

Toronto Transit Commission CEO's Report

June 2018



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Toronto Transit Commission
CEO's Report
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TTC performance scorecard

Key Performance Indicator	Description	Latest Measure	Current	Target	Current Status	Ongoing Trend	Page
Safety and Security							
Lost Time Injuries	Injuries per 100 Employees	Apr 2018	5.51	4.05*			15
Customer Injury Incidents	Injury Incidents per 1M Boardings	Apr 2018	0.92	1.13*			16
Offences against Customers	Offences per 1M Boardings	Apr 2018	0.76	1.00			17
Offences against Staff	Offences per 100 Employees	Apr 2018	4.60	4.06*			18
Customer: Ridership							
	TTC Ridership	Apr 2018	41.3M	43.0M			19
	TTC Ridership	2018 y-t-d to Apr	180.7M	186.3M		NA	19
	PRESTO Ridership	Apr 2018	10.2M	12.4M			20
	PRESTO Ridership	2018 y-t-d to Apr	42.5M	42.4M		NA	20
	Wheel-Trans Ridership	Apr 2018	321K	373K			21
	Wheel-Trans Ridership	2018 y-t-d to Apr	1,403K	1,609K		NA	21

Ongoing trend indicators: Favourable Mixed Unfavourable

* Represents current 12-month average of actual results

Key Performance Indicator	Description	Latest Measure	Current	Target	Current Status	Ongoing Trend	Page
Customer: Environment							
Station Cleanliness	Audit Score	Q1 2018	74%	75%			22
Streetcar Cleanliness	Audit Score	Q1 2018	88.6%	90%			23
Bus Cleanliness	Audit Score	Q1 2018	86.4%	90%			24
Subway Cleanliness	Audit Score	Q1 2018	90.7%	90%			25
Customer: Service Performance							
Subway							
Line 1 Yonge-University	Delay Incidents	Apr 2018	735	448			26
	Delay Minutes	Apr 2018	1,817	913			27
	Capacity Delivered in Peak	Apr 2018	87.1%	96%			28
Line 2 Bloor-Danforth	Delay Incidents	Apr 2018	707	399			29
	Delay Minutes	Apr 2018	1,502	835			30
	Capacity Delivered in Peak	Apr 2018	95.1%	96%			31
Line 3 Scarborough	Delay Incidents	Apr 2018	33	39			32
	Delay Minutes	Apr 2018	496	232			33
	Capacity Delivered in Peak	Apr 2018	98.4%	98%			34

Ongoing trend indicators: Favourable Mixed Unfavourable * Represents current 12-month average of actual results

Key Performance Indicator	Description	Latest Measure	Current	Target	Current Status	Ongoing Trend	Page
Line 4 Sheppard	Delay Incidents	Apr 2018	41	32			35
	Delay Minutes	Apr 2018	178	78			36
	Capacity Delivered in Peak	Apr 2018	100%	98%			37
Streetcar	On-Time Departure	Apr 2018	56.1%	90%			38
	Short Turns	Apr 2018	1,074	1,592			39
Bus	On-Time Departure	Apr 2018	77.4%	90%			40
	Short Turns	Apr 2018	2,196	3,057			41
Wheel-Trans	% Within 10 Minutes of Schedule	Apr 2018	80.7%	90%			42
Customer: Amount of Service							
Streetcar	Weekly Service Hours	Apr 2018	16.6K	16.7K			43
Bus	Weekly Service Hours	Apr 2018	147.5K	149.9K			44
Subway	Weekly Service Hours	Apr 2018	10.7K	10.8K			45
Operator Efficiency	Crewing Efficiency	Apr 2018	87.06%	87.15%			46
People							
Employee Absence	Absenteeism Rate	Apr 2018	6.95%	7.44%*			47

Ongoing trend indicators: Favourable Mixed Unfavourable * Represents current 12-month average of actual results

Key Performance Indicator	Description	Latest Measure	Current	Target	Current Status	Ongoing Trend	Page
Assets: Vehicle Reliability							
Subway							
T1	Mean Distance Between Failures	Apr 2018	242,265 km	300,000 km			51
TR	Mean Distance Between Failures	Apr 2018	790,406 km	600,000 km			52
Streetcar							
CLRV	Mean Distance Between Failures	Apr 2018	3,822 km	6,000 km			53
ALRV	Mean Distance Between Failures	Apr 2018	1,602 km	6,000 km			54
LFLRV	Mean Distance Between Failures	Apr 2018	17,149 km	35,000 km			55
Bus	Mean Distance Between Failures	Apr 2018	20,000 km	12,000 km			57
Wheel-Trans	Mean Distance Between Failures	Apr 2018	12,292 km	12,000 km			59
Assets: Equipment Availability							
Elevators	Percent Available	Apr 2018	98.6%	98%			60
Escalators	Percent Available	Apr 2018	97.1%	97%			61
Fare Gates	Percent Available	Apr 2018	96.46%	99.5%			62
Fare Card Reader	Percent Available	Apr 2018	97.2%	99.9%			63

Ongoing trend indicators: Favourable Mixed Unfavourable * Represents current 12-month average of actual results

CEO's commentary and current issues

General Overview

In early June, the TTC hosted LEAD – Leadership Exchange and Development – that prepares senior managers for future opportunities as the next generation of executive leaders in the transit industry. LEAD is an exciting and innovative program that brings together participants from eight transit agencies across North America. Megan MacRae, Executive Director of Human Resources, and Rich Wong, Head of Streetcar Maintenance and Infrastructure, were the TTC's participants in the program. Past TTC LEAD graduates include Chief Customer Officer and acting Deputy CEO Kirsten Watson and acting Chief Operating Officer Jim Ross.

Last month, more than 9,000 people came through the doors to Bay Lower Station as part of Doors Open Toronto. Bay Lower has been closed to the public since 1966, but



can be seen – often disguised as an American subway station – in numerous movies and TV shows filmed on site. It's always fun to see people's reactions when they first go down to Bay Lower – one of the city's great "hidden" treasures.

I'm proud to report that our #ThisIsWhere campaign, aimed at improving safety and combating harassment on public transit, won a prestigious Silver Award in Marketing Communications from the Toronto Chapter of the

Canadian Public Relations Society. The campaign accompanied the launch of the SafeTTC app that enables customers to report harassment, assault and other safety and security issues directly to TTC staff. To date, we have received more than 1,800 reports through the app.

On June 1, the TTC was at the PRIDE official flag-raising ceremony with our specially wrapped bus with the theme #LovesLove. As we do every year, we will run the wrapped PRIDE bus on the 94 Wellesley route throughout June. The bus will also be part of the PRIDE parade on June 24. Employees and their families and friends are encouraged to join us in the parade.

PRESTO implementation continues, as you will see in the comprehensive report being presented to you this month. With two exceptions, all stations will have the new fare gates installed by the end of June. A revised schedule for PRESTO implementation and the transition

from legacy fare media to PRESTO is detailed in the report.

On the service delivery front, the number of delay minutes on Line 1 dropped by 20% from March, however it was still short of the target. This was in part due to the number of major incidents including the tragic events on Yonge Street which resulted in a service suspension of over four hours. Also contributing to this was the subsequent wind storm which resulted in debris on the tracks causing service delays.

Capacity delivered at peak on Line 3 met target for the first time since November 2017, surpassing the threshold of 98%. This is partially due to the reduction in delay incidents and the improved weather conditions.

Also of note, for the second month in a row, Wheel-Trans average weekly ridership has dropped month-over-month, a trend we haven't seen in four years. This is attributed to a number of factors, including our new

flexible cancellation policy as well as customers opting for alternate modes of travel, including the conventional system.



Richard J. Leary
Chief Executive Officer (Acting)
Toronto Transit Commission

Critical Paths

Critical Path 1: Financial Sustainability

In February, City Council approved a 2018 – 2027 Capital Plan that profiled the TTC's capital funding requirements over the 10-year planning period. The 2019 Budget process also began in earnest in February with the CEO and CFO emphasizing the need for a more complete and reliable forecast of the TTC's long-term capital needs in support of Critical Path 1: Transform for Financial Sustainability in the Corporate Plan "Advancing to the next level, 2018 – 2022 & beyond".

To this end, we are preparing an updated and comprehensive 10-Year Capital Plan. The Plan will provide full clarity on the TTC's long-term capital requirements: legislative and safety requirements; the need to expand capacity and reduce crowding; invest in new

vehicles and enabling technology; and to undertake essential state-of-good-repair investments across the TTC's portfolio of vehicles, tracks, structures, stations and properties. The Plan will also be mindful of the TTC's capacity to spend and the need to collaborate with key stakeholders including the City of Toronto, Metrolinx, other GTHA regional transit partners and of course our customers. The Capital Plan will be prepared over the course of 2018 and presented as part of the 2019 Budget approval process in early 2019.

Critical Path 2: People

The TTC has negotiated and ratified new four-year collective agreements with both CUPE Local 5089 and IAMAW. These agreements reflect the changing business needs of the TTC, while also providing fair and affordable

compensation and benefit improvements for employees.

The TTC and CUPE Local 2 negotiated a tentative collective agreement which unfortunately was not ratified by the union membership. The parties are proceeding to interest arbitration.

After conciliation by a Ministry of Labour appointed conciliator, the TTC and the Amalgamated Transit Union Local 113 will also be proceeding to interest arbitration, pursuant to *Bill 150, Toronto Transit Commission Labour Disputes Resolution Act, 2011*.

As the TTC was declared an essential service in 2011, employees cannot legally strike and the TTC cannot lockout employees.

Critical Path 3: Growth and Assets

New Streetcars

The target for Q2 2018 is 16 new streetcars in service. As of May 28, 2018, seven streetcars have been shipped to the TTC and eight have entered service. Of the 204 streetcars ordered, 80 streetcars have been shipped and 75 have entered service.

Recent Progress

Our project team is embedded at Bombardier's plants in Thunder Bay, Kingston, La Pocatiere QC, and Sahagun Mexico. Recent observations suggest that the production rate continues to increase and quality is improving, particularly in Thunder Bay where streetcars are completed.

While challenges continue, the TTC and Bombardier remain committed to working together to identify areas of constraint, improve efficiencies and implement corrective actions that impact production and service reliability.

Cumulative No. of New Streetcars Entered into Service (Actual vs Original Schedule and Actual vs Latest Schedule)

	2013	2014	2015	2016	2017	2018	2019
Actual	0	3	14	30	57	75*	TBA
vs 2012 Original Schedule	7	37	73	109	148	184	204
					Actual	75*	TBA
					vs 2018 Latest Schedule	121	204

	Q1	Q2	Q3	Q4	Total
Actual	10	8*	TBA	TBA	18*
vs 2018 Latest Schedule	12	16	15	21	64

*As of May 28, 2018

Immediate Next Steps

- Bombardier continues to prepare for production out of their Kingston plant with the first car due in October. Achieving this objective will help restore confidence that Bombardier will be able to meet the original commitment for 204 new streetcars by the end of 2019.
- TTC staff have received

direction for the final position on negotiation for liquidated damages and will work with Bombardier over the coming weeks to complete this negotiation.

- At the June Board meeting, TTC staff will report back on the results of a Request for Information for the supply of additional streetcars.

2018 Wheel-Trans Vehicle Procurement

	Q1	Q2	Q3	Q4
Cumulative Actual	9	16*		
vs Cumulative Schedule	9	31	50	69

*As of May 28, 2018

Wheel-Trans Procurements

The additional 69 vehicles scheduled for 2018 will bring the fleet of ProMasters up to 80.

Recent Progress

All nine vehicles scheduled for Q1 were received on-time. Of the 22 ProMasters scheduled for Q2, seven were received as of May 28, 2018. There is some risk of Creative Carriage missing its Q2 target; however, following the May 23rd visit to Creative Carriage's expanded production facility, it is believed that the end-of-year target remains achievable.

Immediate Next Steps

- TTC staff to continue meeting with Creative Carriage and key sub-suppliers (e.g. INIT) to ensure parts-supply issues are resolved in a timely manner.

Recent Progress

Clean Diesels

As of May 28, 2018, Nova Bus delivered two of the 78 buses scheduled for Q2 for a total of 42 year-to-date. It is expected that deliveries in June will largely make up for the outstanding balance.

Hybrids

In accordance with the Board decision on November 13, 2017, TTC has been working with Nova Bus to change the current order

Bus Procurements

In accordance with the green bus technology plan approved by the Board in November 2017, 625 new buses are scheduled for delivery in 2018 and 2019.



First look at future eBus vehicles

2018 - 2020 Bus Procurements

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Clean Diesel Bus	Actual	40*	2*						
	vs Scheduled	40	78	104	88				
	Cumulative Actual	40	42*						
	vs Cumulative Scheduled	40	118	222	310	310	310	310	310
Hybrid Electric Bus	Actual								
	vs Scheduled			1	54	115			85
	Cumulative Actual								
	vs Cumulative Scheduled			1	55	170	170	170	255
Battery Electric Bus (eBus)	Actual								
	vs Scheduled				10	10		10	30**
	Cumulative Actual								
	vs Cumulative Scheduled				10	20		30	60**
Total		40	118	223	365	500	500	510	625

* As of May 14, 2018

** Additional 30 eBus procurement is pending approval at June 2018 Boarding Meeting

for clean diesel buses to include as many hybrid-electric buses as possible. Since the last Board meeting in May, Nova Bus has advised that it can produce one additional hybrid-electric bus this year for a total of 55 hybrids. The first of this latest generation of hybrid-electric buses is scheduled for delivery in September.

