

**Washington Metropolitan Area Transit Authority  
Board Action/Information Summary**

Action <input checked="" type="radio"/> Information	MEAD Number:	Resolution: Yes <input checked="" type="radio"/> No
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**TITLE**

Department of Safety & Environmental Management Quarterly Report

**PRESENTATION SUMMARY**

The Department of Safety & Environmental Management (SAFE) Quarterly Report publicly communicates safety-related information and statistics.

**PURPOSE**

The Metro SAFE Quarterly Report informs the Safety and Security Committee regarding the ongoing safety culture in the Metro system through established performance measurements in accordance with Authority goals. Further, the public report increases communication to enhance safety of our employees, customers and surrounding Washington metropolitan area community. The Quarterly Safety Report will provide data for the period of April – June 2016 (2Q/2016), compared with the same period of time in 2015 and against the 2016 targets; in addition to summary status of Corrective Action Plans (CAPs).

**DESCRIPTION**

Two key measures of a safety culture are the customer and employee injury rates. As such, both performance measures are included as part of Metro's Strategic Plan. The 2016 targets are: Customer Injury Rate (CIR) at less than 1.75 injuries per million Passenger Trips (MetroAccess is per 100,000 trips) and the Employee Injury Rate (EIR) at less than 4.5 injuries per 200,000 work hours.

**Key Highlights:**

- Customer Injury Rate (CIR) – For the 2Q/2016, the CIR was 2.06 customer injuries per one million passenger trips, which did not meet the target of 1.75. This rate is 5% higher than 2Q/2015's rate of 1.96. For the year, the rate is 2.18, or 6% higher than the CY15 year-end rate of 2.05.
- There were 168 NTD reportable customer injuries in the 2Q/2016, down from 177 in the 2Q/2015.
- Employee Injury Rate (EIR) – For the 2Q/2016, the EIR was 5.35 per 200,000 hours worked (equivalent to 100 employees working one year); this a 5% increase over 2Q/2015 (5.09). For the year, the rate is 5.30, which is the same rate as the CY15 year-end rate.

- There were 160 OSHA Recordable Injuries in the 2Q/2016, up from 152 in the 2Q/2015. Select actions are underway or in development to reduce all injuries below the Authority's target are listed further.

## **Background and History:**

### Key Performance Indicators (KPIs)

The Department of Safety & Environmental Management utilizes two KPIs, the CIR and EIR, as overall indicators of improving the safety culture among employees and the riding public. Daily review of incidents, systematic inspections of facilities and regulatory programs, and employee/contractor training are effective uses of resources which ensure a safer workplace and environment for our employees and passengers. The EIR measures are based on the OSHA Recordable Injury Criteria and the CIR measures are based on National Transit Database (NTD) Reporting Criteria. The data in the attachments support the two KPIs.

## **Discussion:**

### KPIs

#### Employee Injuries

The 2Q/2016 rate is 5% higher, at 5.35, than the rate during the same time period last year (i.e., 5.09). When compared to the Bureau of Labor Statistics (BLS) average for Urban and Transit Systems (i.e., NAICS code 4851), the EIR is 9% lower than the 5.90 BLS average rate.

Bus Transportation accounted for 45 of all employee injuries in the 2Q/2016, followed by Rail Transportation (18%), and MTPD (10%).

The main injury types behind the EIR are:

- Motor Vehicle Collisions (37 injuries);
- Struck By/Against (29 injuries);
- Stress (22 injuries); and
- Slip/Trip/Falls (19 injuries).

Bus Transportation had the most injuries in the 2Q/2016 with 72 OSHA Recordable Injuries. Nearly one-third of BTRA injuries were the result of non-preventable collisions. Crime-related injuries account for over one quarter of BTRA's injury total; these injuries are due to stress-related verbal assaults, being physically assaulted by passengers, or by witnessing crime while driving.

There are efforts in place to assist employees that are at risk of these injuries. WMATA's Employee Assistance Program (EAP) is actively working with Bus Transportation to provide counseling and guidance for these at risk employees. Additionally, Bus Operator Training

is working with employees on how to de-escalate situations with passengers that can lead to verbal assaults.

Bus Services and MTPD have teamed up to launch Metro's SafeWatch, which is an effort to ensure the safety of bus operators working late at night. Bus Services and MTPD will make random checks with bus operators on selected lines late night to confirm that their operating conditions are safe and that they are not experiencing any unusual activities. In addition to random personal contacts, the Bus Operations Control Center will make radio calls to bus operators at the end of each line, and MTPD will monitor problem areas and conduct 'ride-alongs' where possible.

Rail Transportation had 29 injuries in the 2Q/2016, with Stress-related and Struck by/Against injuries amounting to 25% and 17% respectively of its injuries. The former type is from witnessing passengers jumping in front of trains and crime in the station; the latter type is the result of the operator striking the cab door or window against their body. The third category is Crime-related injuries due to passenger assaults of Station Managers, which account for nearly 14% of Rail Transportation injuries.

Rail Transportation will be focusing on situational awareness training, which will identify common hazards in the workplace that may contribute to injuries if employees become complacent. As with Bus Transportation, the EAP is proactively working with employees that encounter situations that may lead to mental stress.

MTPD had 16 injuries in 2Q/2016, with over one-half related to Pursuits/Arrests. Two injuries were the result of being exposed to a suspect's blood and coming into contact with a fire extinguisher discharge. Two injuries were attributed to motor vehicle collisions, both of which were non preventable rearend collisions.

In an effort to reduce injuries and increase officer safety, the MTPD has expanded its safety committee structure to its divisions. This will provide a localized response to safety issues. In addition, defensive driving and arresting tactics training will be reviewed and re-emphasized at the divisions.

#### Customer Injuries

The MetroBus CIR for the 2Q/2016 is 2.60 injuries per million passenger trips with a total of 84 NTD Reportable Injuries; this rate was 4% lower than the 2Q/2015 rate and injury totals, which was 2.72 and 93 injuries.

