Agency Priority Goal Action Plan

Improve America's Transportation-Related Infrastructure

Goal Leaders:

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Overview

Goal Statement

- DOT will maintain good conditions of airport runway surfaces, National Highway System (NHS) bridges, and ride quality per Vehicle Mile Traveled (VMT) on the NHS, as well as reverse the trend of the growing Transit State of Good Repair backlog through FY 2019. DOT will develop improved ways of tracking transportation infrastructure condition and, in the near term, focus on data available for roadway, runway, and transit infrastructure.

Challenge

- DOT has not traditionally published a comprehensive, multi-modal assessment priority goal regarding transportation infrastructure. Information is more readily available to DOT for parts of the transportation systems that are constructed and/or maintained in part with Federal funding, such as roadways and airports, rather than privately-owned assets such as railroads and seaports.
- Because of the Department's inability to monitor and assess the condition and performance of all infrastructure assets, DOT decided instead to assess progress and show improvement over time based on the infrastructure-related measures that it does collect and report.
- The Conditions and Performance (C&P) Report is adapting to focus on the same national performance measures reflected in this action plan. Both draw from common data sources including the Highway Performance Monitoring System (HPMS), National Bridge Inventory (NBI), and the Transit Economics Requirement Model (TERM). The draft 23rd C&P (2014 data) and 24th C&P (2016 data) present the same bridge, pavement, and transit measures presented in the action plan, and future editions will adopt the new pavement measure described in the plan once data are available.

Goal Structure & Strategies (FAA)

Maintain Good Runway Condition (FAA)						
		2016	2017	2018	2019	2020
Percent of Runways in Good Condition	**Targets**	n/a	n/a	93%	93%	93%
	Actuals	97.6%	97.8%	97.9%	*n/a	n/a

FAA's strategies to accomplish the APG include the following:

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

Assessment is rated as Excellent, Good, Fair, Poor, and Failed; Condition of "Good" indicated above includes "Excellent", "Good," or "Fair."

**Actuals will be available in late CY 2019*

Goal Structure & Strategies (FHWA)

Improve Bridge Condition in the National Highway System (FHWA)						
		2016	2017	2018	2019	2020
Percentage of National Highway System (NHS) bridges classified, by deck area, as in Poor Condition	**Targets**	n/a	5.0%	5.0%	5.0%	5.0%
	Actuals	5.0%	4.8%	4.5%	4.6%*	n/a

FHWA's strategies to accomplish the APG include the following:

DOT issued a final rule, effective May 2017, that establishes a new framework of national performance measures for pavement and bridge conditions. States are required to make significant progress towards achieving targets for their individual performance measures for pavements and bridges, with the State performance data available online. The bridge condition indicator is based on a classification system of Good, Fair, or Poor. The indicator is the percentage of NHS bridges classified by deck area as in Poor condition.

**Actual for CY 2018 as reported by the State DOTs in March 2019.*

Goal Structure & Strategies (FHWA)

Improve Pavement Condition on the National Highway System (FHWA)						
		2016	2017	2018	2019	2020
Percent VMT on NHS with good to very good ride quality	Targets	n/a	60.3%	61.0%	61.6%	62.3%
	Actuals	59.6%	60.9%	62.3%	n/a*	n/a

FHWA Strategy to Accomplish the APG:

DOT issued a final rule, effective May 2017, that establishes a new framework of national performance measures for pavement and bridge conditions. States are required to make significant progress towards achieving targets for their individual performance measures for pavements and bridges, with the state-by-state results being aggregated and reported nationally. The pavement condition indicator is based on a classification system of Good, Fair, or Poor.

Beginning in 2019, the measure of percent of pavements in Good and Poor condition will be reported state-by-state. The first-time targets established by State DOTs for 2021 have been reported to FHWA using the new indicator for Interstate pavements.

**Actuals will be available in late August 2020.*

Goal Structure & Strategies (FTA)

Monitor Condition and Performance of Transit Systems (FTA)						
		2012	2017	2018	2019	2020
State of Good Repair Backlog ***(Current-year dollars, not adjusted for inflation)***	**Targets**	n/a	n/a	$105B	$107B	$109B
	Actuals	$89.8B*	n/a**	n/a	n/a	n/a

**From the FY 2015 Conditions and Performance Report.*
***2017 Data Not Available. The 23rd Conditions and Performance Report, reporting 2014 data, has not yet been cleared for publishing. FTA is currently expanding State of Good Repair data collection in the National Transit Database, which will be available in September 2019. At that time, FTA will establish new measures for this target based on data that are available in a much more timely manner.*

FTA's strategies to accomplish the APG include the following:

- All FTA grantees were required to establish Transit Asset Management Plans by October 1, 2018.
- All FTA grantees must integrate State of Good Repair performance targets into the Metropolitan Planning Process and the Statewide Planning Process
- Annual reporting of asset inventories, condition assessments, and State of Good Repair performance targets and results to the National Transit Database began October 31, 2018, with data to be published in September 2019.
- FTA will continue to obligate and oversee its portfolio of grants in the State of Good Repair Formula, Urbanized Area Formula, Rural Formula, Bus and Bus Facilities, Ferry Discretionary, Tribal Transit, and Enhanced Mobility Formula Programs.

