainable practices by State DOTs and MPOs, with a focus on those measures with the potential to provide cost savings.

- Implementing Every Day Counts initiatives that will help to mitigate environmental impacts and accelerate project delivery. An example is an effort to improve the quality of environmental documents in coordination with AASHTO and ACEC through specialized training.

- Implementing MAP-21 related activities including the publication of a NPRM to further support the establishment of programmatic agreements.

Responsible Officials:

Gloria Shepherd, Associate Administrator, FHWA Office

Aviation Environmental Impacts (FAA)

Overview

Mitigating noise directly impacts our ability to increase capacity while sustaining our future. While airport expansion projects is the best way to increase capacity, communities and local government are reluctant to build them if they impose increased aircraft noise exposure

Strategies

The number of people exposed to significant noise levels was reduced by about 95 percent between 1975 and 2012. 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, but traffic is slowly starting to recover to pre-2005 levels. Consequently, the actual number of residents exposed to significant noise remains well below the current target, but did slightly increase in 2012. As air traffic continues to recover and grow over time, noise exposure is likely to continue to increase.

The target will continue to be re-assessed 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 trade-offs in achieving reductions in each. When achieving noise reduction, FAA is using a balanced approach which 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 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.

FAA will track progress by estimating the number of people exposed to significant noise. Significant aircraft noise level is currently defined as values greater than or equal to Day-Night Average Sound Level (DNL) 65 decibels (dB)[6]. This is calculated from the Aviation Environmental Design Tool (AEDT). The computational core of AEDT is FAA's Integrated Noise Model (INM) with methodological improvements. INM is the most widely used computer program for the calculation of aircraft noise around airports. Major assumptions on local traffic utilization come from obtaining INM datasets that were developed for an airport or from the Enhanced Traffic Management System (ETMS). The AEDT model calculates individual DNL contours for the top 101 US 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[7]. 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. The FAA has also partnered with NASA in the development of advanced noise reduction technologies and FAA has the Continuous Lower Energy, Emissions and Noise (CLEEN) program to promote acceleration of those technologies 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.

[6] FAA publishes a table of land uses that are compatible or incompatible with various levels of airport noise exposure, expressed in Day-Night Average Sound Level (DNL). 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/.

[7] 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.

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

Next Steps

FAA will continue to support research in the CLEEN program. In addition, research on operational improvements which have the potential to reduce noise will continue to be funded. Longer term, the FAA will promulgate the new international noise standard that was adopted by ICAO as recommended by its Committee on Aviation Environmental Protection (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.

Responsible Officials:

Michael P. Huerta, Administrator, Federal Aviation Administration
Rich Swayze, Assistant Administrator for Policy, International Affairs and Environment, Federal Aviation 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 Executive Order (EO) 13514, 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

Strategies and Next Steps

Leadership in Sustainability Scorecard – The Department will continue to evaluate each Operating Administration'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 has completed nine sustainability policy orders and will continue working on supporting guidance documents which 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 (OFPP) 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 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 2010-2020 energy, environmental and sustainability requirements. In addition, these are incorporated in the DOT 2012-2016 Strategic Plan.

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Goal Leader:

Keith Washington, Acting Assistant Secretary for Administration & Senior Sustainability Officer

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 U.S. in recent history. Climate change research predicts that storms will become stronger, so DOt need to consider climate change impacts throughout the U.S. 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 of Transportation (OST).

PERFORMANCE REPORT

Performance Measure	Actual					2014		2014 Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Vulnerability Assessment								
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.(FHWA)	N/A	N/A	N/A	N/A	N/A	47	63	Met

Progress Update:

Vulnerability Assessment (FHWA)

The number of States, eligible MPOs, and Federal Land Management Agencies (FLMA) conducting a vulnerability assessment increased to 63, 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. As part of the Gulf Coast 2 project, FHWA conducted an overall vulnerability assessment of the Mobile, AL area, and began drafting detailed engineering assessments of select transportation facilities for the purpose of developing 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.

PERFORMANCE PLAN

Assessment of Climate Vulnerabilities (FHWA)

Performance Goal: 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.(FHWA)		
Indicator: Number of state DOTs, MPOs and Federal land management agencies who have conducted vulnerability assessments.	2015	2016
Performance Target	54	62

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.