Electric Buses (eBuses)

Buses

After several months of technical and commercial negotiations with our new business partners at BYD, New Flyer, and Proterra, we have now issued the TTC's first orders for long range all-electric buses. Orders for both BYD and New Flyer were signed on May 19th by the TTC CEO under delegated authority of the Board. It is expected that negotiations with Proterra will also be successful and an order should be issued in the coming weeks.

As of May 28, 2018, TTC has secured eBus production slots from all bus manufacturers (OEMs) and has conducted its first intensive,

week long pre-production technical review meeting with New Flyer.

While the delivery timeline communicated to-date was based on early communications with the vendors, the 2018 – 2020 Bus Procurements table now reflects the contract delivery dates. These dates are somewhat conservative as they reflect when substantial liquidated damages would be applied in the event of late delivery. As such, actual eBuses on TTC property are likely to arrive earlier.

Infrastructure

The TTC has been working closely with Toronto Hydro, to implement the required charging infrastructure. Toronto Hydro, a fully invested strategic partner without whom this program would not be possible, plans to release a Request for Proposal (RFP) for the final design and infrastructure works in June. The civil and electrical work is not substantial in scale, but it is an entirely new architecture that must be retrofitted successfully without interrupting garage operations. Infrastructure design has been developed by

Toronto Hydro, its contractor CIMA, and with input from key stakeholders at TTC. Infrastructure needs to be complete prior to receiving the buses and so eBus deliveries have been staggered to allow for completion of work at each of the three designated garages.

Immediate Next Steps

TTC staff will present a green bus program update in June 2018 that includes a change request to the eBus program to include an additional 30 eBuses and to start work on retrofit of the TTC's first zero-emissions bus garage.

Critical Path 4: Make Taking Public Transit Seamless

Easier Access Phase III (Accessibility)

On April 26, 2018, the TTC awarded the contract for the construction and installation of elevators, a new second exit and other associated works at Chester Station to continue progress towards our commitment to make all TTC stations accessible by 2025.

The detailed designs of the remaining stations have also been advanced to meet this commitment. Contract document preparation for the next six stations is almost complete; contracts may be issued for bid and awarded in the latter half of 2018 for Runnymede, Wilson, Bay, Keele, Sherbourne and Lansdowne stations.

Fare Card and Fare Gates

As set out in this month's Board report, we have agreed on a schedule with Metrolinx for the implementation of key PRESTO functionality and the transition from legacy fare media to the fare card.

Highlights include:

- Fare gate installation completed by end of June, except for the Commerce Court entrance at King Station and the main entrance at Yorkdale Station, which will both be finished with other construction projects;
- PRESTO fare card vending machines at all subway station main entrances by end of June with full station coverage by end of October;

Easier Access - Design/Construction Schedule

■ Design ■ Construction

		2018	2019	2020	2021	2022	2023	2024	2025
Station	In Service Date								
St. Patrick	2018	Construction							
Dupont	2019	Construction	Construction						
Royal York	2019	Construction	Construction						
Wellesley	2020	Construction	Construction	Construction					
Wilson	2020	Design	Construction	Construction					
Yorkdale	2020	Construction	Construction	Construction					
Chester	2020	Design	Construction	Construction					
Runnymede	2020	Design	Construction	Construction					
Bay	2020	Design	Design	Construction					
King	2021	Design	Construction	Construction					
Keele	2021	Design	Construction	Construction	Construction				
Lansdowne	2021	Design	Construction	Construction	Construction				
Sherbourne	2021	Design	Construction	Construction	Construction				
College	2022	Design	Design	Construction	Construction	Construction			
Spadina	2022	Design	Design	Construction	Construction	Construction			
Donlands	2022	Design	Design	Construction	Construction	Construction			
Lawrence	2023	Design	Design	Design	Construction	Construction	Construction		
Castle Frank	2023	Design	Design	Design	Construction	Construction	Construction		
Christie	2023	Design	Design	Design	Construction	Construction	Construction		
High Park	2023	Design	Design	Design	Construction	Construction	Construction		
Greenwood	2023	Design	Design	Design	Construction	Construction	Construction		
Summerhill	2023	Design	Design	Design	Construction	Construction	Construction		
Museum	2024	Design	Design	Design	Design	Construction	Construction	Construction	
Rosedale	2024	Design	Design	Design	Design	Construction	Construction	Construction	
Old Mill	2024	Design	Design	Design	Design	Construction	Construction	Construction	
Glencairn	2025	Design	Design	Design	Design	Design	Construction	Construction	Construction
Warden	2025	Design	Design	Design	Design	Construction	Construction	Construction	Construction
Islington	2025	Design	Design	Design	Design	Construction	Construction	Construction	Construction
Stations in Design		22	10	13	6	3			
Stations Construction		12	13	13	13	14	12	6	3

- Adult 12 month pass available on PRESTO on May 25;
- Two-hour transfer available on PRESTO by August 26;
- Youth, Post-Secondary pass available on PRESTO by August 26;
- Youth and Senior 12 month pass available on PRESTO by August 26;
- The PRESTO single ticket (previously referred to as Limited Use Media or LUM), will be fully available by June 2019.
- Tickets and tokens sales end August 2019.

We continue to see improvement around fare gate availability. Working with our vendor, Scheidt & Bachmann, we have addressed operational procedures, improved the time for motor replacement on failure and improved our maintenance response times. With fare gate construction winding down, we also have more resources available to respond to out-of-service gates. Fare gate availability improved 78% from March to April. Despite this improvement, there is more work to be done. We expect further

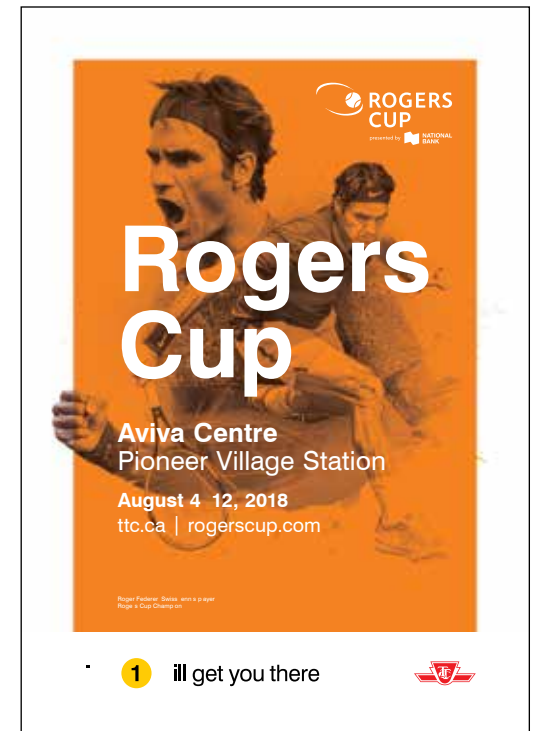
improvements with a software patch currently in testing, with full deployment planned for mid-June of this year.

Critical Path 5: Partnerships

The TTC has partnered with Tennis Canada and Rogers Cup to promote transit use to this annual tennis tournament (August 4 to 12, 2018). Rogers Cup is the highest attended one week tournament in the world with attendance exceeding 150,000. A full advertising campaign will be launched in early July promoting transit use to Rogers Cup. The partnership includes the use of the TTC logo on various Rogers Cup advertising materials as well as on-site activity zone promotions.

Cornerstone: Safety

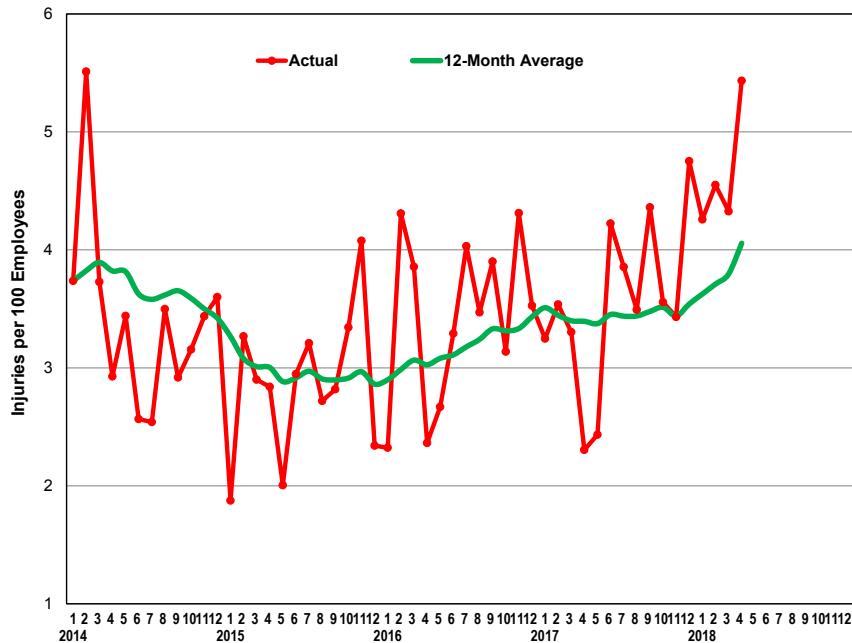
The triennial APTA Audit took place from April 16th through the 25th 2018. Over that time, APTA staff and industry peer reviewers interviewed representatives from most line departments and conducted site visits at many work locations. The APTA Audit provides a 3rd party review of the TTC's Safety Management System



(SMS) and several areas of specific interest. Following receipt of the APTA Audit final management report, it will be presented, along with a management action plan at a future TTC Board meeting.

Safety and Security

Lost-time Injuries



Results

The lost-time injury rate (LTIR) for April 2018 was 5.51 injuries per 100 employees.

Analysis

The 12-month average LTIR to the end of April 2018 was 4.05 injuries per 100 employees. The LTIR for the current period was 36% higher than the 12-month average LTIR. This increase was mainly attributed to the rise in Acute Emotional Event injuries in this period as a result of the April 23 tragedy on Yonge Street near North York Centre.

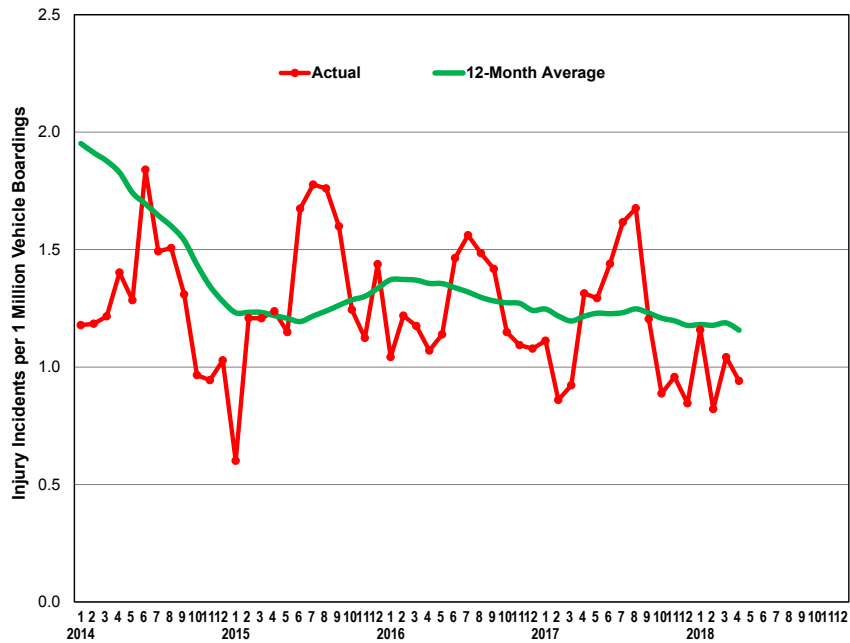
The 12-month average line shows the movement of the LTIR from 2014 to 2018. An upward movement can be observed since December 2015.

Action Plan

Further analysis by injury type reveals that musculoskeletal/ergonomic type injuries (e.g. overexertion, reach/bend/twist, repetition) represent the highest injury event and account for 24% of all lost-time injuries.

The new Ergonomic Musculoskeletal Disorder Prevention Program focused on preventing such injuries and resolving ergonomic concerns will be implemented from April 2018 through to the end of 2019. Implementation of the program will include communication, training, and Musculoskeletal Disorder hazard assessments.

Customer Injury Incidents



Results

The customer injury incident rate for April 2018 was 0.92 injury incidents per one million vehicle boardings.

