



Safety and Operations Committee

Board Information Item IV-A

December 9, 2021

Status of Safety Corrective Action Plans

Washington Metropolitan Area Transit Authority

Board Action/Information Summary

☐ Action ☒ Information

MEAD Number:
202323

Resolution:
☐ Yes ☒ No

TITLE:

Status of Safety Corrective Action Plans

PRESENTATION SUMMARY:

The Department of Safety and Environmental Management (SAFE) will be providing an update on the open the Corrective Action Plans (CAPs) that have been developed in response to findings or recommendations from regulatory agencies such as the Washington Metrorail Safety Commission (WMSC), National Transportation Safety Board (NTSB) and Federal Transit Administration (FTA).

PURPOSE:

This update informs the Safety and Operations Committee on the current status of Metro's open CAPs. This briefing will publicly communicate the status of the action items as Metro continues to close these as part of continuously improving safety.

DESCRIPTION:

Developed by WMATA, CAPs describe the actions WMATA will take to correct nonconforming conditions and reduce risks as well as specify the schedule for taking the actions. CAPs are developed to address findings, recommendations, or required actions issued from regulatory agencies. They are tracked by WMATA's internal Quality Assurance, Internal Compliance and Oversight (QICO) department, and any WMATA department may be assigned responsibility for CAP completion.

In 2019, WMSC assumed oversight of all open CAPs from the FTA, which were originally issued to WMATA between 2015 and 2018. Upon receipt of a finding or required action from the WMSC, WMATA has 30 days to develop CAPs to include hazard ratings for the recommendation and mitigations. These CAPs are submitted to the WMSC for review and approval, at which point WMATA begins the implementation process. The NTSB issues Safety Recommendations, which WMATA is responsible for developing CAPs in response. These CAPs are delivered to the NTSB within 90 days of the issuance of the Safety Recommendations. The NTSB does not formally approve the CAPs, but WMATA seeks concurrence prior to implementation.

Key Highlights:

- There have been 436 CAPs assigned to WMATA.
- 340 CAPs have been closed in the past five years.
- 20 CAPs have been fully implemented and have been submitted to the NTSB or WMSC for review and closure.
- Each CAP may have multiple action items, of which there are 1,868. Of that total 1,398 have been approved and closed, 215 have been submitted for approval and closure, and the remaining 255 have been developed and are in the process of being implemented.

Background and History:

The FTA CAPs include those originally assigned as part of the FTA's oversight role. Those CAPs have been transferred to the WMSC. These CAPs are embedded in the FTA's original Safety Directives, of which there have been seven issued:

- 15-1, Safety Management Inspection;
- 16-2, Tri-State Oversight Committee;
- 16-4, Track Integrity Investigation;
- 16-5, Stop Signal Overrun Investigation;
- 16-6, Rail Vehicle Securement Investigation;
- 17-1, Traction Power Electrification Investigation; and
- 18-2, TOC Triennial Safety Findings.

These Directives have resulted in 289 CAPs. Additionally, the WMSC has independently issued findings that resulted in the development of 116 CAPs (50 in 2020 and 66 in 2021) resulting in 502 action items. The majority of NTSB CAPs have been in response to the L'Enfant Incident. Of the 31 total CAPs, the following three are unrelated to this incident:

1. NTSB-R-10-20 Remove all 1000-series railcars as soon as possible and replace them with cars that have crashworthiness collision protection at least comparable to the 6000-series railcars (Closed).
2. NTSB-R-10-22 Develop and implement a program to monitor the performance of onboard event recorders and ensure they are functioning properly (Closed).
3. NTSB-R-08-004 Implement appropriate technology that will automatically alert wayside workers of approaching trains and will automatically alert train operators when approaching areas with workers on or near the tracks (Open).
 - a. With the support of an FTA grant, WMATA conducted a pilot of a technology designed to address this mitigation. The report on the results of this pilot are in the process of being finalized.

Each CAP is composed of action items that include the timeline and responsible parties.

Of the current 1,868 action items:

- 1,398 have been approved and closed;
- 215 have been submitted for approval and closure; and
- The remaining 255 have been developed and are being implemented.