Strategies

FHWA partners with State Departments of Transportation (DOTs), Metropolitan Planning Organizations (MPOs), and Federal Land Management Agencies (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; and
- 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 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.
- Conduct 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.

Responsible Officials:

Gloria Shepherd, AA for Planning, Environment, and Realty, FHWA

Strategic Goal: 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 itsemployees. DOT Operating Administrations: All Operating Administrations.

PERFORMANCE PLAN

Employee Engagement Index Score (OST)		
Performance Goal: Increase DOT's employee engagement index score on the Office of Personnel Management's (OPM) Federal Employee Viewpoint Survey (EVS) to 70.5% positive responses by 2018.		
Indicator: Employee engagement index score	2015	2016
Performance Target	65.1%	67%
Hiring Persons with Disabilities (OST)		
Performance Goal: Increase hiring of persons with targeted disabilities for eligible positions to 3 percent by 2018.		
Indicator: Percentage of employees with targeted disabilities	2015	2016
Performance Target	1.79%	2.1%

Overview

DOT will refocus its energy and attention on key management practices that address leadership and performance culture and hold management accountable for results. By addressing creativity and innovation, process improvement, poor performance and accountable leadership, DOT's satisfaction rates in leadership and performance culture will improve.

DOT will become a model employer of a diverse workforce that includes people with disabilities. A diverse and productive workforce is DOT's best guarantee for ensuring safe transportation systems for all Americans and in supporting economic competiveness, livable communities, and environmental justice and sustainability in the United States.

Next Steps

- Refocus energy and attention on key management practices that address leadership and performance culture and hold management accountable for results.
- Develop and implement strategies to increase greater innovation and creativity through the use of IdeaHub.
- Develop and implement strategies to improve internal processes
- Develop and implement strategies that address poor performers
- Form a multi-modal team comprised of supervisors and HR specialists to assess, analyze and recommend approaches to addressing poor performers.
- Assess the effectiveness of the DOT performance management system
- Host a number of webinars and presentations for managers and supervisors on disability awareness.
- Maintain and strengthen partnerships with the local vocational rehabilitation offices, and other Federal agencies and organizations to support the recruitment and hiring of persons with disabilities.
- Provide technical assistance and consultation opportunities to employees with disabilities, managers, and staffing specialists on the recruitment, advancement, and retention of persons with disabilities.
- Host quarterly headquarters listening sessions for the internal DOT disability community.

Goal Leaders:

Cynthia M. Vaughan, Director, Departmental Office of Human Resource Management, Department of Transportation

Strategic Objective 6.2—Improve Information Systems and Financial 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: All Operating Administrations.

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Improper Payment Percentage (By Program Tested)								
FAA Airport Improvement Program	0.80%	0.03%	0.89%	0.64%	0.07%	0.50%	0.20%	Met
FHWA Federal-Aid Highways	3.50%	1.40%	0.94%	0.22%	0.20%	0.25%	0.10%	Not met
FRA High-Speed Intercity Passenger Rail Program	Not Tested	Not Tested	Not Tested	0.96%	0.00%	0.25%	1.06%	Not met
FTA Capital Investment Grants	0.90%	0.00%	0.00%	0.00%	0.04%	0.25%	0.00%	Met
FTA Formula Grants	0.20%	0.16%	0.00%	0.44%	0.73%	0.50%	2.91%	Not Met
FAA Facilities and Equipment – Disaster Relief Act	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested	N/A*	0.00%	N/A
FHWA Emergency Relief Program – Disaster Relief Act (Hurricane Sandy-related only)	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested	N/A*	0.00%	N/A
FRA Grants to Amtrak – Disaster Relief Act	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested	N/A*	0.41%	N/A

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
FTA Public Transit Emergency Relief Program – Disaster Relief Act	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested	N/A*	0.02%	N/A
* 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

Financial Management (OST)

FY 2014 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% and $10 million of program outlays or $100 million of program outlays regardless of the percent. In FY 2014, 8 of 9 DOT programs tested for improper payments were below the statutory threshold.
In FY 2014, DOT's Operating Administrations 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 to prior years.

DOT initiated a department-wide improper payment risk assessment of all programs in FY 2014. 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.