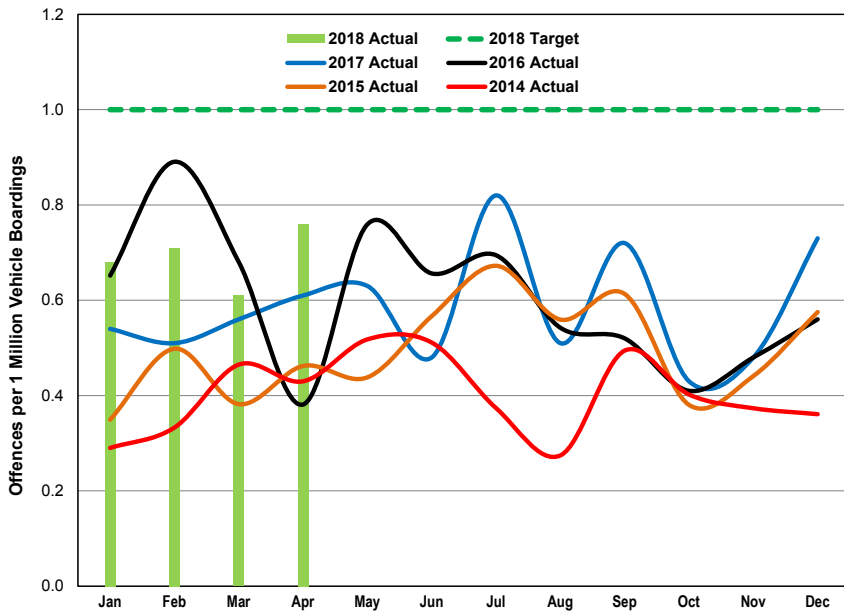
Analysis

The 12-month average customer injury incident rate to the end of April 2018 was 1.13 injury incidents per one million vehicle boardings. The customer injury incident rate for the current period was 19% lower than the 12-month average rate. This decrease was mainly attributed to the decrease in station related subway injuries in Lines 1 and 4 in this period.

Action Plan

The 12-month average line shows the movement of the customer injury incident rate from 2014 to 2018. The observed reduction in the moving average customer injury incident rate can partly be attributed to the introduction of the Station Management Model with an increased focus on ensuring a safe, clean and secure system for customers. Also contributing were the ongoing actions taken as part of the Safe Service Action Plan, initiated in 2015 to reinforce good safety behaviours and improve safety performance. Incidents by mode are currently being assessed to more effectively focus resources into continually reducing future incidents.

Offences Against Customers



Results

Total offences against customers increased in April to 0.76 offences per one million vehicle boardings. The moving annual rate of offences against customers to April 2018 was 0.63, which was 11% higher than the corresponding moving annual rate of 0.57 to April 2017.

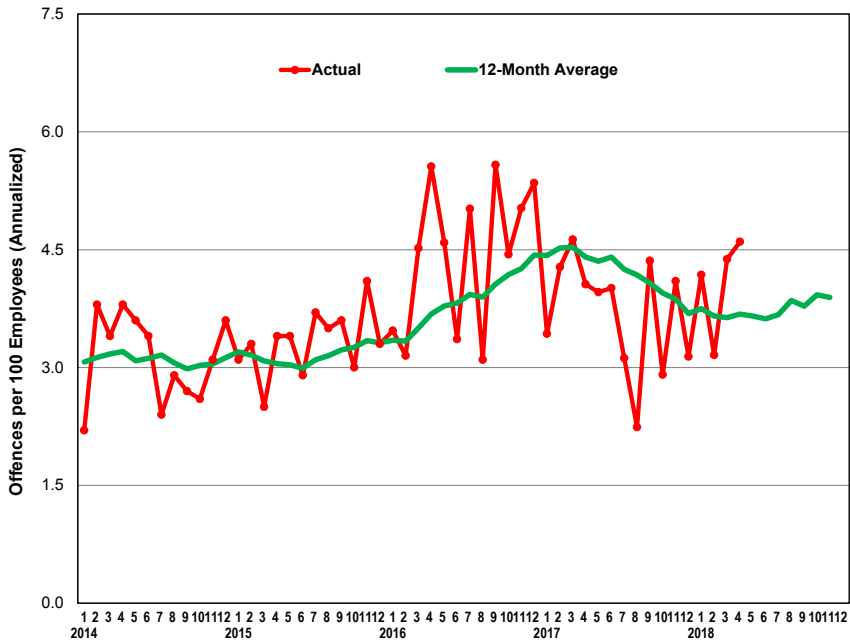
Analysis

An increase in sexual assaults was observed in the period, as a result of two offenders who were linked to multiple incidents. Both suspects have been arrested and charged.

Action Plan

Transit Enforcement Special Constables will continue to provide a visible presence across the system, with a special focus on designated areas of concern.

Offences Against Staff



Results

Total offences against staff increased in April to 4.6 offences per 100 employees. The current rate is 13% higher than the corresponding rate of 4.06 for April 2017. The moving annual rate of offences against staff to April 2018 was 3.65, which was 17% lower than the corresponding moving annual rate of 4.41 to April 2017.

Analysis

Year-over-year decreases in crimes against employees were observed in eight of the 10 previous periods and the ongoing trend remains favourable.

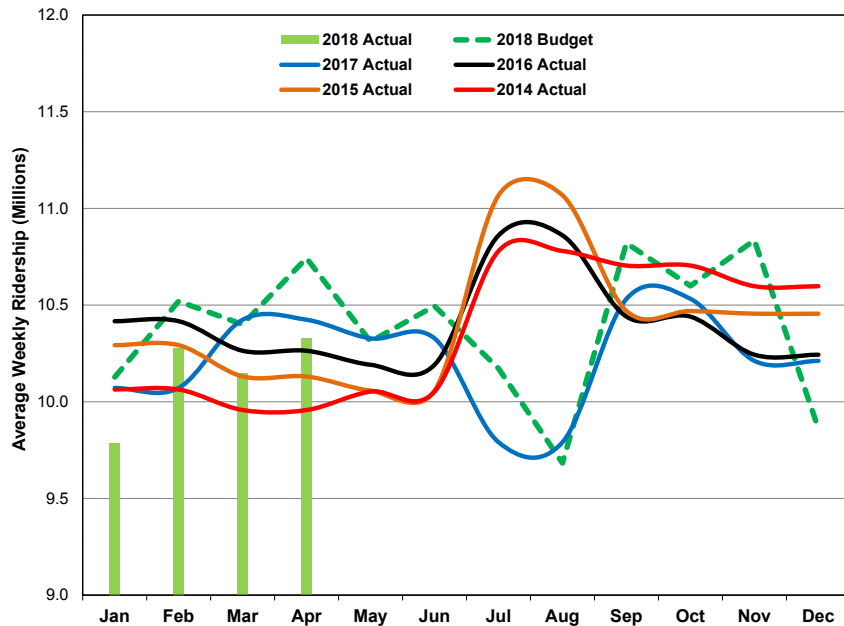
Action Plan

Transit Enforcement Special Constables have continued to provide support to operating personnel via the B.U.S.S.T.O.P. Initiative, and have traveled on more than 1,800 buses and streetcars since the project's inception. Transit Enforcement Special Constables have also been assigned to special details in response to specific safety and security concerns identified by TTC staff.

Customer

Customer: Ridership

TTC Ridership



Ridership

Ridership in April 2018 was 41.3M, which was 1.7M (4.0%) below the budget of 43.0M. In terms of year-over-year growth, April's ridership of 41.3M was 1.5M (3.5%) below the comparable period in 2017.

Year-to-date to the end of April 2018, ridership was 5.6M (3.0%) below budget and 3.2M (1.7%) below the comparable period in 2017.

Analysis

The sluggish ridership results to-date in 2018 are partially attributable to the frequency of severe cold weather. To the end of April, Toronto Public Health issued 19 Extreme Cold Weather Alerts (forecasted temperatures of -15C or colder) compared with 17 to the same point in 2017.

Another factor continuing to impact ridership is the ongoing decrease in Metropass sales. There were 83,000 (-7%) fewer passes sold

from January to April in 2018 compared with the corresponding months in 2017. Some of these lost sales have likely been offset by an increase in PRESTO e-purse transactions. Metropasses currently generate about 45% of total ridership. Therefore, declining sales will have a significant impact on overall ridership trends.

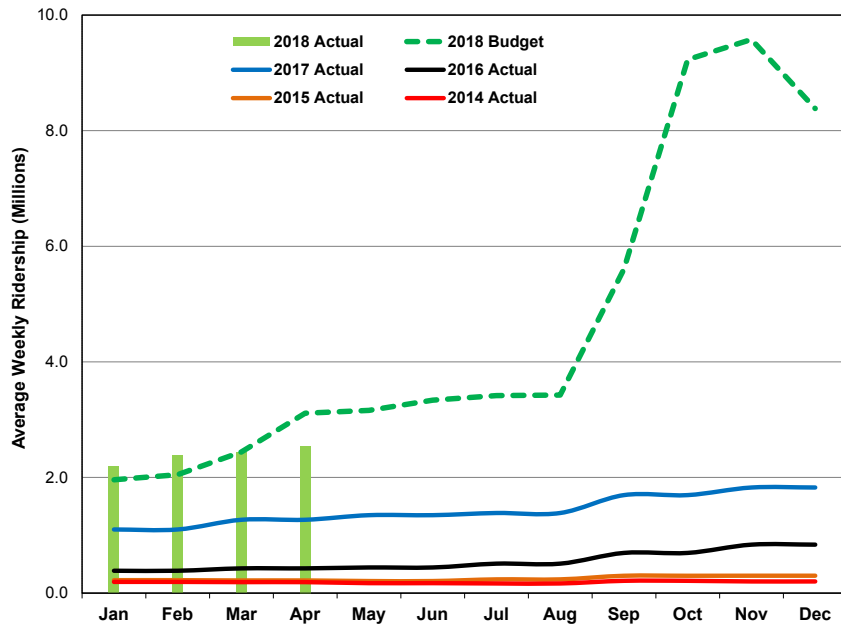
Action Plan

Ridership has flatlined since 2014 and this is due to a variety of factors such as city growth and congestion, changes in customer mobility, and growth in digital ride-hailing services.

To re-establish sustained ridership growth, a new Ridership Growth Strategy is being implemented.

Research is also underway to analyze the changes in monthly Metropass sales and corresponding ridership impact. Results of this analysis will inform future action plans.

PRESTO Ridership



Results

Ridership using the PRESTO fare card (e-purse; period pass) in April was 10.2M, which was below the budget (-2.2M). In terms of year-over-year growth, April's PRESTO ridership of 10.2M was 5.1M (100%) above the ridership of 5.1M for the comparable period in 2017.

Year-to-date to the end of April 2018, ridership was 0.2M (0.5%) above budget and 22.3M (110%) above the comparable period in 2017.

Analysis

The PRESTO component of total TTC ridership continues to grow. The PRESTO adoption rate increased from 24.0% to 24.7% in April 2018.

The 2018 PRESTO ridership budget was calendarized in late 2017 and the sharp increase in September 2018 had been based on the anticipated discontinuation of the sale of legacy monthly

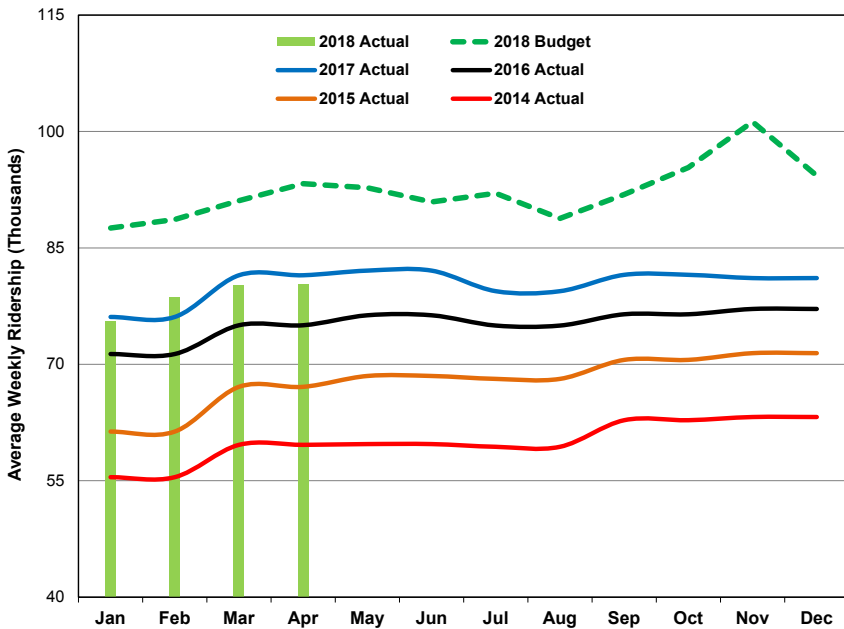
passes, tokens and tickets. Staff will continue to monitor adoption rates throughout the year with consideration of the impact of the current PRESTO Transition Plan that will see the elimination of legacy Metropasses by the end of 2018 and legacy tickets/tokens by the end of 2019.

Action Plan

The PRESTO adoption rate is expected to accelerate in 2018 with the introduction of additional PRESTO functionality and equipment. This includes additional PRESTO vending machines installed at stations and the two-hour time-based transfer feature that will be available to customers in August on the PRESTO card. The TTC continues to work with PRESTO to enable new products, while phasing out legacy fare media.

Note:
PRESTO ridership is included in TTC ridership totals.

Wheel-Trans Ridership



Results

Ridership in April 2018 was 321K, which was 52K (14%) below the budget of 373K. In terms of year-over-year growth, April's ridership of 321K was 5K (2%) below the ridership of 326K for the comparable period in 2017.

Year-to-date to the end of April 2018, ridership was 205K (13%) below budget but 61K (5%) above the comparable period in 2017.