The number of action items will continuously change over time (i.e., when a CAP is closed by the regulatory agency or if new ones are added). The status of each CAP is posted online for tracking and review at:

<https://www.wmata.com/initiatives/transparency/Corrective-Action-Plans.cfm>

Discussion:

The oversight performed by regulatory agencies falls under the Safety Assurance component of a Safety Management System (SMS). The SMS is designed to drive the shift from a traditionally reactive safety program to a proactive safety program that takes action before an incident occurs. This safety oversight performs two key functions. The first function is to verify compliance with the regulations, rules, processes, procedures, and other mitigations designed to enable safe Metro operations. The second function is to assess the effectiveness of those mitigations. The ensuing findings and recommendations are evaluated and placed into one of four categories:

- i. Unacceptable – The hazard must be mitigated in the most expedient manner possible.
- ii. Undesirable – The hazard must be mitigated; if necessary, the Chief Safety Officer (CSO) will develop interim mitigations in coordination with the Executive Safety Committee and subject to WMSC approval.
- iii. Acceptable w/review – CSO must determine if the hazard is adequately controlled or mitigated as-is.
- iv. Acceptable w/o review – The hazard does not need immediate mitigation, but corrective actions are monitored.

As of November 12, 2021, there is one open finding ranked as unacceptable. The aforementioned NTSB recommendation R-08-004, which recommends that WMATA implement appropriate technology that will automatically alert wayside workers of approaching trains and will automatically alert train operators when approaching areas with workers on or near the tracks. With the support of an FTA grant, WMATA conducted a pilot of a technology designed to address this recommendation. The report on the results of this pilot are in the process of being finalized to determine the path forward. Additionally, WMATA has benchmarked from the railroad industry to establish an Operating Practices team that is dedicated to refreshing the Metro Safety Rules and Procedures Handbook with an emphasis on leveraging railroad best practices to improve Roadway Worker Protection processes, procedures, and training.

The majority of CAPs fall under the Undesirable category, which means the regulatory agency is requiring action from WMATA. For example, the WMSC

performed an audit of the Rail Operations Control Center (ROCC) that resulted in 21 findings categorized as Undesirable; therefore, CAPs were submitted. Those CAPs are currently being implemented, and WMATA meets bi-weekly with the WMSC to discuss CAP progress.

While the findings received from regulatory agencies are never expected to reach zero, as WMATA's SMS matures, the internal Safety Assurance function should gradually drive more and more detection and mitigation. This is expected to result in a correspondingly gradual decline in the CAPs required by regulatory agencies. Therefore, WMATA's next steps are centered around staying the course in terms of implementation in accordance with the commitments made in the CAPs and concurrently, maturing the WMATA's SMS in accordance with the Agency Safety Plan.

FUNDING IMPACT:

There is no impact on funding related to presenting this informational item.	
Project Manager:	Theresa Impastato
Project Department/Office:	SAFE

TIMELINE:

Previous Actions	<ul style="list-style-type: none"> - Update on Status of Safety Corrective Action Plans on November 19, 2020. - Update on Status of Safety Corrective Action Plans on December 12, 2019. - Update on FTA and NTSB Actionable Item on October 11, 2018. - Memo to Board on January 16, 2018. - Update on FTA and NTSB Actionable Item on November 16, 2017. - NTSB CAP Review on April 27, 2017
Anticipated actions after presentation	<p>Continue to fully implement all CAPs Continue to implement SMS in accordance with the Agency Safety Plan</p>

RECOMMENDATION:

While the findings received from regulatory agencies are never expected to reach zero, as WMATA's SMS matures, the internal Safety Assurance function should gradually drive more and more detection and mitigation. This is expected to result in a correspondingly gradual decline in the CAPs required by regulatory agencies. Therefore, WMATA's next steps are centered around staying the course in terms of implementation in accordance with the commitments made in the CAPs and concurrently, maturing the WMATA's SMS in accordance with the Agency Safety Plan.

Status of Safety Corrective Action Plans

Safety & Operations Committee
December 9, 2021



Purpose

- Provide an update on the status of safety corrective action plans

CAP Defined

- What is a Corrective Action Plan (CAP)?
 - Developed by Metro to address a safety recommendation or finding from a regulatory oversight agency that identifies specific, action items to be performed, milestone schedules, action coordinators, performance measures and verification strategies
 - Developed in response to safety investigations, inspections and audits of the Metrorail System performed by the Washington Metrorail Safety Commission (WMSC) or in response to investigations by other agencies, such as the National Transportation Safety Board (NTSB)
 - Submitted to the regulatory oversight agency for review and approval, prior to full implementation
 - Metro routinely meets with the WMSC and NTSB on CAP progress