The leading customer injuries for the 2Q/2016 are Collision-related (59%) and Slips/Trips/Falls (38%); the former has been the leading cause of customer injuries for the last three years.

The majority of MetroBus customer injuries are the result of three preventable collisions that amounted to 20% of all injuries. Customers falling due to not holding onto a

handrail or inattention is the second leading factor for injuries, with over 30% of injuries in this category

Bus Operator Training continues to emphasize defensive driving tactics with the overall goal of reducing non preventable collisions, which are the leading injury types for both employees and customers. In addition, WMATA's Customer Service, Communications, and Marketing Department is working on a safe riding campaign that will emphasize how to safety ride on a MetroBus (e.g., holding handrails, standing behind the yellow line).

The MetroRail CIR for the 2Q/2016 is 1.31 injuries per million passenger trips with a total of 61 NTD Reportable Injuries; this rate was 2% lower than the 2Q/2015 rate and injury total, which was 1.32 and 73 injuries. Seventy-six percent of all MetroRail injuries are Slips/Trips/Falls, followed by Struck By (14%) and Caught In/By (8%).

Escalator: The 2Q/2016 escalator injury rate (i.e., 0.59) has increased 8% when compared to the same time period in 2015 (i.e., 0.49). The leading factor causing escalator injuries are passenger inattention/distraction (50%).

Rail Facilities: The 2Q/2016 Rail Facility injury rate (i.e., 0.66) has increased 17% when compared to the same time period in 2015 (i.e., 0.56). Passenger inattention/distraction is the leading Slips/Trips/Falls factor at 23%, followed by intoxication (16%) and tripping and falling on uneven surface (16%).

Rail On-Board: The 2Q/2016 Rail On-Board injury rate (i.e., 0.06) has decreased 78% when compared to the same time period in 2015 (i.e., 0.27). The leading injury factor was when passengers were caught in a closing train door after the chimes were given (100%, or three injuries).

The MetroAccess 2Q/2016 CIR is 3.36 per 100,000 trips, up 77% from 1.89 during the same time period in 2015. The leading causes of customer injuries are non-preventable collisions (62%) and falling while alighting (33%).

### **Funding Impact:**

Necessary funding is within approved annual budget.

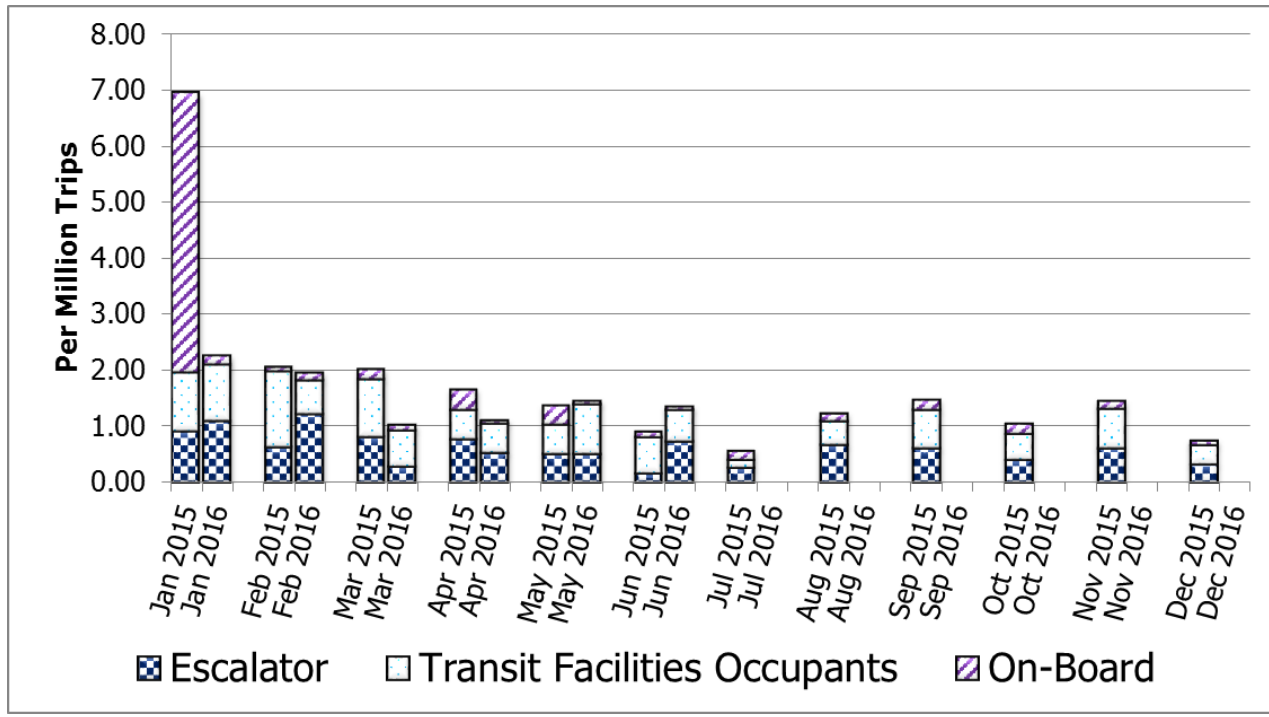
### **Timeline:**

Previous Actions	<ul style="list-style-type: none"><li>• May 12, 2016 – 1<sup>st</sup> Quarter Safety Report</li></ul>
Anticipated actions after presentation	<ul style="list-style-type: none"><li>• Continue to fully implement all NTSB and FTA CAPs</li><li>• Continue to strengthen safety Culture</li></ul>