Analysis

For the second month in a row, Wheel-Trans average weekly ridership is lower than the same month last year, a trend that has not appeared in the last 4 years. Some of the drop can be attributed to poor weather, which has a more significant impact on Wheel-Trans customers. Applications for new Wheel-Trans eligibility remains consistent. The delay in confirming trips due to finding scheduling efficiencies has also had an impact on our ridership. There has also been an increase in cancellations by 23%, indicating customers may be taking advantage of the more flexible cancellation policy and are

selecting alternative methods of travel including the conventional system.

Action Plan

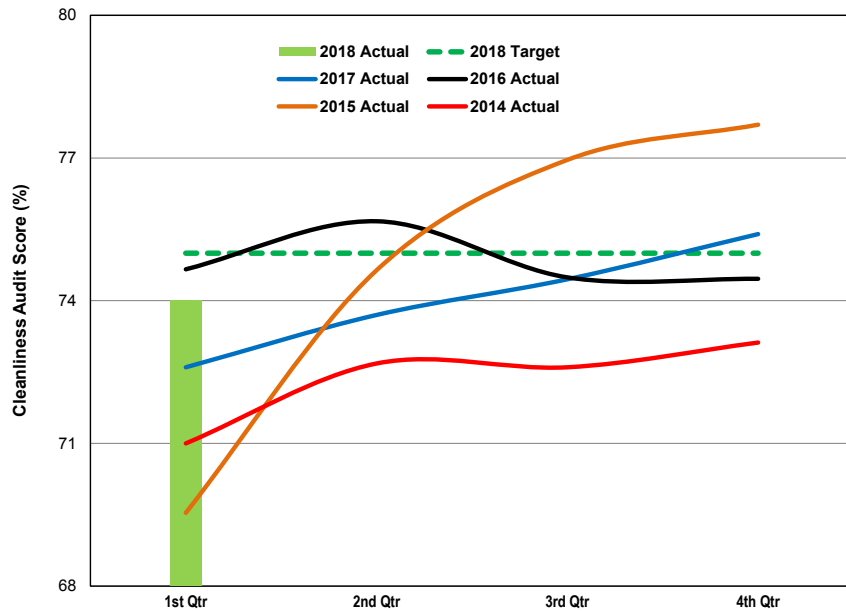
Expanding the Family of Services conventional route choices and continuing to roll out streetcar services as part of the program will provide customers with more travel options and positively impact ridership. We will continue to monitor the impact of increased travel options on our overall KPIs.

Note:

Wheel-Trans ridership is not included in TTC ridership totals.

Customer: Environment

Station Cleanliness



Results

The average station score missed target, coming in at 74.01%. The average score is down slightly from Q4 2017, but came in higher than what is traditionally seen in the first quarter. Line 1 extension stations are excluded due to ongoing construction completion work.

Analysis

Inclement weather during the winter months traditionally has a direct impact on the audit scores, compounded by the fact that tending to inclement weather prevents janitors from being able to tend to detail oriented work in the stations.

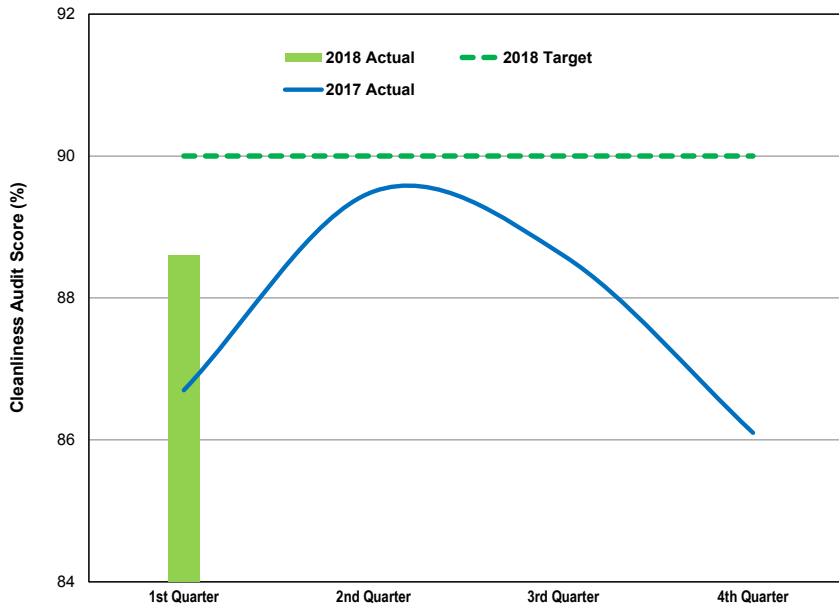
With the start-up of annual projects, the audit scores are expected to rise throughout the remainder of 2018.

Action Plan

New methods and processes continue to be investigated.

One process being explored is to increase the number of heavy cleaning crews to increase the frequency of heavy cleaning activities in stations. The goal is to reduce the current four-week cycle to a two-week cycle. The proposed plan involves converting some Maintenance Service Persons to Heavy Clean Service Persons, which would be a cost-neutral change.

Vehicle Cleanliness - Streetcar



Results

The audit score for streetcar cleanliness for Q1 2018 was 88.6%. This score is an increase from both Q1 2017 (same period last year) and Q4 2018 (previous period). Overall performance on cleanliness, however, remained below the target of 90%.

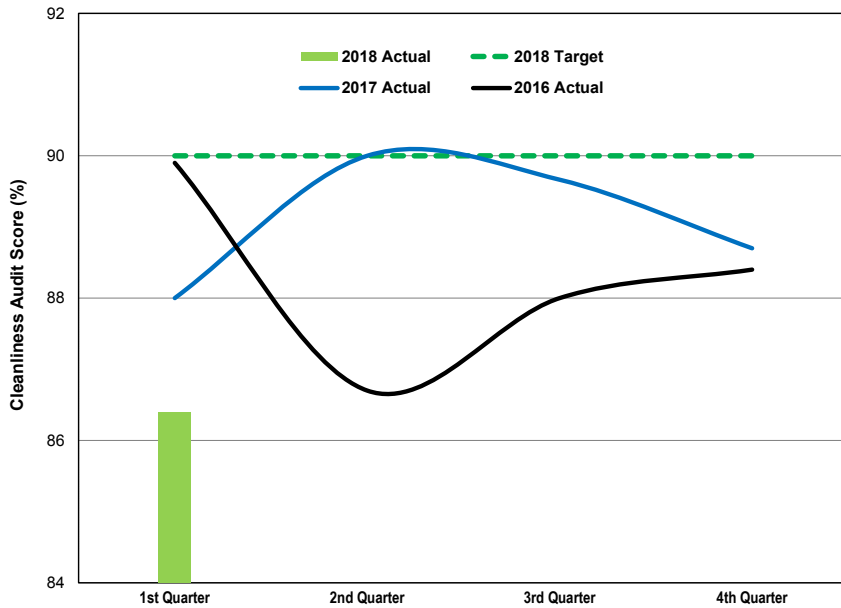
Analysis

Poor weather conditions in January impacted the overall Q1 quarterly cleanliness. Exterior washes were not completed regularly since they were not performed in temperatures below -10C. Although the floors were washed regularly, accumulation of salt and sand deposits contributed to the overall rating.

Action Plan

In addition to investigate methods to wash vehicles in all weather conditions, staff will investigate additional procedures to remove deposits that have accumulated on the flooring. The warmer weather and absence of salt and sand on the roads will also contribute an increase in cleanliness.

Vehicle Cleanliness - Bus



Results

The bus cleanliness audit score in Q1 2018 was 86.4% which is below the target of 90%. Q1 2018 results were slightly lower than Q4 2017. Extreme cold temperatures and precipitation (snow) during winter months impacts the cleanliness of the exterior and interior of vehicles.

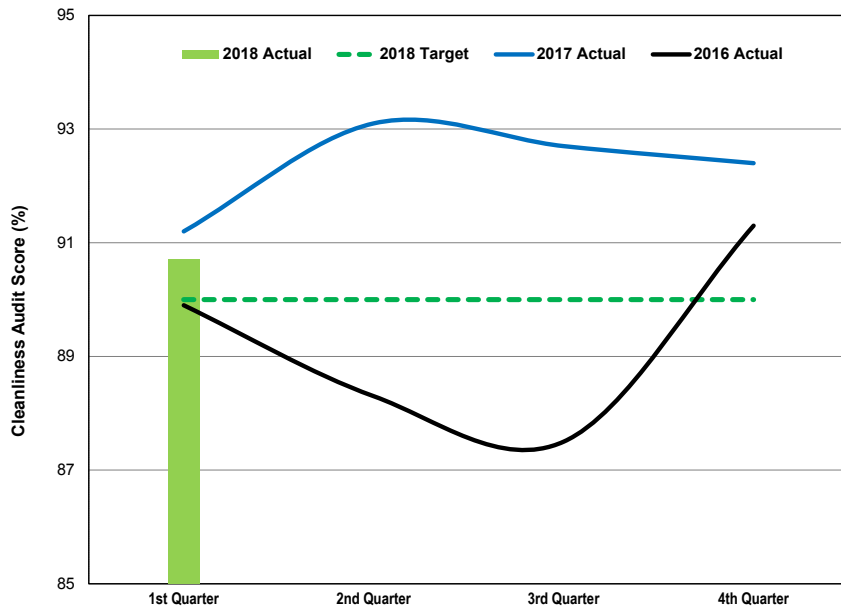
Analysis

The performance scores take into account pre-service, in service and post-service audit results. As a result, the scores are impacted by changes in in-service operating conditions. Fifty per cent of the audits were conducted in minus 11C and no exterior washing or floor washing took place. This resulted in lower scores. Pre-service audit scores were 96.4% for temperatures above minus 10C. Q2 results are expected to be favourable as temperatures rise.

Action Plan

Manually cleaning the front and back exteriors was stepped up in Q1 and will continue throughout 2018. Opportunities are being reviewed to clean the interior of buses at end terminals and buses returning to the garages to further enhance the customer experience.

Vehicle Cleanliness - Subway



Results

The average rating of 90.7% in Q1 2018 is above the target of 90.0%. The department has recorded a score of greater than 90% in six consecutive quarters.

Analysis

Areas of strength in the vehicle cleanliness across all fleets and lines were the ceilings and lighting. In Q4 2017, floors and the exterior cleanliness of our vehicles recorded the lowest scores due to inclement weather conditions. Floors and exterior cleanliness again appeared as an area where further improvement can be made in Q1 2018 where the inclement weather conditions prohibited the exterior wash program.

Action Plan

On Line 1, exterior washes were affected due to facility constraints at Wilson, and construction at Davisville. Currently, the floors are tended to every 14 days during the floor wash cycle. Exterior vehicle cleanliness is an area where further improvements can be made on all lines when weather conditions are more favourable.

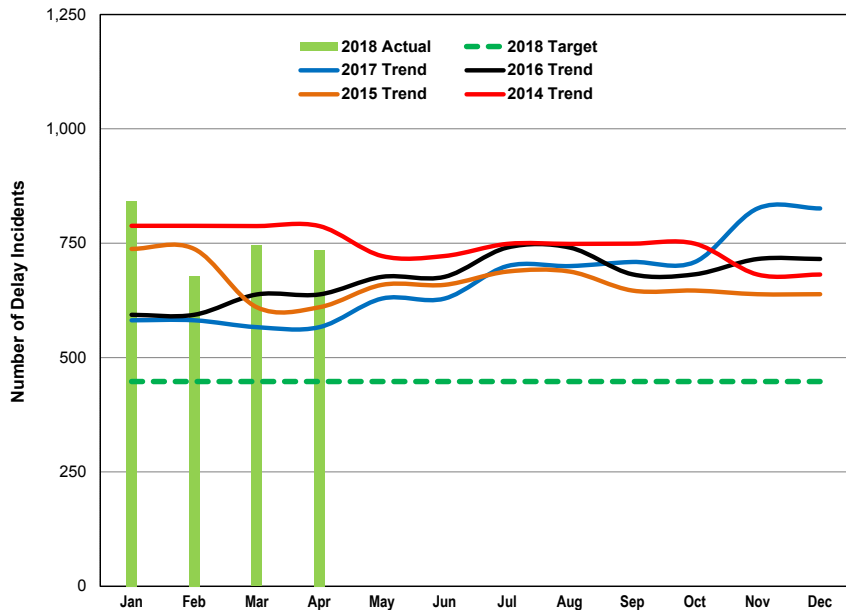
Note:

The target for this measure has been changed to 90% in Q4 2017, a target more reflective of the ongoing level of performance and consistent with the targets for bus and streetcar.

Customer: Service performance

Subway

Line 1: Delay Incidents



Results

The number of delay incidents were very similar to the previous month, with a slight decrease of 1.3%.

Analysis

While the target of 448 incidents was not reached, there was a decrease in passenger incidents, down from 367 to 309 (approximately two less incidents per day).

Staff incidents also declined, from 88 to 67 in Subway Transportation specifically.

