



**Massachusetts Bay
Transportation Authority**

MBTA Quarterly Safety Report

Ronald Nickle, Chief Safety Officer

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Quarterly Safety Report

- Workplace Safety Improvement Initiative
- Regulatory Updates
 - FTA & DPU regulations
 - FTA General Safety Directive 17-1
 - FRA System Safety Program
- Derailment Prevention Steps Already Taken or Ongoing
 - Risk Mitigation & Corrective Action
 - 20 Year Derailment Data Review
- Safety Certification
 - Infrastructure Projects
 - Vehicle & Systems Procurements



Moving from Safe to Safer

- MBTA is currently in compliance with national transit agency safety standards
- MBTA is taking voluntary steps to enhance safety
- MBTA now has 5 year safety implementation plan which includes increased training and additional infrastructure
- No mainline derailments since November 2016



Workplace Safety Improvement Initiative

- **Phase 1:** Occupational Health & Safety Plan (Completion: Sept. 30, 2017)
- **Phase 2:** System-wide Gap Analysis (Sept 1, 2017 – March 31, 2018)
- **Phase 3:** Implementation Plan (March 1, 2017 – Onward)





Regulatory Updates – FTA & DPU Regulatory Changes

- FTA Final Rule – State Safety Oversight (49 CFR 674)
 - Increased DPU enforcement and safety standard requirements
 - Revisions to DPU’s existing State Safety Program Standard (220 CMR 151)
 - Accelerated DPU implementation
- FTA Final Rule – Transit Agency Safety Plan (49 CFR 673)
 - Revise MBTA Safety Plan to adopt Safety Management Systems (SMS)
 - Pending final rule release





Regulatory Updates – FTA General Safety Directive 17-1

- Proposed FTA General Safety Directive 17-1
 - Issued to all rail transit agencies
 - Conduct a system-wide Safety Risk Evaluation (90 days)
 - Collaborative approach with DPU
 - Utilize tools (SMS) to identify and evaluate risks
 - Develop a corrective action plan (DPU)

FTA Definition

Stop signal, flag, or other indicator overruns:

“When a rail transit vehicle fails to stop as required in advance of a stop signal, flag, or other indicator, as specified in a rail transit agency’s operating rules and procedures.”





Regulatory Updates – Federal Railroad Administration (FRA)

- FRA System Safety Program (49 CFR 270)
 - Revise MBTA's existing Commuter Rail System Safety Plan
 - Organizational engagement in safety program
 - Hazard and risk approach to safety
 - Management/labor collaboration
 - Management/labor presentation (completed)
 - Submittal Deadline (February 2018)
 - Implementation Plan (3 years)