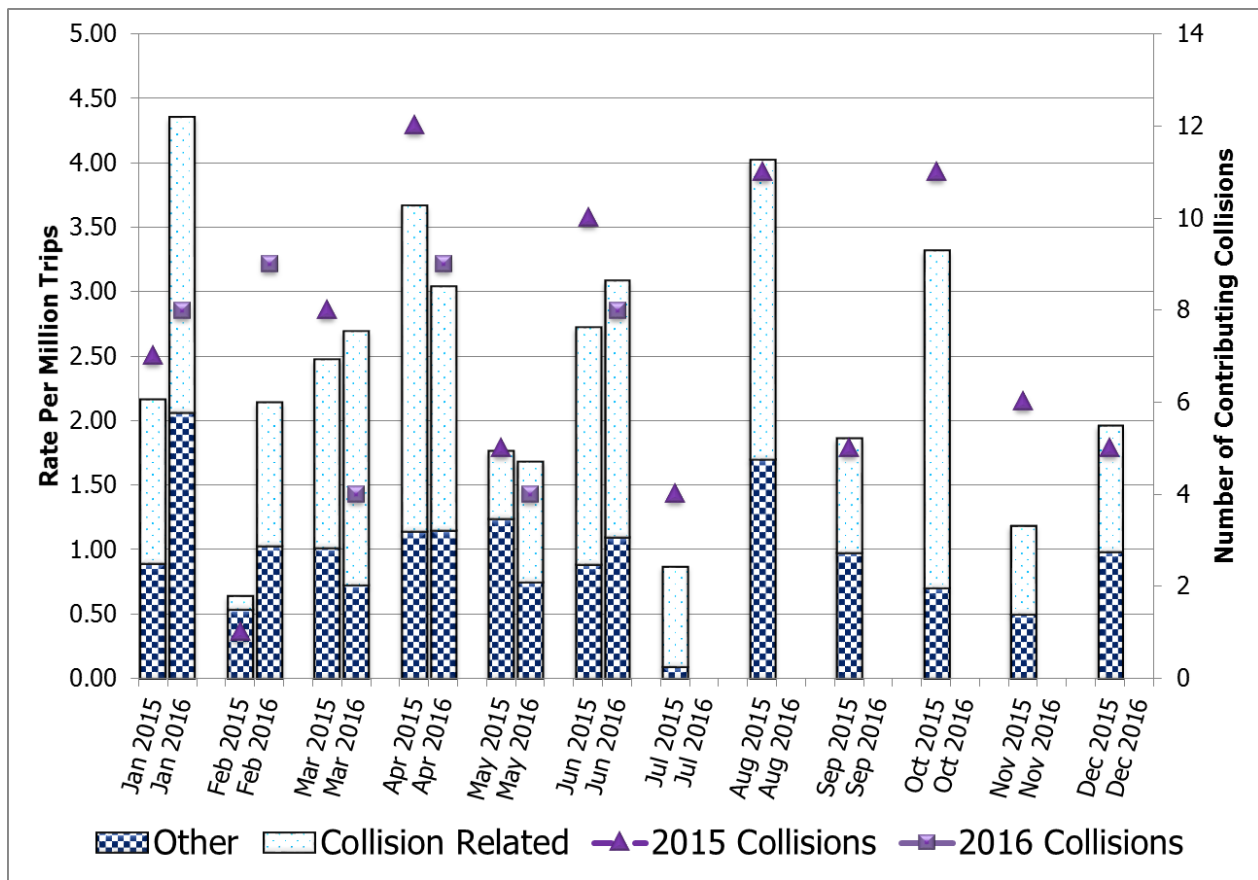
**Recommendation:**

To inform the Board's Safety Committee of the quarterly safety performance measures and actions.

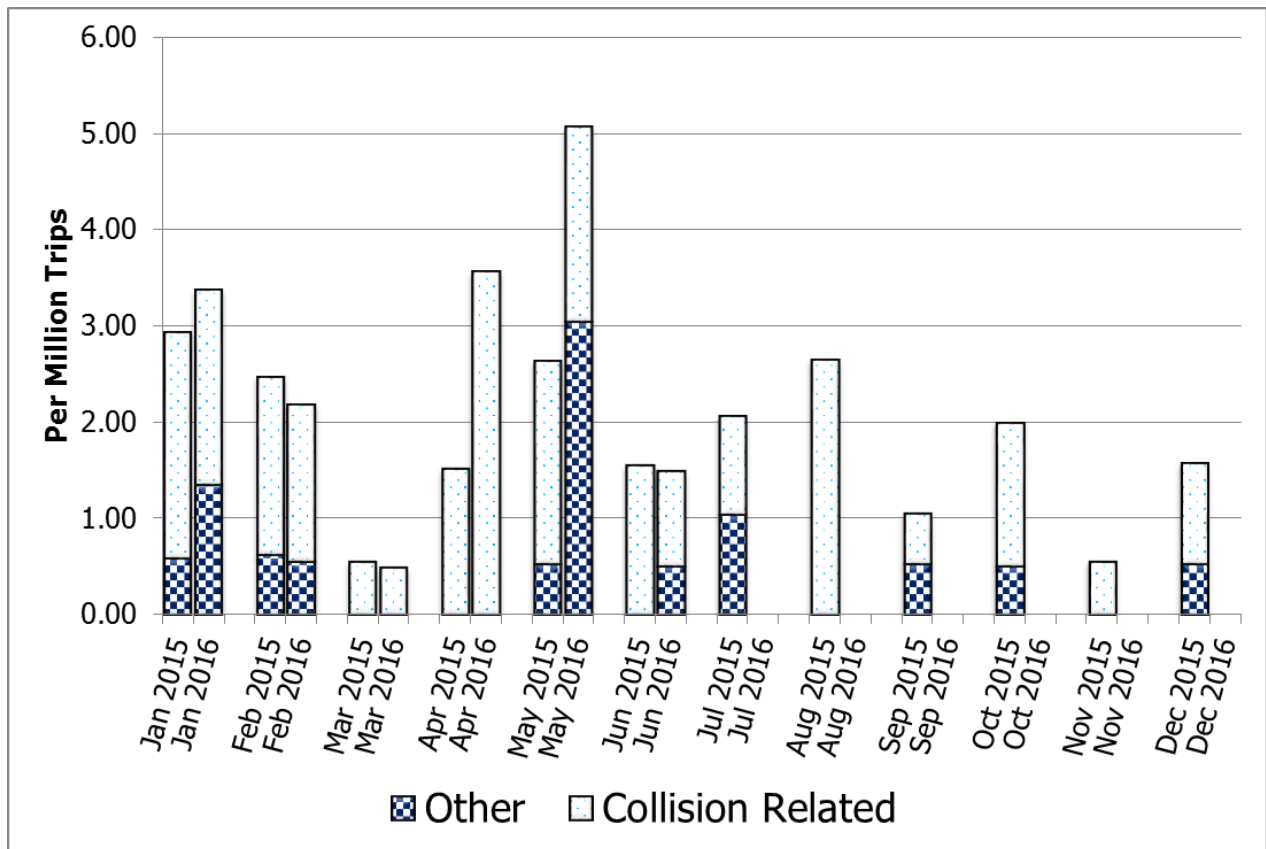
### Chart 1: Rail Passenger Injury Rates