Action Plan

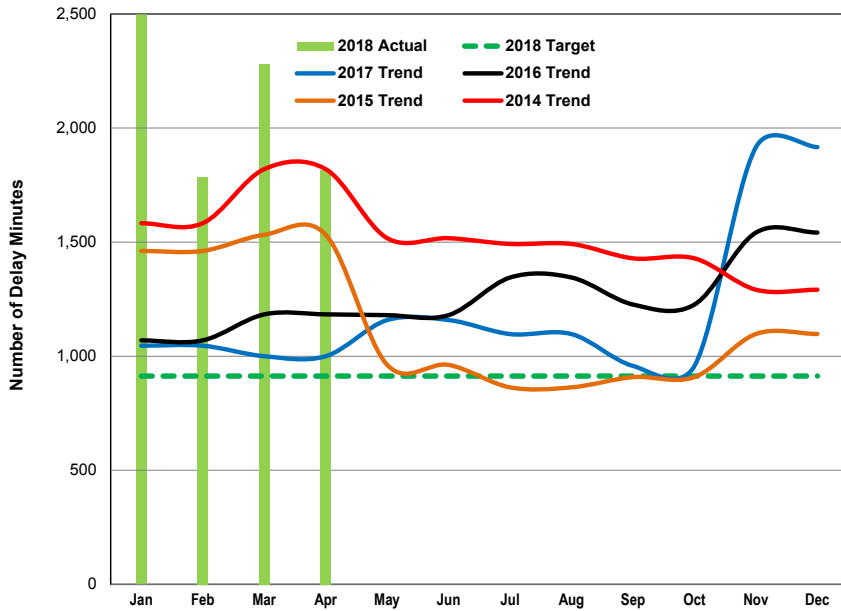
Of the over 300 passenger-related incidents, one third were medically related. The majority of these medical incidents did not occur on trains in service, but in the stations so there was no negative impact to subway service.

Additional customer campaigns may need to be considered to educate passengers about the proper use of the emergency alarms in the trains, as there were 85 false alarms reported during this period.

Note:

The 2018 target is based on a 40% or more reduction in delay incidents from the 2014 monthly average baseline.

Line 1: Delay Minutes



Results

The number of delay minutes decreased in April to 1817. This was a reduction of 20.4% compared to March.

Analysis

During this period, there were decreases in delay minutes in a number of areas including rolling stock, ATC and staff delays.

Despite these reductions, April had several major incidents that contributed to the high number of minutes.

The tragic events on Yonge Street on April 23 resulted in a service suspension of over four hours to allow for the police investigation.

In an unrelated incident, there was a delay of over two hours as a result of a smoke / fire incident from King to Union stations. The results were further skewed due to the wind storm on May 4, which blew trees and debris onto the track at open cut areas causing service delays.

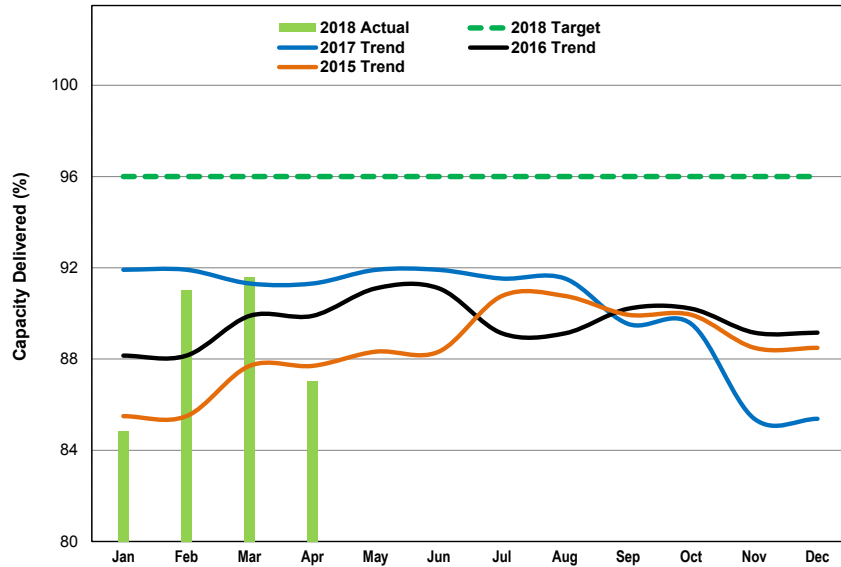
Action Plan

Controllable events must still be our focus in reducing delay minutes. In April, the number of delay incidents related to track work defects and signals increased significantly. Thorough investigations into the causes and solutions to prevent recurrences, including improved training and procedural changes have occurred.

Note:

The 2018 target is based on a 40% or more reduction in delay minutes from the 2014 monthly average baseline.

Line 1: Capacity Delivered In Peak



Results

This period's average peak capacity delivered was lower than the target due to a series of adverse events related to weather, signal issues and a police investigation. All events occurred during the AM or PM peak service periods, further compounding the impact.

Analysis

The results were significantly lower than the target of 96%. Typically, 25.5 trains per hours (TPH) run through identified stations. This is used as a means to measure capacity. On the day of the ice storm, the TPH was 13.5.

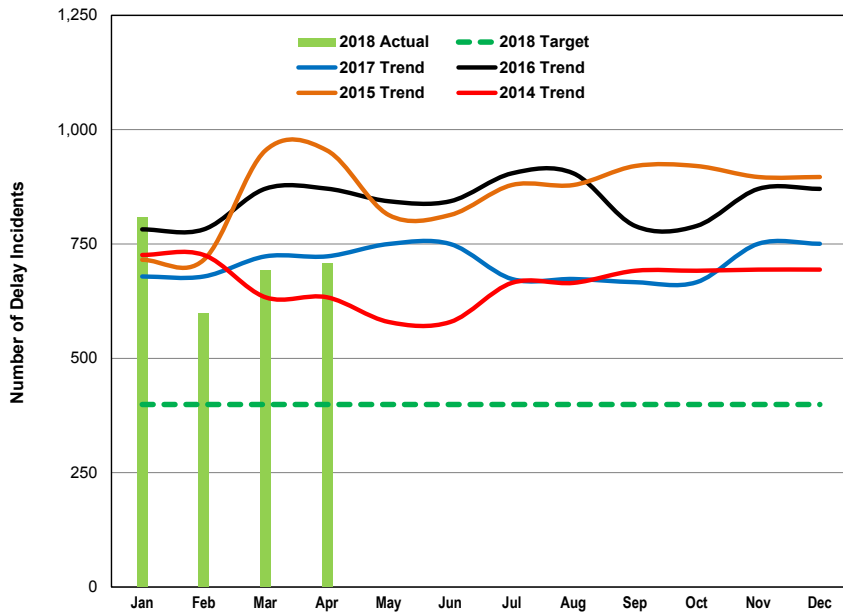
During the morning of April 19, when trains were unable to leave the yard, the THP was 14.5.

Despite the low numbers, train management techniques were deployed to ensure safe service was provided to customers. Equipment was brought from Line 2 to support service and many trains were turned at strategic locations to ensure that the interchange stations were not underserved.

Action Plan

Work continues at Wilson Yard to reduce the likelihood of issues that will impact serve runouts. Schedule modification have been made and will continue to be made in the coming months.

Line 2: Delay Incidents



Results

The number of delay incidents remained similar to the previous period, with a slight increase of 2.2%.

Analysis

Overall, incident numbers in most categories did not show any significant increases or decreases. Of note, rolling stock did have more door related issues, 15 mechanically related and 22 related to debris or customers.

Passenger-related incidents only increased 4.7%, but continue to be responsible for a high number of the total incidents at 38.2%.

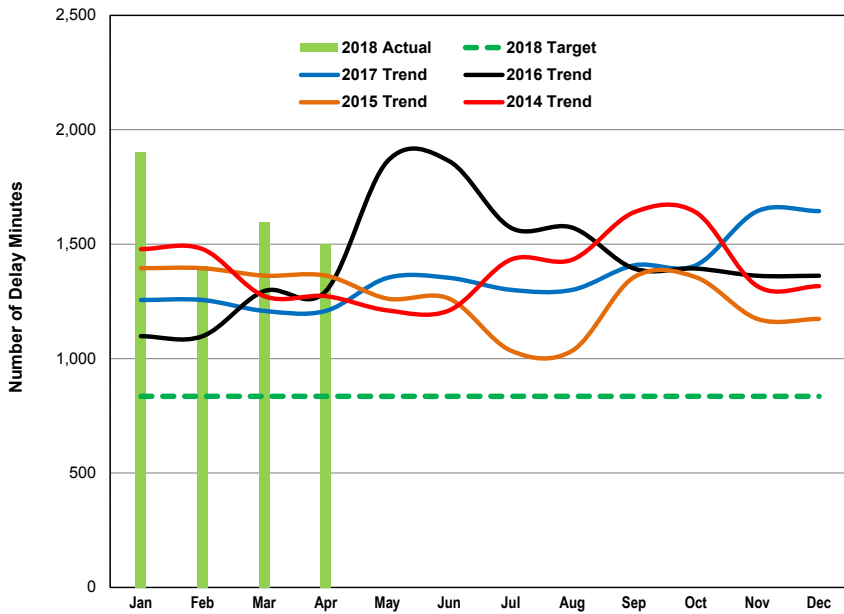
Action Plan

In order to reduce door incidents on trains, protocols are in place to inspect vehicles before service to ensure they are problem-free. This process will continue to assist with identifying issues before trains enter service.

Note:

The 2018 target is based on a 40% or more reduction in delay incidents from the 2014 monthly average baseline.

Line 2: Delay Minutes



Results

The number of delay minutes decreased in April to 1502 or 5.9%, mostly due to a 41.9% reduction in passenger-related minutes.

Analysis

The decrease in minutes is related to a number of areas, including a reduction in passenger events. Specifically, the number of trespassers is down 74.5% and injuries at track level are down 72%.

There were unforeseen incidents that caused significant delay minutes, including the ice storm on April 16, which resulted in 108 minutes delay to service due to downed hydro lines. As well, on May 4th, high winds lead to 118 minutes in delays related to debris on the track.

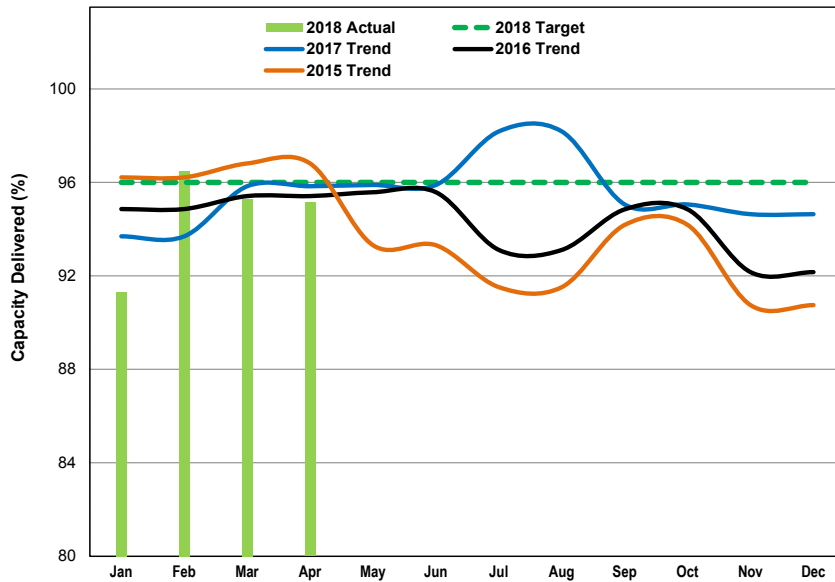
Action Plan

Additional attention will be given to rolling stock to ensure door issues do not result in increased minutes. April data had an increase of 405%, from 17 to 86. The Subway Infrastructure work-flow is also being reviewed to ensure that late clearing work zones do not impact service startup.

Note:

The 2018 target is based on a 40% or more reduction in delay minutes from the 2014 monthly average baseline.

Line 2: Capacity Delivered In Peak



Results

The peak capacity delivered on Line 2 narrowly missed the target of 96% coming in at 95.1%.

Analysis

Performance was good for most of April. There were two significant events that kept us shy of the target. On April 16, a late-clearing work zone and a disabled workcar impacted the AM peak. On this same day, downed hydro lines on the east end of Line 2 caused further service disruptions.

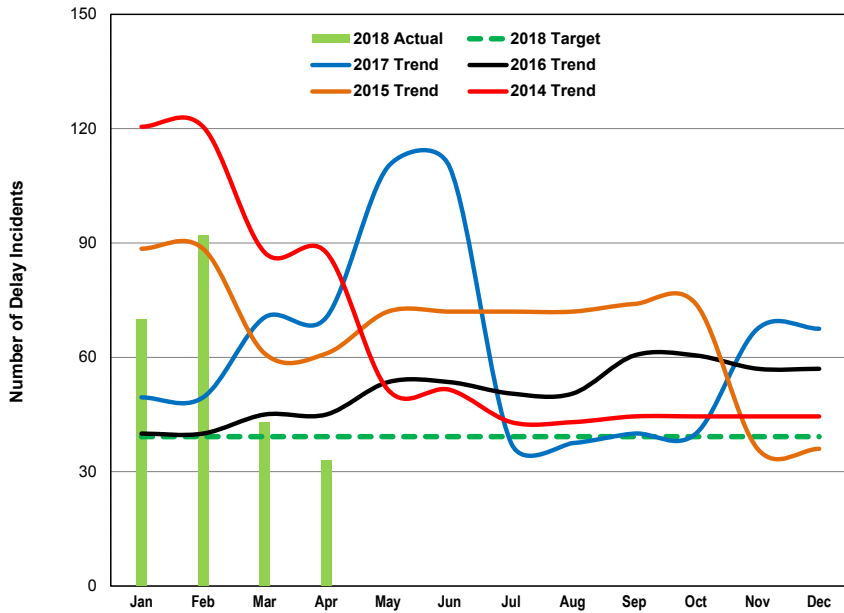
Action Plan

Reviews related to our workcar fleet. Reliability studies are being recommended to ensure vehicles more prone to malfunctions are removed earlier from track work.