Summary of Progress – FY 19 Q3

FAA

The FY 2019 Q3 status condition of all runway pavement in the National Plan of Integrated Airport Systems (NPIAS) being in either "excellent," "good," or "fair" condition is 97.9%. The FAA is on target to meet this performance goal. Meeting this performance goal results in maintaining a very safe and efficient runway system for the Nation.

FHWA

In FY 2019, FHWA set aside funds in five states that exceeded the 10% threshold for of NHS bridge deck area in poor condition. The metric, *Percentage of States with National Bridge Inspection System (NBIS) Bridge Load Rating Compliance Assessed as Satisfactory*, indicates progress in maintaining an appropriate level of safety for the traveling public. As of June 2019, 54% of the States were in satisfactory compliance, a slight decrease from the previous year. This decrease is likely due to including the assessment of Specialized Hauling Vehicles (SHV) Group 1 load ratings into the compliance determinations (as of 12/2018). While the percentage by area of NHS bridges in poor condition declined from 8.2% in 2010 to 4.6% in 2019, 4734 bridges on the NHS are still classified as in poor condition.

All State DOTs are required to develop risk-based transportation asset management plans (TAMP) for the National Highway System to improve or preserve the condition of the assets and performance of the network. FHWA presented six training courses on Financial Planning for Asset Management to State DOTs in 2019. States are required by June 30, 2019 to submit a complete TAMP together with documentation demonstrating implementation of the plan. All 50 States, Puerto Rico, and the District of Columbia, submitted TAMPs with documentation before June 30, 2019. FHWA is now reviewing the documents to see if they meet the requirements of 23 U.S.C. 119 and 23 CFR part 515.

In 2019, State DOTs, Puerto Rico, and the District of Columbia began reporting on pavements in Good and Poor condition per the requirements for National Performance Management Measures in 23 CFR 1.490 (2017). Data submitted by April 15, 2019 are being analyzed to determine baselines for new pavement condition measures that will be reported in FY 2020. The Agency developed guidance that was delivered thru webinars and workshops to State DOTs throughout the year to assist with implementation and showcase best practices.

FHWA continues to provide technical assistance and educational workshops to State DOTs and Metropolitan Planning Organizations (MPOs) as they set targets and report on performance. State performance dashboards were published for safety, infrastructure condition, travel time reliability (including freight), and traffic congestion measures.—see https://www.fhwa.dot.gov/tpm/reporting/state/.

Summary of Progress – FY 19 Q3 (cont.)

FTA

FTA published its Transit Asset Management Rule on July 1, 2016. This rule established an innovative approach to addressing the State of Good Repair backlog, as it required FTA grantees to establish State of Good Repair performance targets for their systems based on specific performance measures defined by FTA. Those State of Good Repair performance targets are intended to guide the investment prioritization in the asset management plan.

The National Transit Database (NTD) FY 2018 reporting cycle, which runs from October 2018 to July 2019, includes expanded data on asset inventories and condition assessments through the NTD, as well as the State of Good Repair performance targets required by the rule. FTA will publish the first set of performance targets and expanded asset inventory information in September 2019. Making this information available to transit agency stakeholders will drive additional performance by achieving State of Good Repair goals at the local level.

As of October 1, 2018, all FTA grantees were required to have a Transit Asset Management Plan in place, including an investment prioritization informed by these State of Good Repair targets.

FTA continues to manage its portfolio of grants and obligate remaining available funds from the State of Good Repair Formula Program, Urbanized Area Formula Program, Rural Area Formula Program, Bus and Bus Facilities Formula Program, Bus and Bus Facilities Discretionary Program, the Tribal Transit Program, the Ferry Discretionary Program, and the Enhanced Mobility for the Elderly and Disabled Formula Program to support State of Good Repair investments.

Key Milestones (FAA)

- Maintaining suitable runway pavement condition requires careful coordination, often years in advance, of a runway rehabilitation project. Projects are carefully timed by the airport and the FAA with some of the Nation's largest airports resurfacing their runways on an established revolving basis. The FAA works with airports to ensure the system never has too many runways out of service at any given time, as this can cause significant flight delays throughout the country. This goal has been a long-established standard (since 1986) that sponsors understand and support.
- From our assessment in FY 2018, visual inspections remain.