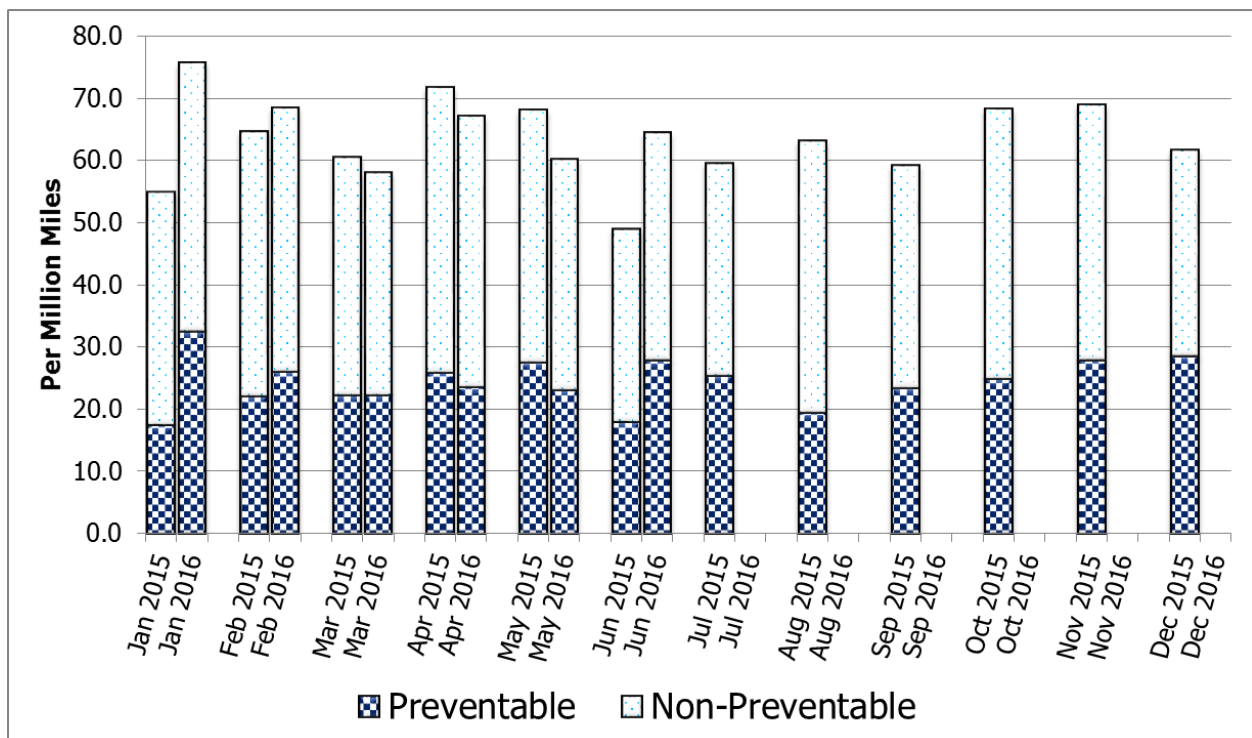
### Chart 2: Bus Passenger Injury Rates



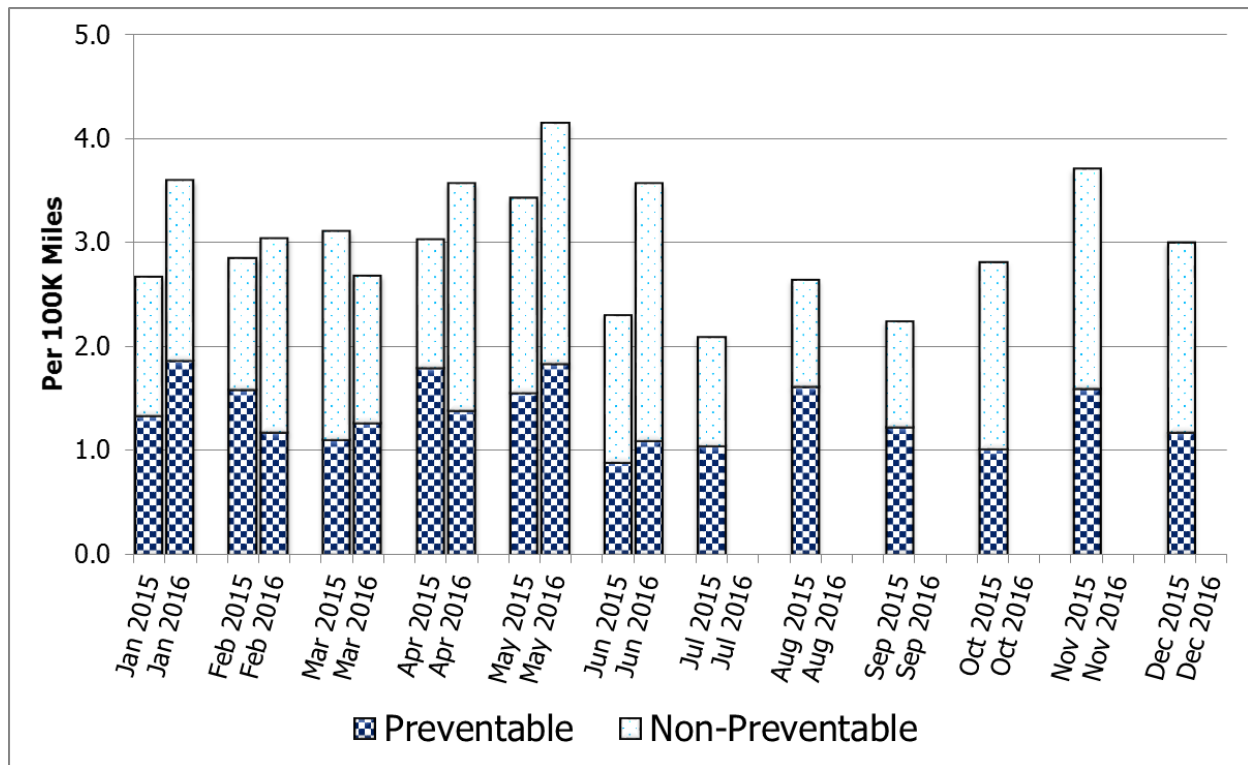
### Chart 3: MetroAccess Passenger Injury Rates