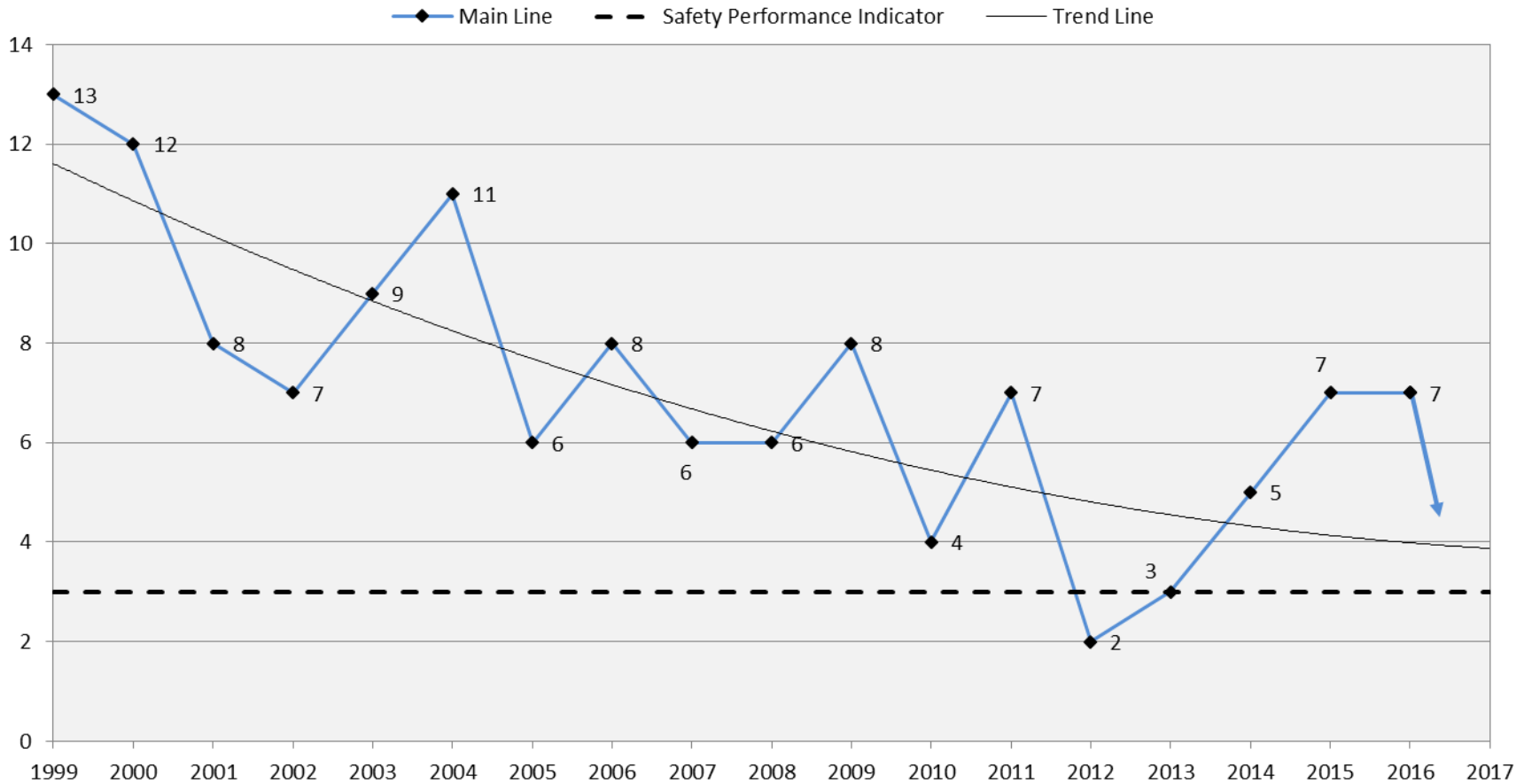
Derailment Prevention Steps Already Taken or Ongoing

- Speed Enforcement
 - Speed restrictions
 - Ongoing speed audits
 - GPS monitoring (real time data)
 - Radar monitoring (alerts/video)
- Track Maintenance & Engineering
 - Gauge face grinding
 - Ongoing profile grinding
 - Track geometry
 - Optical inspections
 - Ultrasonic testing
 - Track Safety Standards Training
- Vehicle Maintenance & Engineering
 - Type 8 flange lubricator installation – 100% complete
 - Type 8 scissor modification replacement – about 50% complete



Derailments – Data Review

Yearly Main Line Derailments 1999-2017





Safety Certifications – Infrastructure Projects

- Current Projects (136):
 - 24 Bridge & Tunnel
 - 22 Commuter Rail (both North and South Side)
 - 15 Facility Rehabilitation and/or Improvement Projects
 - 31 Rapid Transit, including 11 elevator projects
 - 19 Operational (i.e. Red/Orange Line Infrastructure Improvements)
 - 22 Transit Oriented Development (TOD)
 - 3 System Extensions (GLX, GLX DB, and Wachusett)
- Final Acceptance - Safety & Security Certification:
 - Savin Hill Underpass
 - Hingham Intermodal
 - Boston Landing/Brighton Station
 - Riverside Carhouse Work Platforms



Safety Certifications – Vehicle & Systems Procurements

Current Vehicle Projects:

- Bus Procurements
 - CNG/Hybrid (10 Busses/week)
 - 60' Articulating (2 Busses/week)
- Red Line/Orange Line Vehicle
 - Orange Line Mock-up
 - Final Design milestone
 - DPU participation
- Green Line Type 9 Vehicle Procurement
 - Mock-up at Riverside Carhouse
 - Pilot Car First Article Inspection and Testing





Safety Certifications – Vehicle & Systems Procurements

Current Systems Projects:

- Green Line Train Protection System (GLTPS)
 - Procurement phase
 - Proof of concept approach
- Positive Train Control (PTC) – Commuter Rail
 - Safety Certification Committee
 - PTC System Safety and Certification Plan





Questions?