PERFORMANCE PLAN

Cybersecurity (OST)		
Performance Goal: Strengthen the cyber security posture of the Department through holistic situational awareness and risk management capabilities.		
Indicator: Percent of systems governed by Automated Continuous Monitoring capabilities within each component.	2015	2016
Performance Target	60%	70%
System Authorization (OST)		
Indicator: Percent of systems converted to an ongoing authorization process.	2015	2016
Performance Target	20%	50%
Financial Management (OST/DOT-wide)		
Performance Goal: Maintain the percentage of improper payments below program targets.		
Indicator: Percent improper payments.	2015	2016

Target: FAA Airport Improvement Program	0.50%	0.50%
Target: FHWA Federal-Aid Highways Program	0.25%	0.25%
Target: FRA High-Speed Intercity Passenger Rail Program	0.25%	0.25%
Target: FTA Capital Investment Grants	0.25%	0.25%
Target: FTA Formula Grants	0.50%	0.50%
Target: FAA Facilities and Equipment – Disaster Relief Act	N/A*	N/A*
Target: FHWA Emergency Relief Program – Disaster Relief Act (Hurricane Sandy-related only)	N/A*	N/A*
Target: FRA Grants to Amtrak – Disaster Relief Act	N/A*	N/A*
Target: FTA Public Transit Emergency Relief Program – Disaster Relief Act	N/A*	N/A*

Information Systems (OST)

Strategies

As part of the Information Resources Management (IRM) Strategic Plan, DOT plans to achieve the following objectives over the next five 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.

Goal Leaders:

Richard McKinney, DOT Chief Information Officer (CIO)

Financial Management (OST)

Strategies

Department-wide: Perform a Department-wide risk assessment for reporting. Based on information from the results of the risk assessment, DOT will determine if additional programs are susceptible to significant improper payments. In addition, DOT will seek relief from testing program that have low-risk of improper payments and have demonstrated improper payment rates below statutory thresholds.

Federal Aviation Administration: 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 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: Under its Financial Integrity Review and Evaluation (FIRE) program, FHWA subjects States and territories not selected as part of the 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 Rail Administration. 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 HSIPR program. The routine monitoring activities center on recipient compliance with the FRA agreement and on the approved budget, schedule, and fund stewardship. Routine monitoring highlights potential areas of concern and opportunities for training and technical assistance.

Next Steps

The improper payments program next steps are:

- Complete a Department-wide risk assessment for reporting;
- Update DOT policies and procedures for estimating and reducing improper payments;
- Establish improper payment rate target for Disaster Relief Programs;
- Provide grantees with guidance on the retention of supporting documentation; and,
- Provide grantees with refresher training on disbursement guidelines.

Goal Leader:

Sylvia Garcia, Chief Financial Officer and Assistant Secretary for Budget and Program Performance

David Rivait, Deputy Chief Financial Officer

Security, Preparedness, and Other Supporting Objectives

Meet transportation needs for defense readiness through interagency cooperation with the Departments of Defense, 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 provide 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 Rail Administration (FRA), and Office of the Transportation Secretary (OST).

Performance Goal: DOT staff supporting Emergency Response Operations (ERO) will meet or exceed minimum training standards established by DOT and FEMA by 2015.

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 responseand 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 Rail Administration (FRA), Maritime Administration (MARAD), and Office of the Transportation Secretary (OST).

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
National Security and Emergency Response (MARAD)								
Percentage of DoD required shipping capacity complete with crews available within mobilization timelines. (MARAD)						94%	96%	Met
Percentage of DoD designated commercial ports available for military use within DoD established timelines. (MARAD)						83%	94%	Met
FY 2014 was the first year for reporting this metric.								

National Security and Emergency Response (MARAD)

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 and during times of national emergency. Targets are based on readiness times that have historically met DoD requirements. The readiness represented by the government-owned Ready Reserve Force (RRF), Maritime Security Program (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 2014, MARAD reported 96 percent shipping and crew availability.