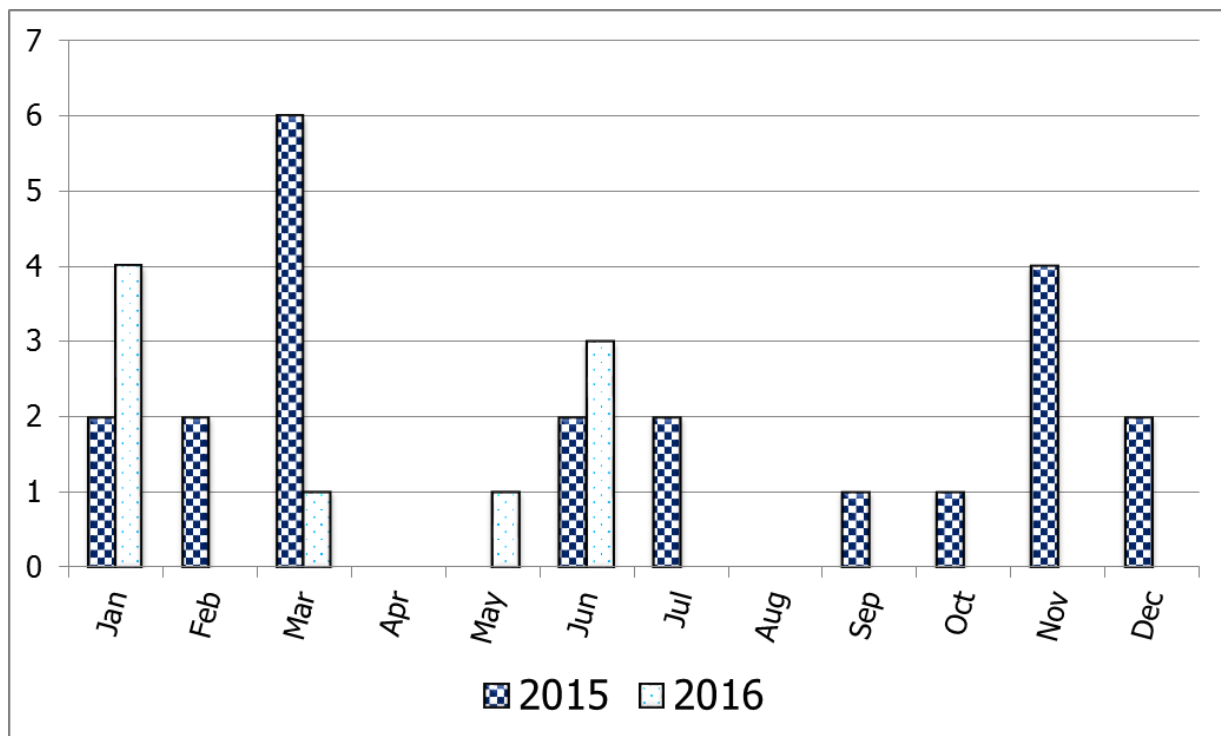
### Chart 4: MetroBus Collision Rates



### Chart 5: MetroAccess Collision Rates

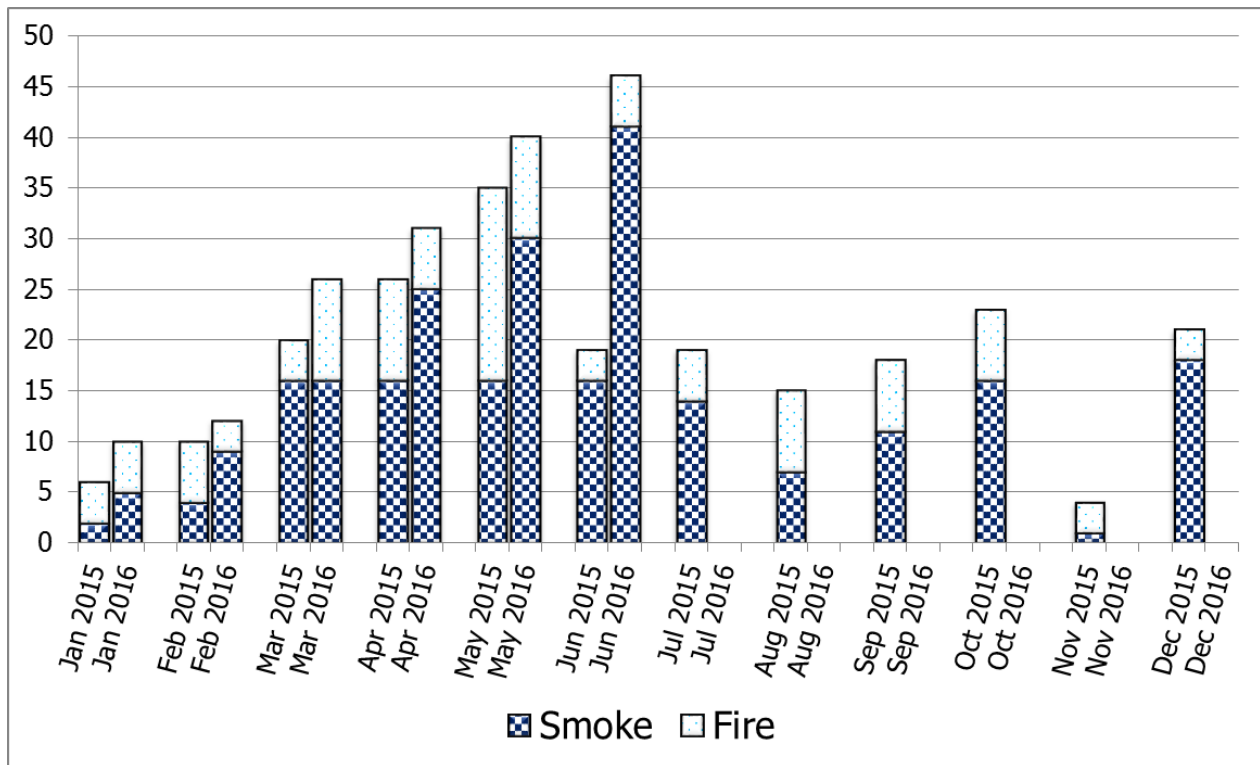


### Chart 6: Pedestrian / Cyclist Trasported to Hospital



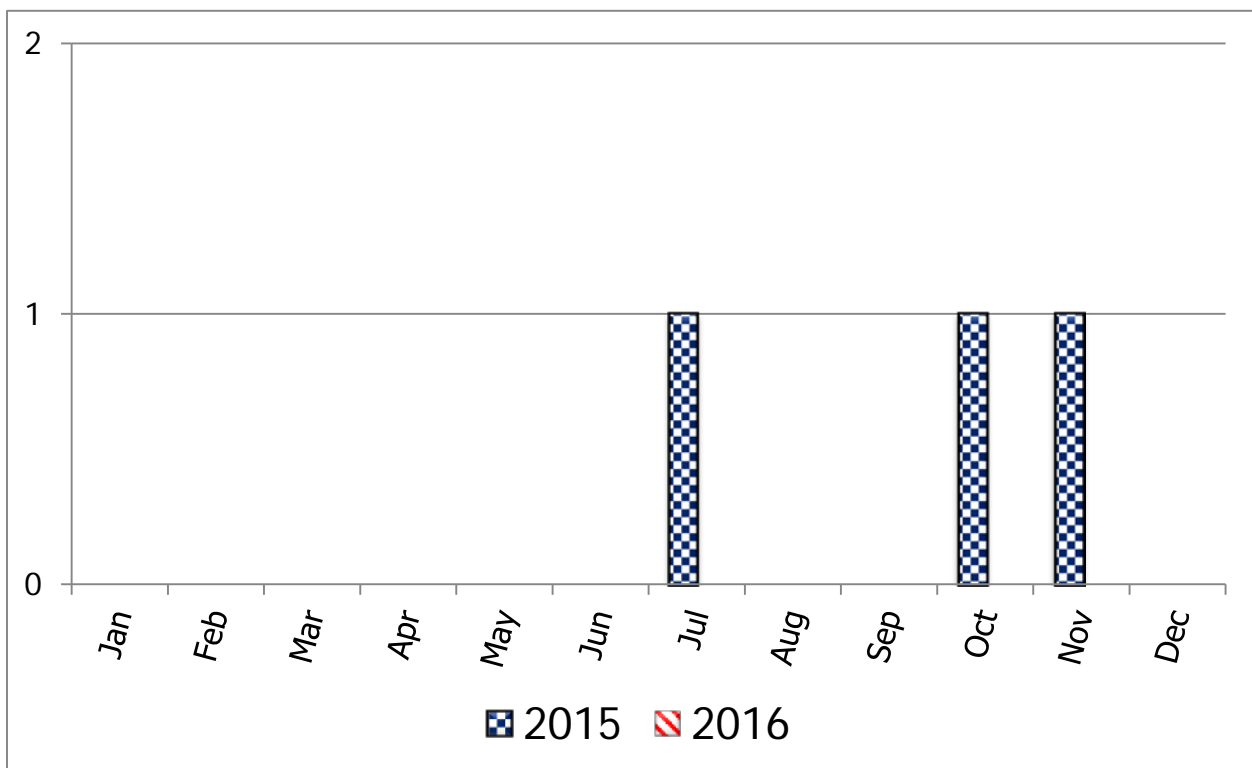


### Chart 7: Smoke/Fire Incidents\*



\*Pending OEM approval

### Chart 8: Suicides



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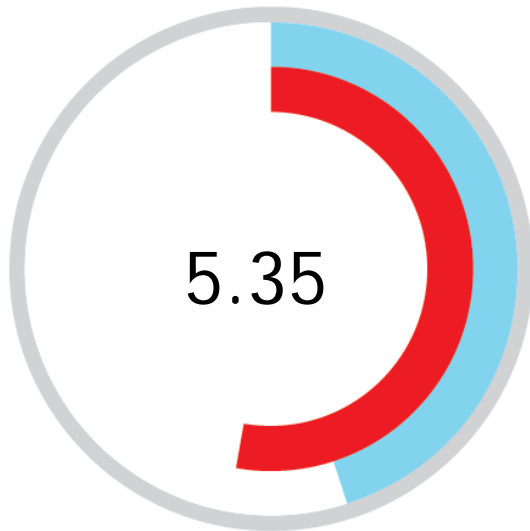
**Washington Metropolitan Area Transit Authority**