Note:

Capacity delivered is the actual train count divided by the scheduled train count for each hour at sampled locations. Data are based on weekday service from Monday to Friday.

Line 3: Delay Incidents



Results

The number of incidents decreased to 33 in April from 43 in March, staying below the threshold of 39.

Analysis

There was a 52.8% decrease in rolling stock issues attributed to a reduction in door problems. As well, Subway infrastructure incidents decreased by 60% as there were no issues related to track maintenance, axle counters or signals during this period.

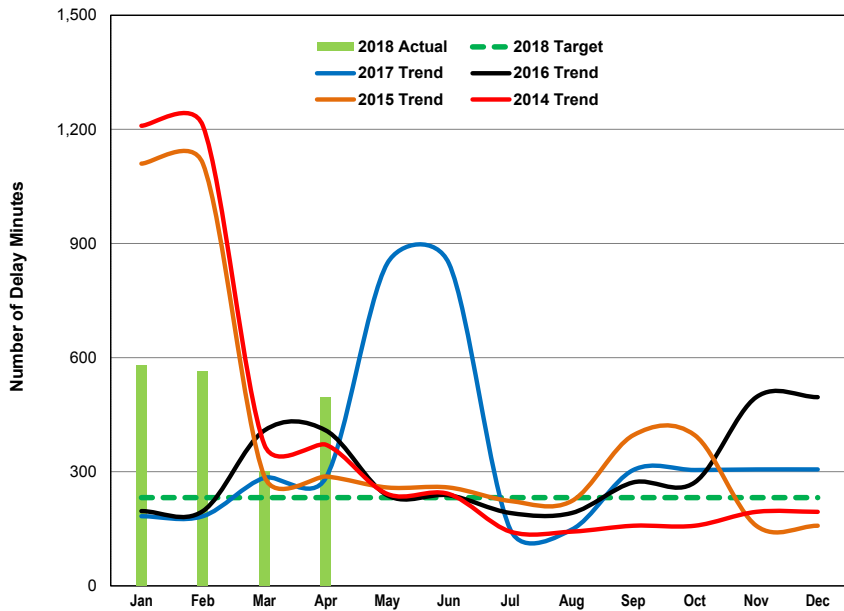
Action Plans

It is clear that the continued efforts of the Rail Cars & Shops department are showing improvement to vehicle reliability. Further maintenance is approved to increase the lifespan of these vehicles and will occur over the next two years.

Note:

The 2018 target is based on a 40% or more reduction in delay incidents from the 2014 monthly average baseline.

Line 3: Delay Minutes



Results

The number of delay minutes increased to 496 compared to 301 in the previous period.

Analysis

There was one major event that accounted for 82% of the minutes. On April 15, Line 3 lost power due to the ice storm. This resulted in a 399 minute delay.

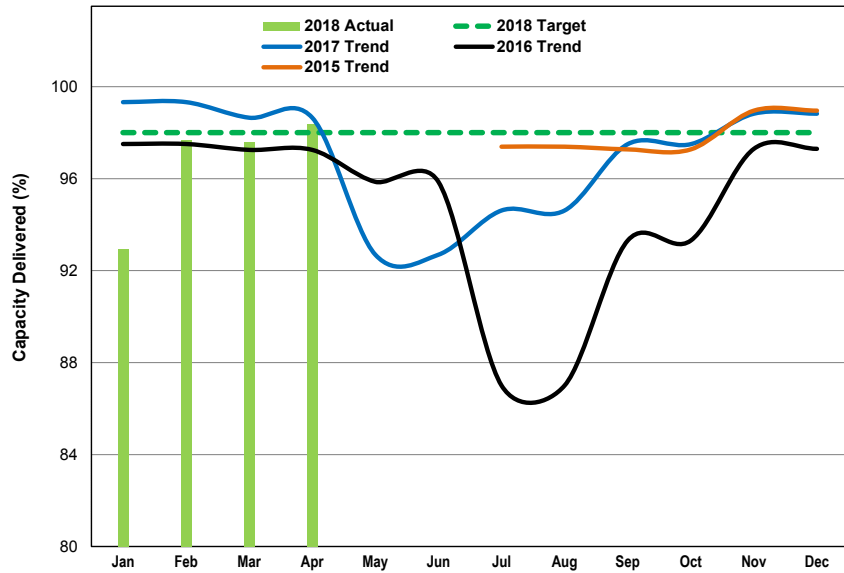
Action Plan

There were improvements across the board on Line 3. All efforts will be made to continue this trend moving forward.

Note:

The 2018 target is based on a 40% or more reduction in delay minutes from the 2014 monthly average baseline.

Line 3: Capacity Delivered In Peak



Results

The peak capacity delivered on Line 3 has a target of 98%. In April, this number was achieved for the first time since November 2017.

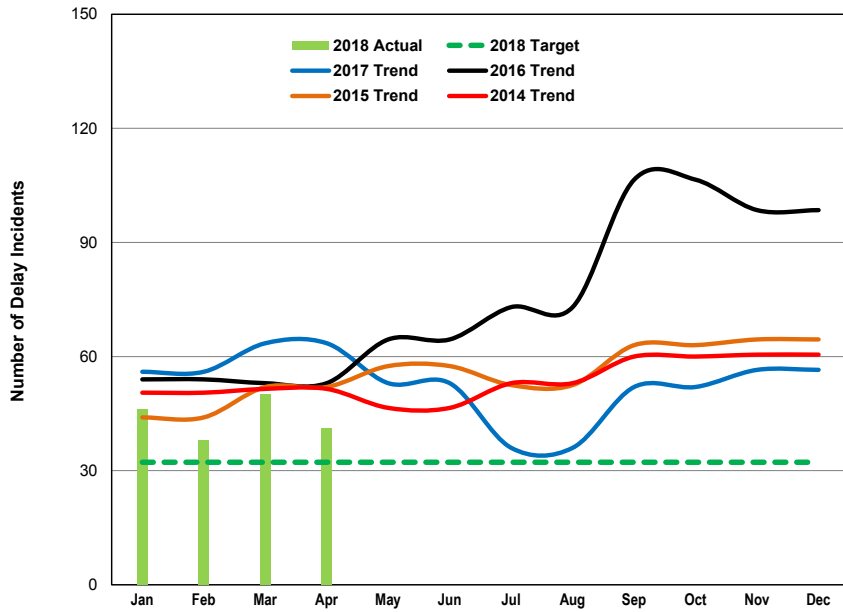
Analysis

Reduced minutes and incidents during the AM and PM service ensured that performance was regularly delivered to our customers.

Action Plan

As delay incidents on this line remain relatively low, and as weather has improved, this level of performance should be sustainable over the next several periods.

Line 4: Delay Incidents



Results

The number of delay incidents decreased from 50 in March to 41 in April.

Analysis

The decrease of incidents is in large part due to a 76.2% decrease in speed control issues as well as a 56.3% reduction in equipment issues.

Further reductions would have been seen had there not been a 122% increase in passenger incidents.

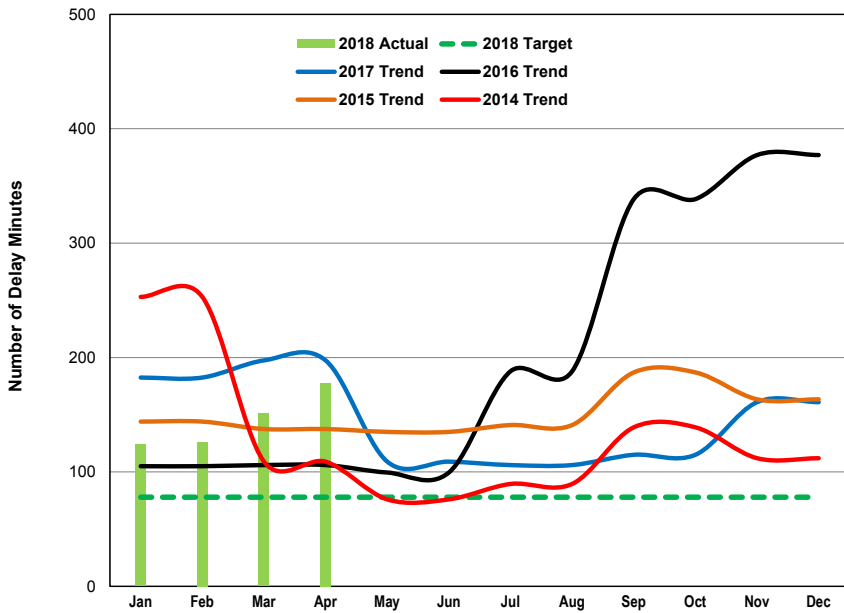
Action Plan

Continue the progress made with reducing speed control incidents with supervisory follow-ups and education.

Note:

The 2018 target is based on a 40% or more reduction in delay incidents from the 2014 monthly average baseline.

Line 4: Delay Minutes



Results

The number of delay minutes increased in April to 178, up 17.9% from March.

Analysis

On April 16, the ice storm that occurred caused a 70 minute delay due to hydro and communications issues.

In addition, there was one fire/smoke event on April 27 that accounted for 24 minutes of delay.

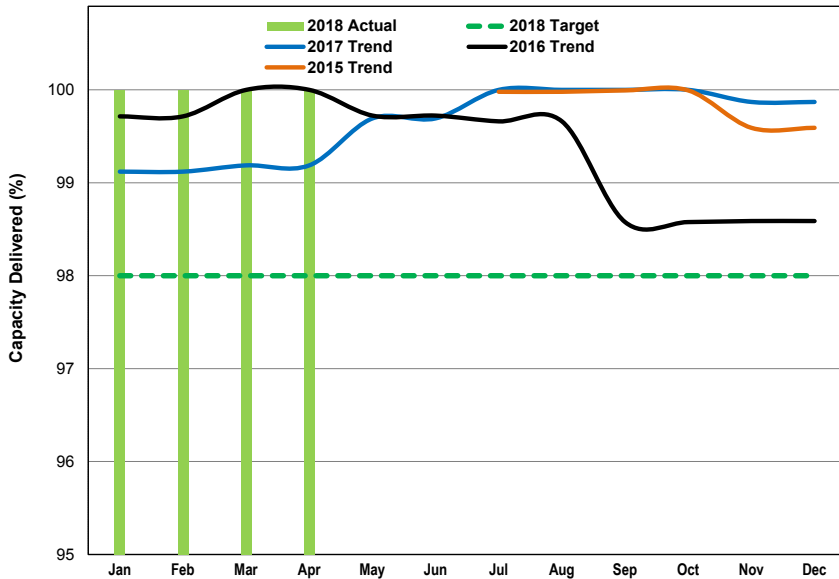
Action Plan

The smoke / fire reduction team has been consulted, and further review of Line 4 will occur to minimize the opportunity for these types of incidents.

Note:

The 2018 target is based on a 40% or more reduction in delay minutes from the 2014 monthly average baseline.

Line 4: Capacity Delivered In Peak



Results

The daily average number of trains per hour (TPH) in the morning and afternoon peak service periods was 100% of what was scheduled.

Analysis

Despite being off target for incidents and minutes, the peak capacity delivered for Line 4 remained strong.

Action Plan

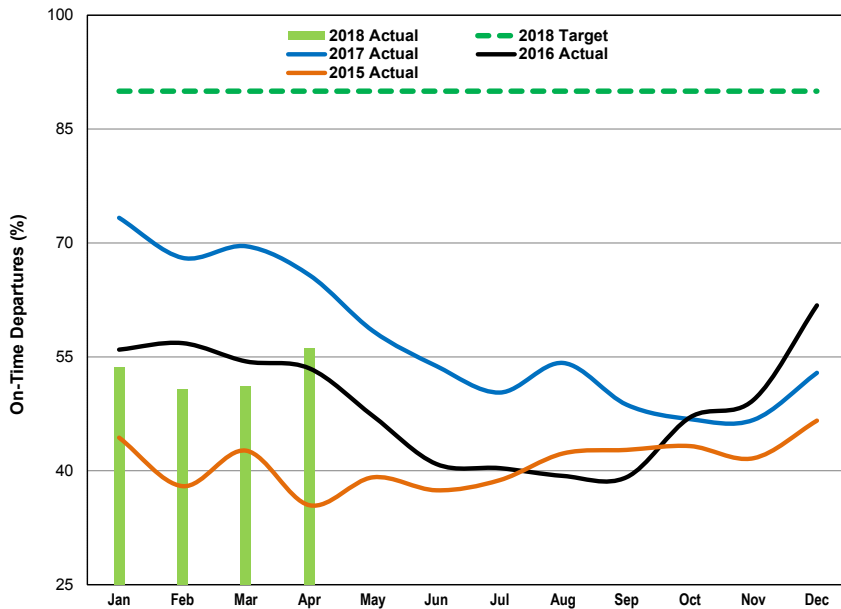
We continue our efforts to reduce the number of delay incidents that can affect service quality. In April, we saw an 18% reduction in delay incidents as compared to March, with the greatest reductions in speed control delays (down 76.2%) and equipment delays (down 56.3%).