Milestone Summary

Key Milestone	Milestone Due Date	Milestone Status	Change from last quarter	Owner	Comments
Maintain above 93% target of runway pavement in excellent, good, or fair condition for the paved runways in the National Plan of Integrated Airport Systems.	**Sep 30, FY 2019** 1st Qt 2nd Qt 3rd Qt 4th Qt	 97.9 97.9 97.9 97.9	 0.1 0.0 0.0 0.0	Kirk Shaffer, Associate Administrator for Airports	Evaluation of the network level of inspection of over 4300 runways is being reviewed and reported monthly; and we are on track to achieve this goal. The June status condition of runways in excellent, good or fair condition is 97.9%, which remains unchanged from previous month.

Key Milestones (FHWA)

Milestone Summary			
Key Milestone	**Milestone Due Date**	**Milestone Status**	**Comments**
First annual requirement for State DOTs to report Interstate pavement conditions to the HPMS using the new indicator.	April 2019	Completed*	Interstate pavement condition data were reported on time and has been reviewed by FHWA staff. States that did not meet the 5% missing/incomplete data requirement will be notified by the end of August 2019.
First-time targets established by State DOTs will be reported to FHWA for Interstate pavements using the new indicator. These targets will represent the anticipated network-level conditions of the Interstate system within the States at the end of 2021.	October 2020	On track	Targets will be updated every 4 years after 2018.
First biennial requirement for State DOTs to report non-Interstate NHS pavement conditions to the HPMS using the new indicator.	June 2022	On track	
First-time targets established by the State DOTs will be reported to FHWA for non-Interstate pavements using the new indicator. These targets will represent the anticipated network level conditions of the non-Interstate NHS within the State at the end of 2025.	October 2022	On track	Targets will be updated every 4 years after 2022.

Data Sources and Methodologies

Methodologies

FHWA

Bridge Condition—Bridges are considered to be in Poor condition when any bridge component (i.e., deck, superstructure, substructure, or culvert) is coded 4 or less on the National Bridge Inventory (NBI) rating scale.

States, Federal agencies, and tribal governments annually submit data that are contained in the NBI and used to determine if bridges are deficient. Deck area is calculated from length and width data also reported to the NBI. The surface area (length multiplied by width) of bridge decks is viewed as a more meaningful indicator than simply a count of bridges because the area measure recognizes the size difference among bridges, thus avoiding the pitfalls associated with counting bridges where every bridge is treated the same regardless of size.

Pavement Condition – Currently, the performance of highway pavements is reported nationally as the percent of vehicle-miles traveled (VMT) with good to very good ride quality. States report VMT and pavement ride quality data using the International Roughness Index (IRI) for NHS sections in the Highway Performance Monitoring System (HPMS). IRI is a quantitative measure of the accumulated response of a quarter-car vehicle suspension experienced while traveling over pavement. An IRI of less than 95 inches per mile is generally considered indicative of a good rated ride. VMT represents the total number of vehicle-miles traveled by motor vehicles on public roadways within the 50 States, the District of Columbia, and Puerto Rico. Measurement and reporting procedures are included in the FHWA HPMS Field Manual.

Data Sources and Methodologies (cont.)

Methodologies

FAA

Runway condition data for the approximately 4,300 runways in the National Plan of Integrated Airport System (NPIAS) are reviewed monthly by FAA. Airports with runway pavement in poor or failed condition must identify rehabilitation projects in their capital improvement plans.

FTA

Estimates of the transit State of Good Repair (SGR) backlog are produced by the Transit Economic Requirements Model (TERM). TERM combines the most-recent data from the National Transit Database and ad-hoc data collections with pre-defined life-cycle models for various transit capital assets to produce SGR backlog estimates. Those estimates are then published approximately every two years in the Conditions & Performance Report. The most recent edition of that Report is currently the 2015 edition, which relies upon 2012 data. TERM model results are reported publicly through the Conditions & Performance report. Background information on the TERM companion model, TERM-Lite can be found at: https://www.transit.dot.gov/TAM/TERMLite.

Data Sources and Methodologies (cont.)