# **Quarterly Safety Report**

Safety and Security Committee  
July 28, 2016

# 2016 Key Performance Indicators

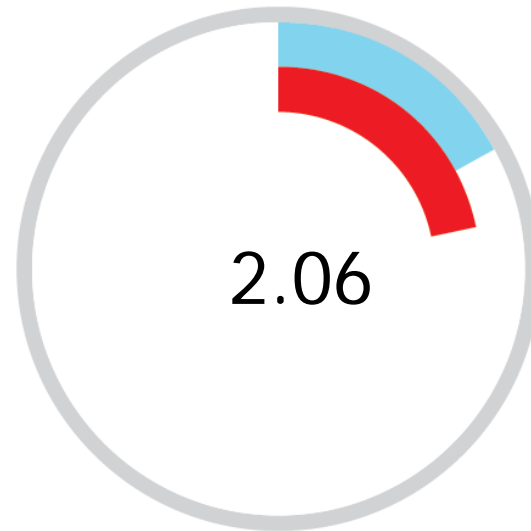
Employee Injuries



● Target ≤ 4.5 per 200,000 hours worked



Customer Injuries



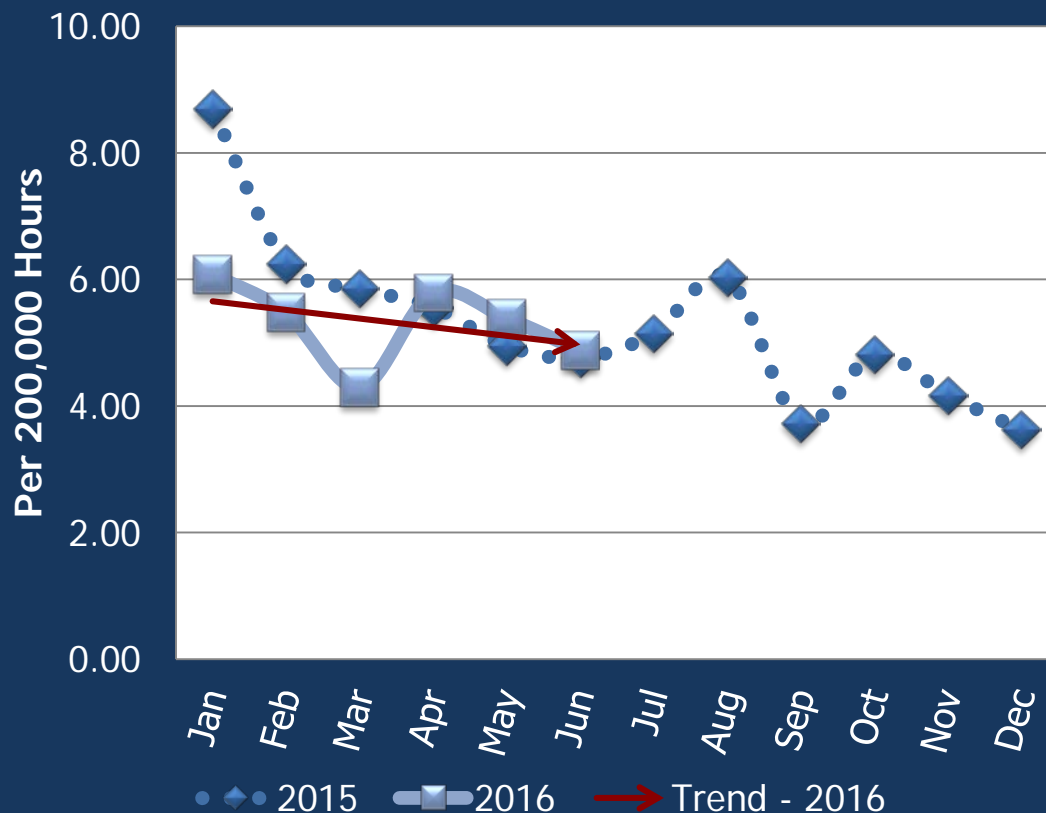
● Target ≤ 1.75 per million passengers



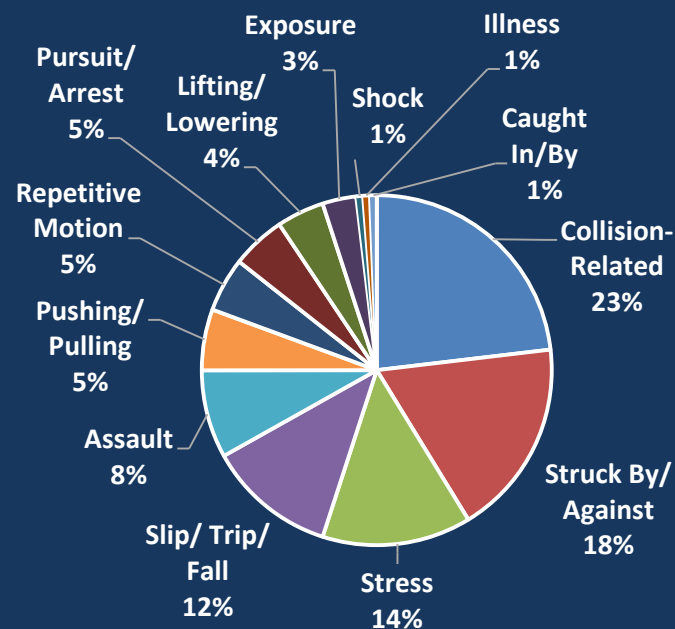


# Statistical Review

## Employee Injury Rate – *per 100 Employees*



Injury Types  
2Q/2016

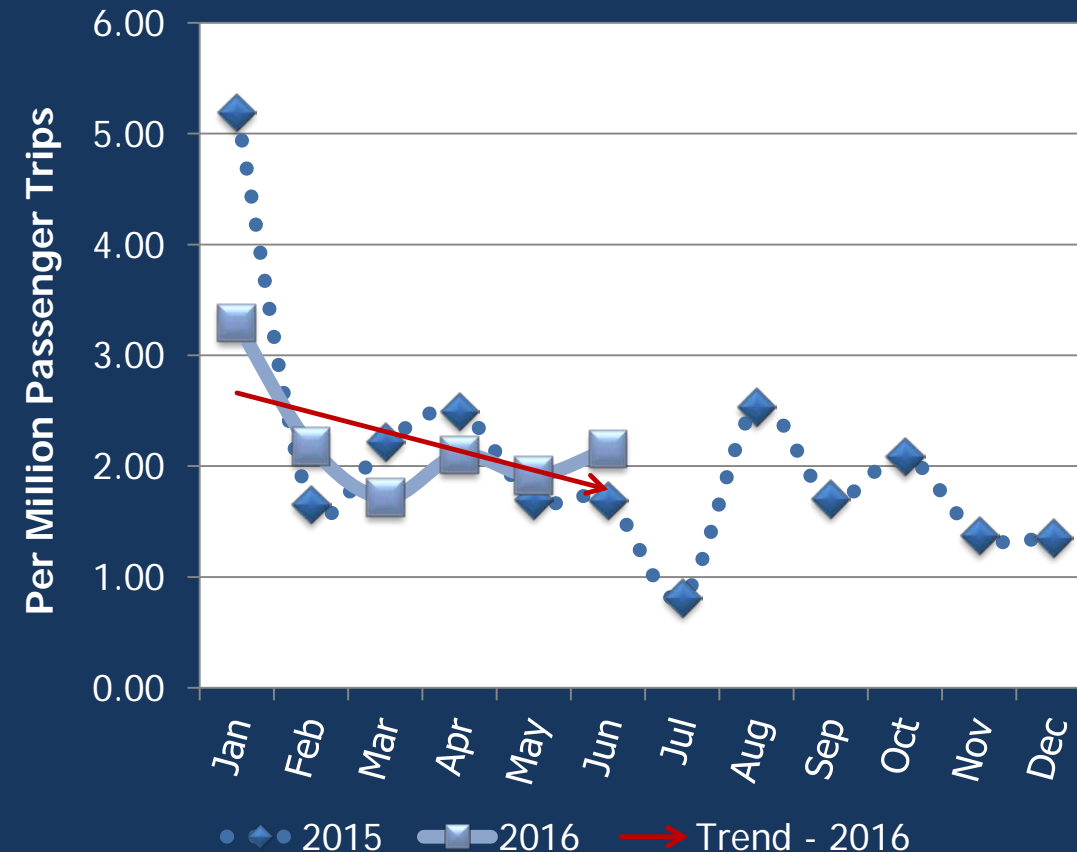


APR	MAY	JUNE	2Q/16	TARGET
5.78	5.39	4.87	5.35	<4.5

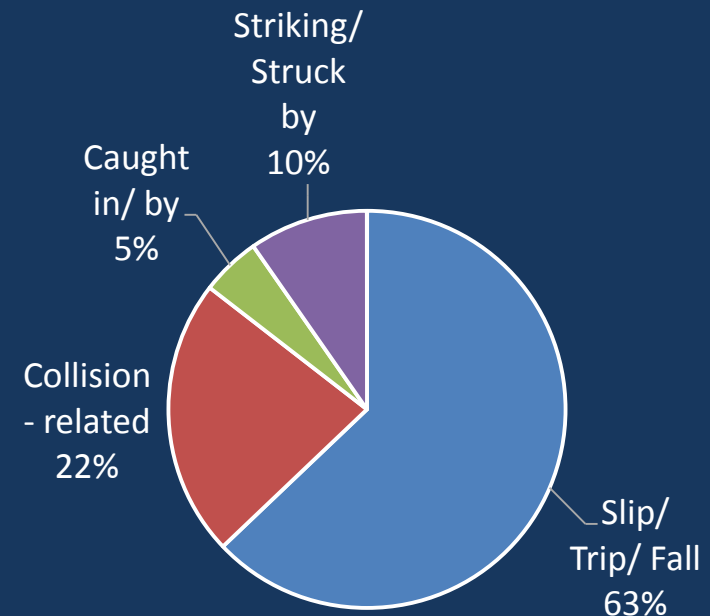


# Statistical Review

## Customer Injury Rate - *per million trips*



Injury Types  
2Q/2016



APR	MAY	JUNE	2Q/16	TARGET
2.10	1.91	2.15	2.06	<1.75



# Injuries– Key Drivers

## 2Q/2016

### Ergonomics (Employees)



– Main factors:

- Pushing/Pulling, Repetitive Motion, Lifting/Lowering
  - Actions: Training, Job Hazard Analysis, Improved Design
- 

### Non-Preventable Collisions



- Main factors: Rear End Collisions (Customers and Employees)
- Actions: Training, Pilot Accident Prevention Programs
- 

### Crime-related Incidents (Employees)



- Main factors: Verbal/Physical Assaults, Arrests, Stress
- Actions: EAP, Arrest Tactics, SafeWatch (MTPD and Bus Services)