Note:

Capacity delivered is actual train count divided by the scheduled train count for each hour at sampled locations. Data are based on weekday service from Monday to Friday.

Streetcar

On-Time Performance



Results

On-Time Performance (OTP) increased over last month, but remained below figures for the same period last year.

Analysis

The current period remains below 2017 OTP achievements due to streetcar fleet availability. We also experienced a significant ice storm event in the middle of the month that lasted approximately two and a half days. During this event, the entire network operated independent of schedule. Despite this, performance has increased for three consecutive periods with April 2018 showing an improvement over April 2016. Schedule changes implemented for the 512 St Clair route have significantly improved the performance of that route and the overall KPI.

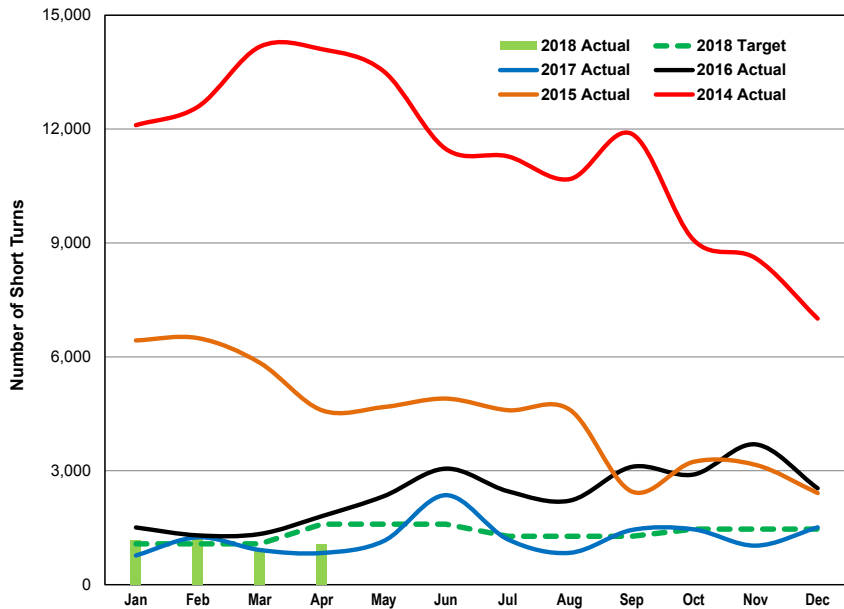
Action Plan

A work plan has been presented to TTC Executives recommending schedule changes to numerous routes. This work plan is in place and results are projected to improve by the September Board Period.

Note:

This KPI measures adherence to scheduled (59 seconds early to five minutes late) departure times from end terminals.

Streetcar - Short Turns



Results

Short turns for the period increased (unfavourable) compared to last period and were slightly higher than the same period last year.

Analysis

Short turns are within target. This was achieved despite challenges related to downtown traffic congestion and sporting events. Sporting events in the city core continue to challenge our route performance and require to short turn vehicles to maintain service standards.

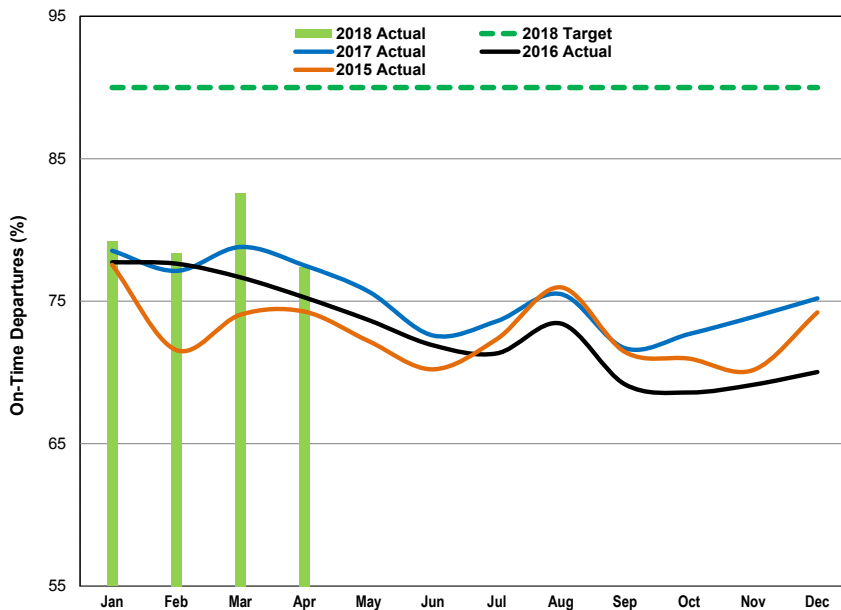
Action Plan

It is expected that with the upcoming focus on schedule improvements, the short turn figures will remain below our target.

Note:

Data is based on all seven days of service from Sunday to Saturday.

Bus On-Time Performance



Results

There has been year-over-year improvement in on-time performance for Bus Transportation since 2015. Performance in April was comparable to the year prior however, still below the acceptable threshold.

Analysis

Route performance continues to be closely monitored to assess delays related to Crosstown construction along Eglinton Avenue and utility relocations related to the Finch West LRT and the negative impact of the ice storm.

The following schedule changes were implemented in the April Board Period (Effective April 1 to May 12):

Metrolinx Construction:

5 Avenue Rd, 34 Eglinton East, 54 Lawrence East, 56 Leaside, 74 Mt Pleasant and 113 Danforth.

Service reliability Improvements:

39 Finch East, 47 Lansdowne, 122 Graydon Hall, 161 Rogers and 168 Symington

Action Plan

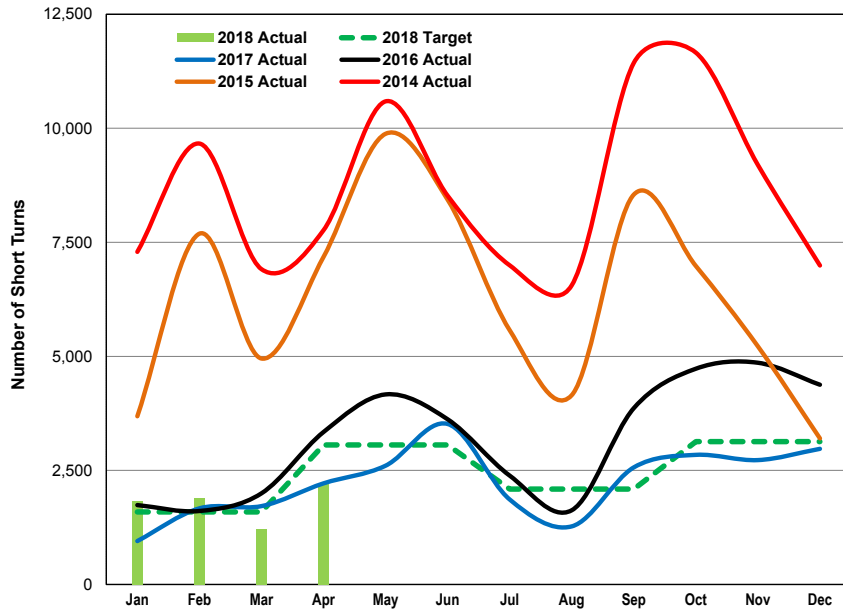
The program for continuous monitoring and improvement to schedules to better match observed operating conditions resulted in schedule changes for 11 routes.

Operators' performance continued to be closely monitored to maximize the effectiveness of schedule improvements. Since March 2017, 1,352 operators, an increase of 250 from the previous month, have been interviewed for schedule adherence irregularities. Occurrences of early departures continue to decrease as a result of this initiative.

Note:

This KPI measures adherence to scheduled (59 seconds early to 5 minutes late) departure times from end terminals.

Bus - Short Turns



Results

Short turns for this period remain below target (favourable) and consistent with the same period last year.

Analysis

The number of short turns in April decreased to 2,196 as compared to 2,216 in the same period last year. The top five routes for short turns were: 52 Lawrence West (8.7%), 34 Eglinton Ave E (8.5%), 32 Eglinton West (5.6%), 75 Sherbourne (5.4%) and 165 Weston Rd North (4.9%) were the top 5 routes for short turns.

Short turns were mainly driven by traffic congestion (62%), construction (13%) and weather conditions (12%).

Action Plan

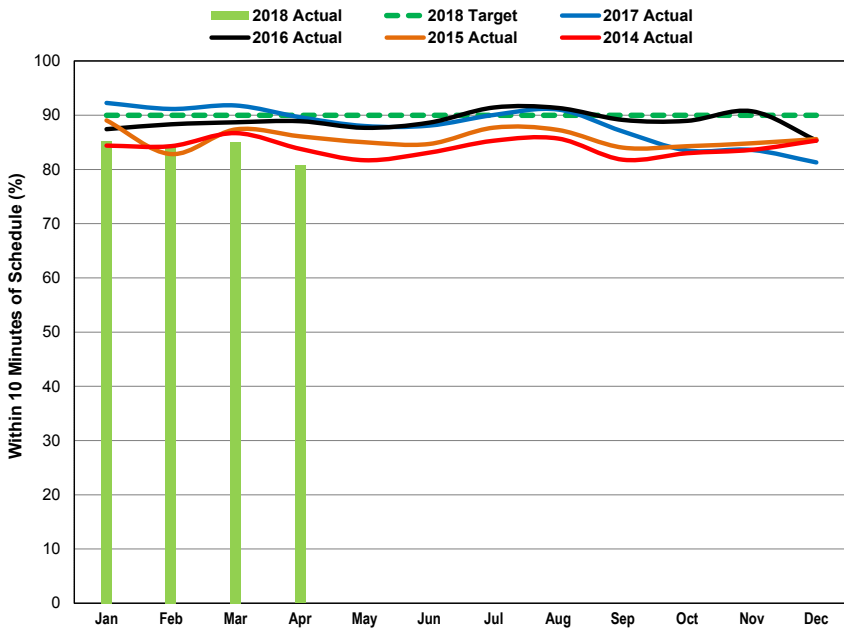
There is an on-going review to target high incident routes, where increased traffic congestion has resulted in unreliable service and schedules no longer reflect actual operating conditions.

Run-as-Directed (RAD) buses are being deployed on routes impacted by Metrolinx, City of Toronto and TTC construction.

Note:

Data is based on all seven days of service from Sunday to Saturday.

Wheel-Trans On-Time Performance



Results

On-Time Performance (OTP) in April decreased by 4.4% from the previous period. OTP is down by 8.9% compared to the same period in 2017.

Analysis

Wheel-Trans continues to review and adjust its service delivery model, which has an impact on OPT. In April, unexpected cold weather and ice/snow conditions resulted in a significant increase in service delays and late cancellations. In addition, two days of network system total outage, compounded by partial outages, rendered the computer system inoperable and staff were unable to complete service adjustments.

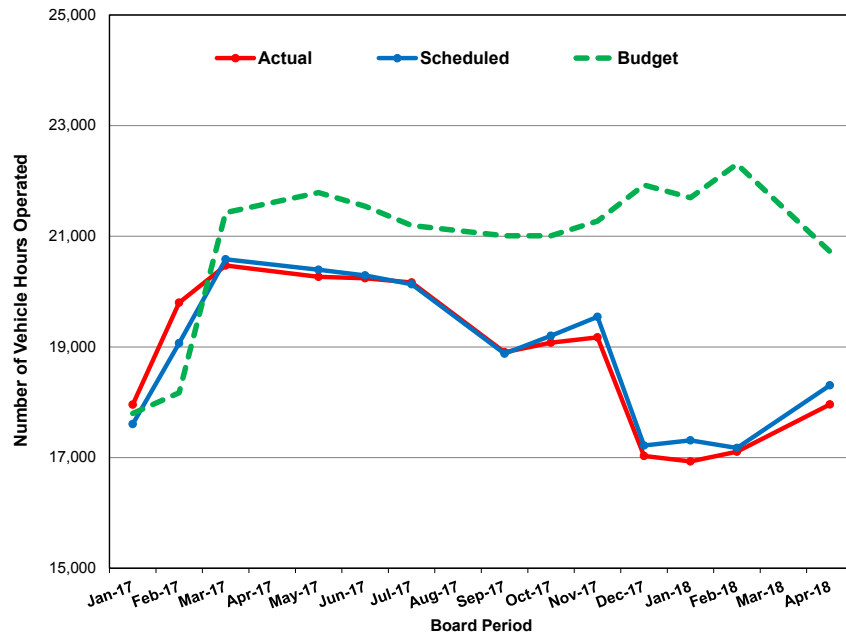
Action Plan

The majority of computer network issues have been resolved. We continue to make delivery model adjustments to increase the number of vehicles in service at any one time allowing for greater flexibility to make service adjustments by our Dispatch.

Wheel-Trans measures On Time as plus or minus 10 minutes, whereas other paratransit providers measure plus or minus 20 minutes. We are consulting with the Advisory Committee on Accessible Transit (ACAT) in May to consider making this adjustment to our delivery model.