Data Sources

FHWA

National Bridge Inventory (NBI)

Highway Performance Monitoring System (HPMS)

FAA

FAA Airport Safety Data Program (IQ 5010) and FAA System of Airports Reporting (SOAR)

https://aep.airports.faa.gov/Home.aspx

IQ 5010 - https://www.faa.gov/airports/airport_safety/airportdata_5010/#5010

SOAR – List of NPIAS airports is accessible at - https://www.faa.gov/airports/planning_capacity/npias/reports/

FTA

Transit Economic Requirements Model (TERM)

Additional Information (FAA)

Contributing Programs

Construction and preservation of airfield pavement infrastructure relies on multiple funding sources that are complementary to each other:

- Airport Improvement Program (AIP)

  Organization: FAA Office of Airports, Federal assistance program
  Program Activities: Construction, Re-construction, rehabilitation and limited maintenance
  Regulations: 14 CFR 139 (Airports with commercial service)
  Policy: 49 USC chapter 471

- Passenger Facility Charge (PFC) programs

  Organization: Local Airport Authority, FAA
  Program Activities: Same as AIP
  Regulations: 14 CFR 139 (Airports with commercial service)
  Policy: 49 USC chapter 475

- State Airport funding programs

  Organization: State Authority
  Program Activities: Construction, Rehabilitation and maintenance
  Policy: State code

- Local Funding programs

  Organization: Local governing body
  Program Activities: Construction, Rehabilitation and maintenance

Additional Information (FHWA)

Contributing Programs

- Statutory requirements in Title 23 USC 106, 109, 144, 502, and elsewhere requires FHWA to cooperate and/or coordinate with the American Association of State Highway and Transportation Officials (AASHTO) in developing bridge, tunnel, and structure-related standards and other materials. FHWA outlines its priorities as a member of the AASHTO Committee on Bridges and Structures—see https://bridges.transportation.org/ — and 20 technical subcommittees within the Committee.
- In this role, the Agency assists AASHTO by identifying necessary changes to the various AASHTO specifications and by providing input on needed research areas to advance the bridges and structures program. State DOT engineers are members of the Committee on Bridges and Structures, which enables FHWA to coordinate with these partners as well.

Program Activities

- FHWA published the National Tunnel Inspection Program (NTIP) Compliance Review Manual in March 2019, which provides guidance and direction to the FHWA Division Bridge Engineers in performing NTIP compliance reviews of State tunnel safety inspection programs. The NTIP compliance review is conducted in a similar way as the National Bridge Inspection Program (NBIP) review, but compliance is measured with 15 metrics. Each metric measures one aspect of the National Tunnel Inspection Standards (NTIS) requirements. The new NTIP oversight process is a comprehensive plan to routinely conduct systematic, data-driven analysis to identify nationwide tunnel safety risks for remediation in coordination with the States. FHWA Divisions work with State DOTs to establish plans of corrective actions or improvement plans for 15 specific metrics to comply with the NTIS.

Regulations

FHWA National Performance Management Measures - see 23 CFR 490.409

Policies

FHWA: FAST Act § 1106; 23 U.S.C. 119 – see National Highway Performance Program

Additional Information (FTA)

Contributing Programs

The majority of FTA's contributing programs are grant programs. The FY 2019 appropriated levels for these programs are as follows:

- State of Good Repair Program - $614,964,489
- Urbanized Area Formula Program - $4,827,117,606
- Rural Area Formula Program - $630,335,590
- Bus and Bus Facilities Formula Program - $614,964,489
- Bus and Bus Facilities Discretionary Program - $512,059,980
- Enhanced Mobility for the Elderly and Disabled Formula Program - $279,646,188
- Ferry Discretionary Program - $30,000,000
- Tribal Transit Formula Program - $30,000,000
- Tribal Transit Discretionary Program - $5,000,000
- Transit Asset Management Program (not a funding program)

Additional Information (cont.)

Stakeholder / Congressional Consultations

FHWA

DOT continues to take actions to address management challenges related to the performance management requirements of MAP-21. In 2016-2017, DOT finalized and published all MAP-21 performance management rulemakings, and every rulemaking is now effective except one. The Greenhouse Gas measure included in the final transportation performance management rulemaking was repealed in a separate Final Rule published on July 2, 2018. FHWA has promulgated these rules and is offering technical assistance, formal training through the National Highway Institute, and educational workshops to States and Metropolitan Planning Organizations (MPOs) as they set targets and report on performance. The Agency has contributed to a stakeholder-administered transportation pooled fund to further identify and develop performance management implementation resources and tools– see https://www.tpmtools.org/

FAA

The Federal Aviation Administration incorporates views and suggestions for airport system-wide development from all of its stakeholders, including: individual airport owners; FAA's Airports Regional and District Offices; the Air Traffic Organization; the Flight Standards Office; Congress; State aeronautical agencies; and other aeronautical user groups.

FTA

Stakeholders include the American Public Transportation Association, the Community Transportation Association of America, American Association of State Highway and Transportation Officials, the Association of Metropolitan Planning Organizations, the Transportation Research Board, and their members.