The MV CAPE RAY, one of 46 RRF vessels in stand-by status, was mobilized to serve as a platform for the destruction of Syrian chemical weapons. The M/V CAPE RAY has earned special recognition for this unprecedented operation to support the United Nations and United States of America mission to neutralize 463,000 liters of Syria's chemical weapon stockpiles at sea. This unique mission, never before accomplished at sea, required MARAD to plan and oversee significant modifications to transport equipment, technology and personnel necessary for what became DoD's primary contribution toward the international efforts to eliminate Syria's chemical weapons material program.

Efforts included outfitting the vessel with two field deployable hydrolysis systems (FDHS) that use neutralizing technology to destroy bulk chemical warfare agents and their precursors. The FDHS units installed on the M/V CAPE RAY were utilized at sea to safely destroy precursor agents from the blistering agent mustard and Sarin nerve gas. By August, CAPE RAY was on its way home, having successfully neutralized over 580,000 kilograms of Sarin nerve gas precursor and nearly 20,000 kilograms of sulfur mustard blistering agent, at an estimated cost savings of over $5.9 billion as compared to land based processing. The chemicals were fully containerized during the at sea neutralization process and no spills occurred.

For FY 2015, the RRF anticipates additional activations, including a critical mission of supporting Operation United Assistance by delivering Ebola relief supplies to West Africa. MARAD also had 17 designated strategic commercial port facilities in FY 2014 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 reported 94 percent commercial ports availability for FY 2014.

PERFORMANCE PLAN

National Security and Emergency Response (MARAD)		
Percentage of DoD required shipping capacity complete with crews available within mobilization timelines. (MARAD)		
Indicator: Percentage of shipping and crew availability	FY 2015	FY 2016
Performance Targets	94%	94%
Percentage of DoD designated commercial ports available for military use within DoD established timelines. (MARAD)		
Indicator: Percentage of ports availability	FY 2015	FY 2016
Performance Targets	87%	87%

MARAD's Ready Reserve Force (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 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. MARAD's Maritime Security Program (MSP) and Voluntary Intermodal Sealift Agreement (VISA) programs also provide sustainment sealift via commercial U.S.-flag vessels.

Also dependent upon port capacity is MARAD's defense. There are 17 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 has declined, which necessitates that military planners more effectively use the resources they have. The RRF is an example of how they 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 humanitarian examples included 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 school ships.

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 Rail Administration (FRA), Maritime Administration (MARAD), Federal Aviation Administration (FAA), and Office of the Transportation Secretary (OST).

PERFORMANCE REPORT

Performance Measure	Actual					2014		Target Met or Not Met
	2009	2010	2011	2012	2013	Target	Actual	
Percent of total dollar value of DOT direct contracts awarded to small, disadvantaged businesses. (OST)	13.36%	14.50% (r)	19.45% (r)	17.98% (r)	19.30%	5% (r)*	20%*	Met
Percent of total dollar value of DOT direct contracts awarded to women-owned businesses. (OST)	10.94%	7.85% (r)	11.14% (r)	8.77%(r)	11.44% (r)	5% (r)	12%*	Met

Notes:

(r) Revised

* Preliminary Estimate

PERFORMANCE PLAN

Contracts to Women-Owned Businesses (OST)		
Performance Goal: Maintain the percent of total dollar value of DOT direct contracts awarded to women-owned businesses at 5 percent through FY 2018.		
Indicator: Percent of total dollar value of DOT direct contracts awarded to women-owned businesses	2014	2015
Performance Target	5.0%	5.0%

Contracts to Small and Disadvantaged Businesses (OST)		
Performance Goal: Maintain percent of total dollar value of DOT direct contracts awarded to small disadvantaged businesses at 5 percent through FY 2018.		
Indicator: Percent of total dollar value of DOT direct contracts awarded to small disadvantaged businesses.	2014	2015
Performance Target	5.0%	5.0%

Overview

DOT will expand efforts to assist certified Disadvantaged Business Enterprise firms in becoming competitive when competing for highway and bridge construction contracts through the FHWA Disadvantaged Business Enterprise Supportive Services program. The goal of the program is to achieve a level playing field in a competitive environment where the effects of discrimination are absent and small businesses have a fair chance to participate in DOT-assisted contracts without contending against discriminatory barriers related to race, color, gender, or national origin.

Strategies and Next Steps

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

Goal Leaders:

DeVera Redmond, Supervisory Small Business Specialist, OST OSDBU
Brandon Neal, Director, OST OSDBU