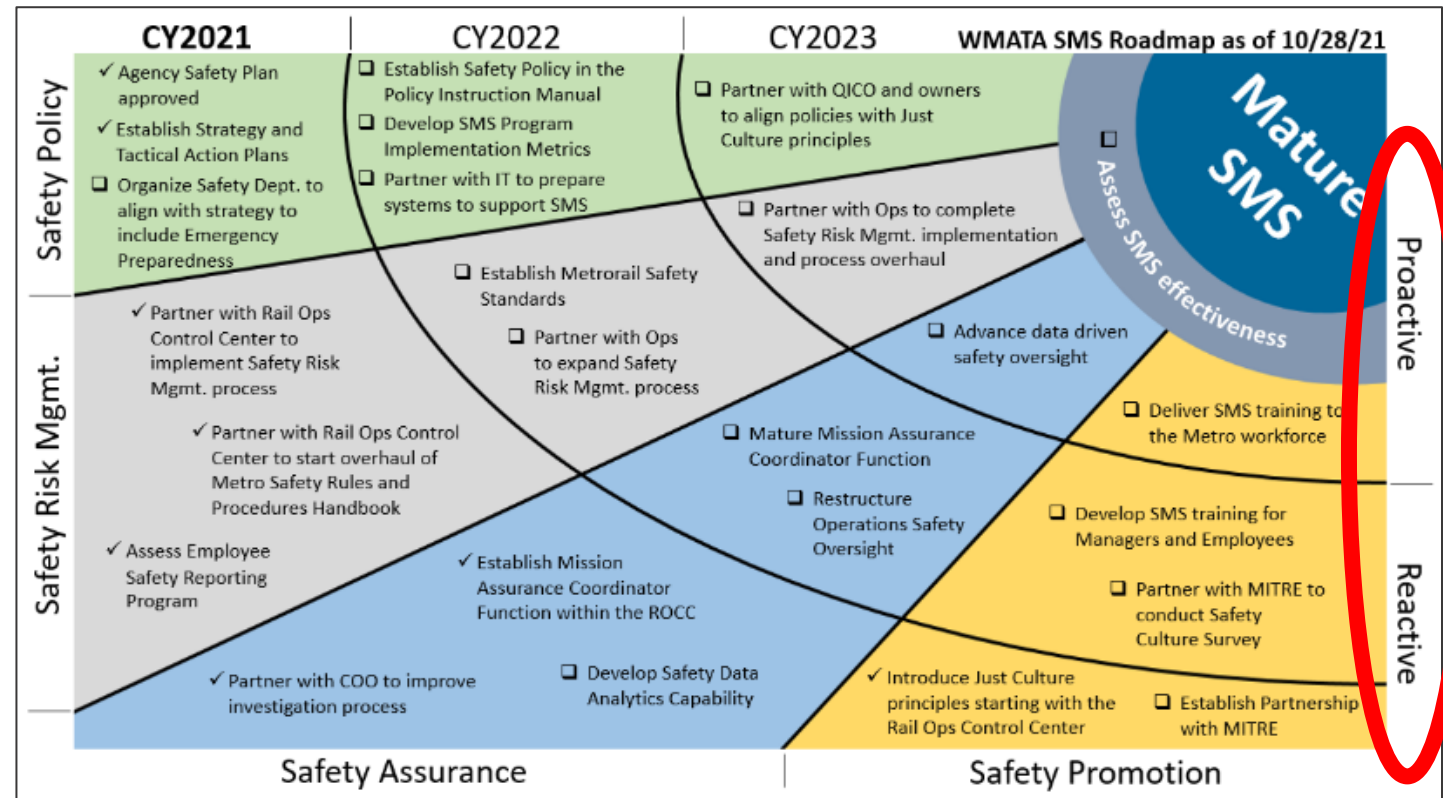
CAPs in SMS

- Oversight
 - Verify Compliance
 - Measure Effectiveness
- Continuous Improvement
 - Root Cause Methodologies
 - Corrective Action Plans



CAPs and SMS Strategy

- CAPs Drive Shift to Proactive Safety
 - High rate of findings expected early on
 - Robust CAPs usually multi-year efforts

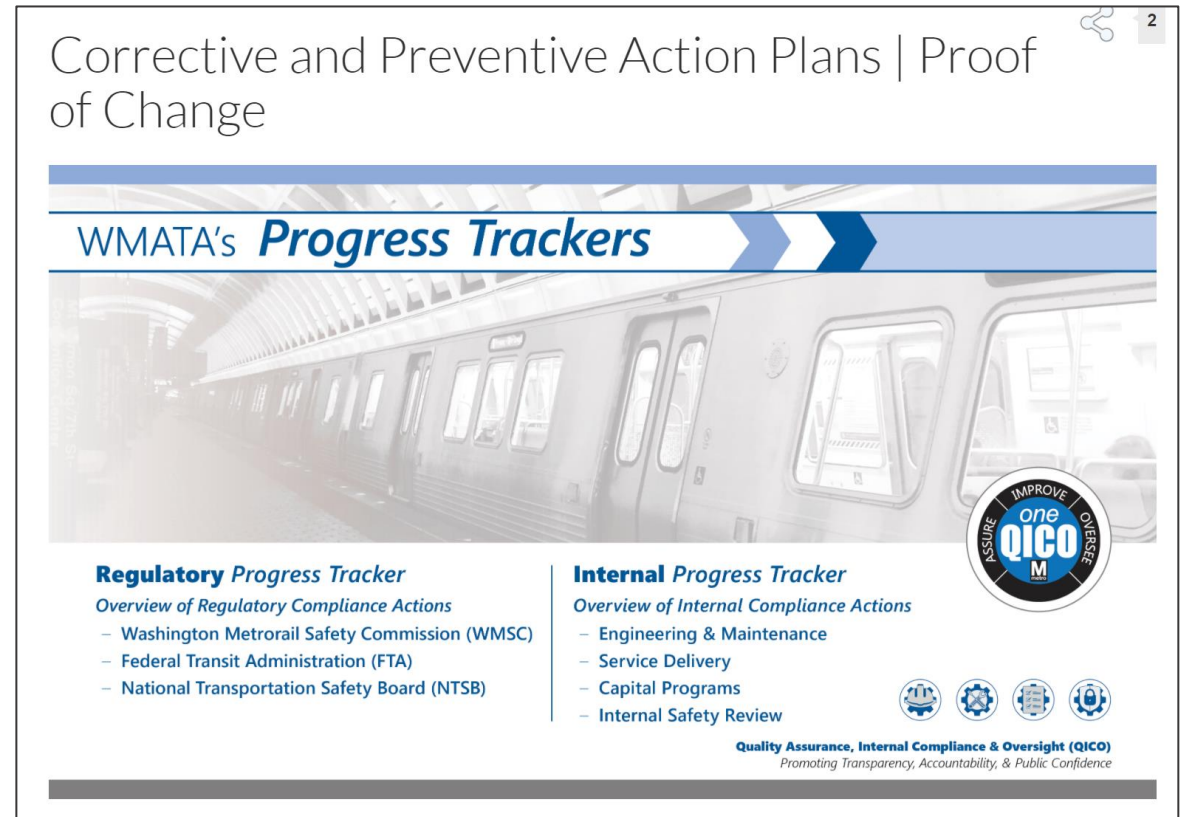


CAP Status Defined

<u>In-Development</u> <i>Implementing</i>	Mitigation strategy developed; in the process of being implemented.
<u>Under Review</u> <i>Submitted for Closure</i>	Fully implemented, supporting documentation submitted to regulatory agency for review
<u>Closed</u>	Plan implemented, approved, and closed by regulatory agency

WMATA CAP Progress Tracker – Public Site

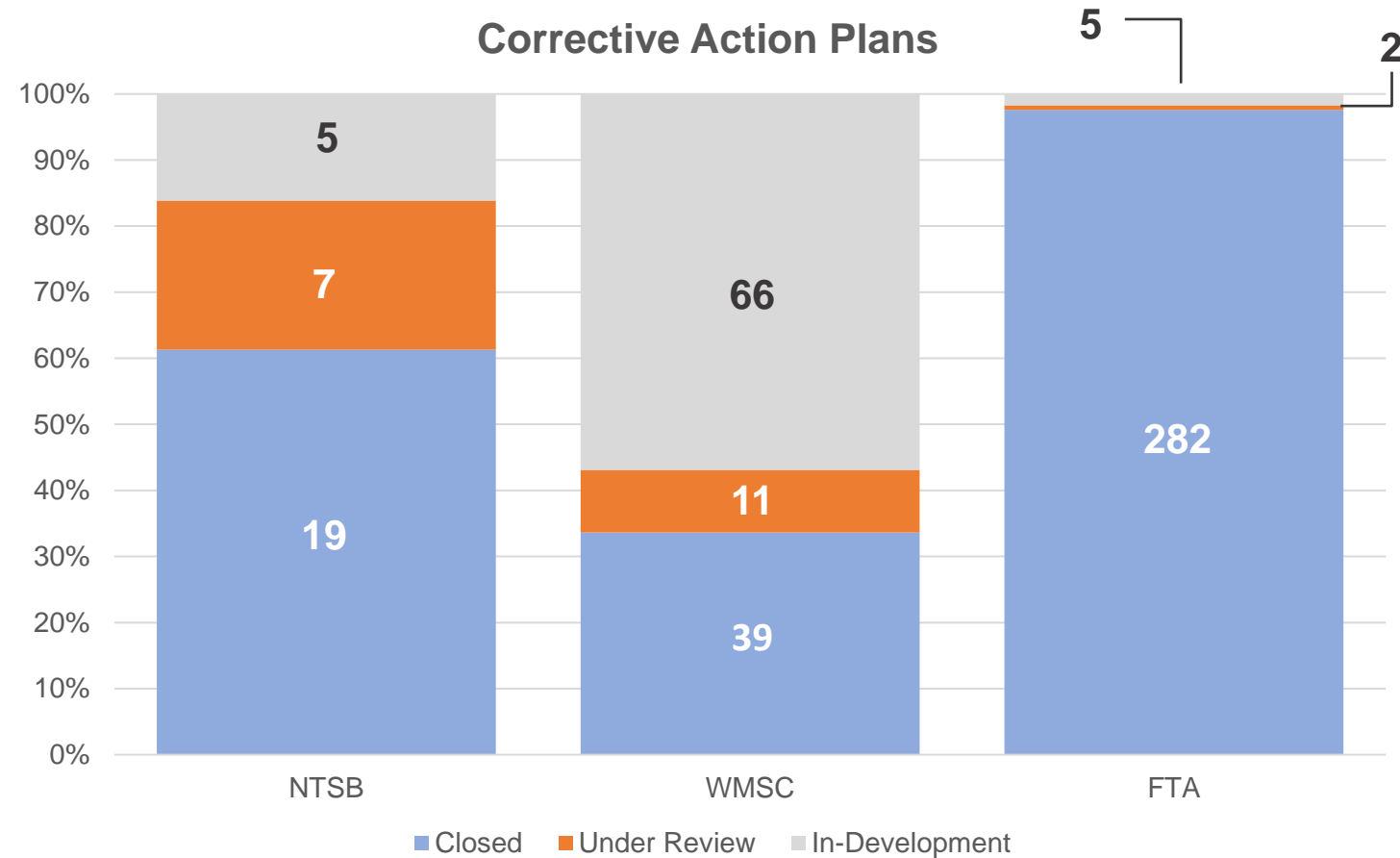
- Since 2017, CAPs have been posted on WMATA's website
- Provides detailed breakdown
- Updated weekly



<https://www.wmata.com/initiatives/transparency/Corrective-Action-Plans.cfm>

CAPs by Source

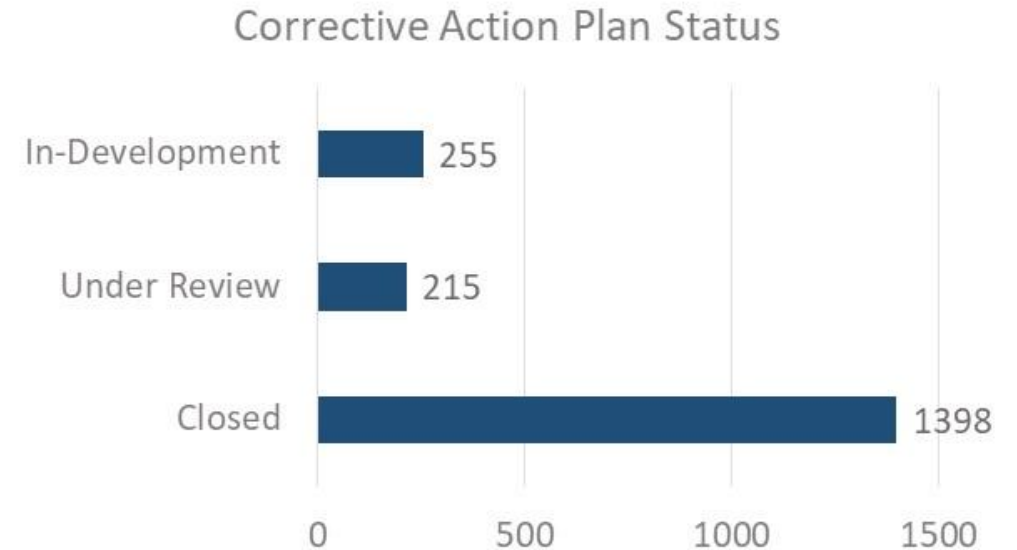
- 436 total CAPs
 - 31 CAPs – NTSB
 - 116 CAPs – WMSC
 - 289 CAPs – FTA*



*In 2019, WMSC assumed oversight of all open CAPs from the FTA which were originally issued to WMATA between 2015 and 2018 through various safety directives.

Action Item Progress

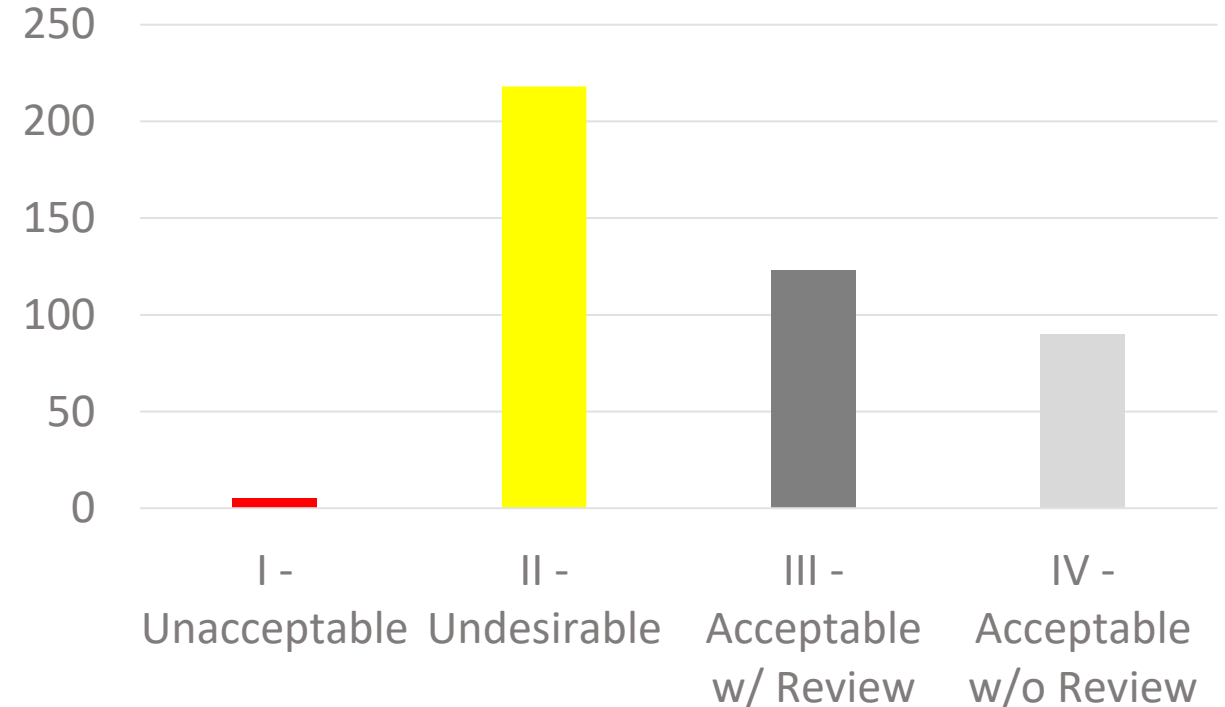
- Under the 436 CAPs, there are 1,868 individual action items
 - 13% are in development
 - 12% have been submitted for approval and closure
 - 75% have been approved and closed



Hazard Ranking

Unacceptable Hazards

- NTSB-R-08-004
 - Bi-directional technology for roadway worker protection
 - Conducted pilot of technology with funding from FTA grant
 - Finalizing report on the results of the pilot and determining path forward
 - Strengthening Roadway Worker Protection Program by leveraging railroad industry best practices



*as of 11/12/21

Next Steps

- Follow-up on submitted action items and CAPs
- Continue working to complete action items by scheduled due dates
- Implement SMS strategy as outlined in the Agency Safety Plan



Questions