Customer: Amount of service

Streetcar - Weekly Service Hours



Results

In the April 2018 Board Period, 18,898 streetcar weekly hours were budgeted for service while 16,684 streetcar weekly hours were scheduled to operate which represents a -11.72% variance.

Of the 16,684 streetcar weekly hours scheduled to operate, 16,646 streetcar weekly hours were actually delivered which represents a variance of 0.23%.

Analysis

The variances are a result of the streetcar fleet shortage. Streetcars have been removed from 505 Dundas and 506 Carlton and replaced with bus service.

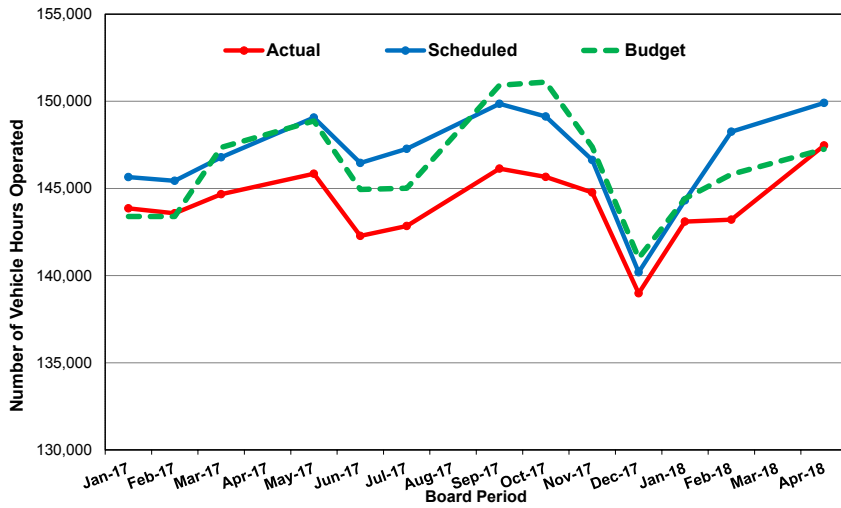
Action Plan

Staff continues to monitor the Bombardier delivery schedule. Bombardier met its Q1 target.

Date	Budgeted Streetcars for AM Peak Service	Scheduled Streetcars for AM Peak Service
February 2014	198	202
February 2015	201	202
February 2016	189	189
February 2017	189	170
February 2018	165	152

As streetcar fleet ages, more vehicles are decommissioned and unavailable for scheduled service.

Bus - Weekly Service Hours



Results

In the April 2018 Board Period, 147,252 bus weekly hours were budgeted for service while 149,901 bus weekly hours were scheduled to operate which represents a 1.8% variance.

Of the 149,901 bus weekly hours scheduled to operate, 147,465 weekly hours were actually delivered which represents a variance of -1.63%.

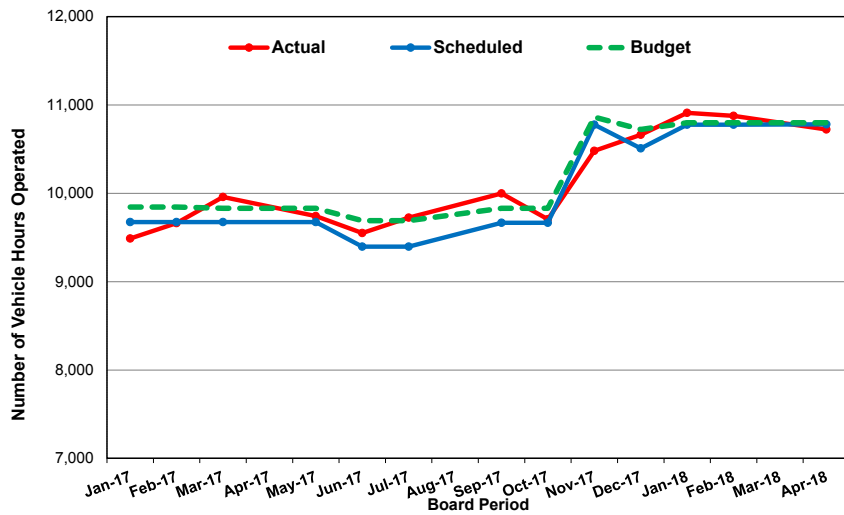
Analysis

This is a result of the streetcar fleet shortage. Buses are replacing streetcars on 505 Dundas and 506 Carlton.

Action Plan

Staff continues to monitor the Bombardier delivery schedule. As more streetcars are delivered, it is anticipated that buses will be removed from streetcars routes.

Subway - Weekly Service Hours



Results

In the April 2018 Board Period, 10,800 subway weekly hours were budgeted for service while 10,781 subway weekly hours were scheduled to operate, which represents a -0.17% variance.

Of the 10,781 subway weekly hours scheduled to operate, 10,723 weekly hours were actually delivered which represents a variance of 0.54%.

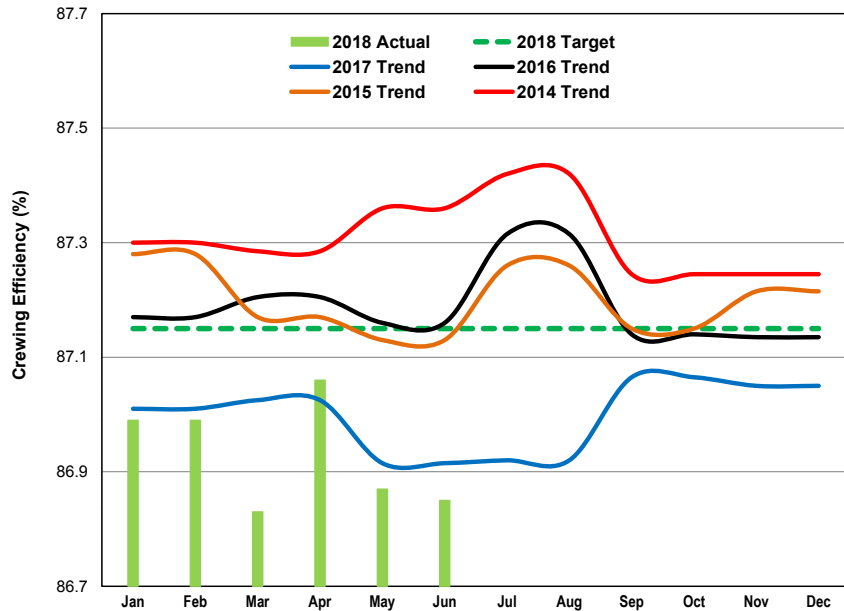
Analysis

The scheduled and delivered subway weekly hours for April remain on budget.

Action Plan

Maintain current strategy.

Operator Crewing Efficiency



Results

Operator crewing efficiency remained relatively unchanged in June 86.85%; performance remained below target.

Analysis

Crewing efficiency has been below target due to the large number of buses replacing streetcars resulting in longer driving distances from bus divisions to streetcar routes. Also contributing to the drop in efficiency is the closure of Roncesvalles Division for track replacement. This required longer travel times for streetcars to reach their designated routes.

Action Plan

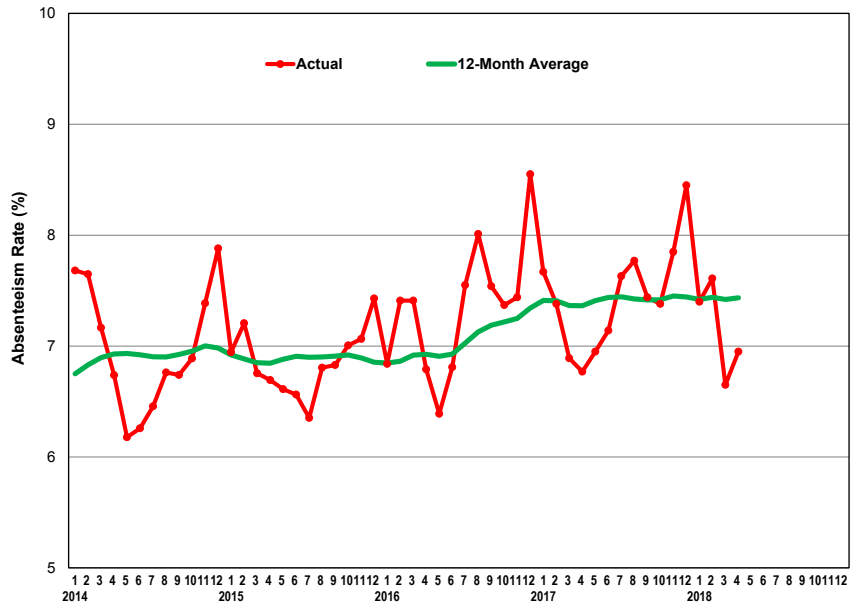
Staff will review the process for dispatching buses from divisions that are closer to streetcar routes that are being served. We anticipate that efficiencies will not reach targets until additional streetcars are delivered from Bombardier and put into service.

Note:

Crewing efficiency is defined as the ratio of scheduled hours to pay hours.

People

Employee Absence



Results

The absenteeism rate in April 2018 increased to 6.95% from 6.65% in March.

Analysis

The absenteeism rate for April decreased .49% from the 12 month average, from 7.44% to 6.95%. Although the ongoing trend is unfavourable, efforts are in place to reduce these levels further.

Action Plan

Staff continues to manage absence with a focus on reducing the number of complex absence cases and the duration of these absences. Through data analytics, focus will be placed on determining the root cause of absence and the increasing absence rate for the TTC. Opportunities to continue efforts in management of absences will be sought through ongoing collective bargaining. Staff is monitoring the anticipated impacts of Bill 148 on the organization's attendance levels.

At the Group Level, in the Service Delivery Group, an attendance management project team was established in 2017 to focus on employees with concerning absence levels.

Fitness For Duty Update

Total number of employees who were non-compliant or refused to test under the random program: 44
Data are from May 8, 2017 to May 22, 2018.

Random Testing Summary – All Employees				
Test Category	2018	2017	Total *	%
Compliant Tests	948	1651	2599	98.3%
Non-Compliant (drug, alcohol, refusal)	12	32	44	1.7%
Total	960	1683	2643	100%

Random Testing Summary – Unionized Employees				
Test Category	2018	2017	Total*	%
Compliant tests	784	1381	2165	98.1%
Non-Compliant (drug, alcohol, refusal)	12	29	41	1.9%
Total	796	1410	2206	100%

* Currently 20 drug results have yet to be reported as they are still at the lab undergoing analysis or have been cancelled.

Random Testing Summary – Staff (non-unionized) Employees				
Test Category	2018	2017	Total*	%
Compliant	164	270	434	99.3%
Non-Compliant (drug, alcohol, refusal)	0	3	3	0.7%
Total	164	273	437	100%

* Currently 7 drug results have yet to be reported and are either at the lab undergoing analysis or have been cancelled.

Non-Compliance by Substance				
Substance Type	2018	2017	Total	Percentage
Oxycodone	0	1	1	2.4%
Opiates	0	2	2	4.9%
Marijuana	6	15	21	51.2%
Cocaine	4	6	10	24.4%
Amphetamines	0	1	1	2.4%
Alcohol	1	5	6	14.6%
Total*	11	30	41	100.0%

This chart is updated quarterly. This information is up to date as of April, 2018. Next update will be July, 2018.

* 3 Drug results have come back positive for two substances.

Non-Compliance Breakdown				
Category	2018	2017	Total	Percentage
Drug	11	24	35	77.8%
Alcohol	1	5	6	13.3%
Refusals	1	3	4	8.9%
	13	32	45	100.0%

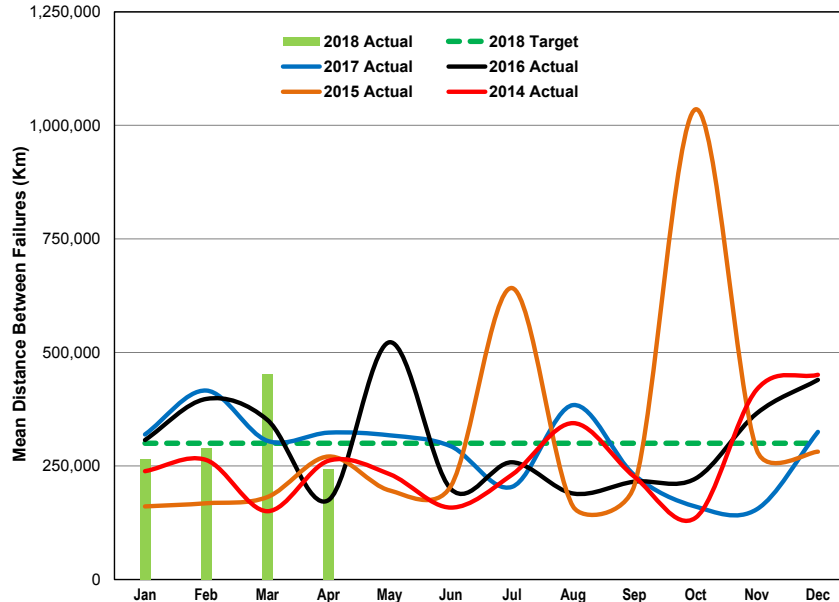
Other Policy Violations		
Category	2018	2017
Alcohol non-compliant for 0.02 - 0.039	1	2
Safety sensitive flags	0	3
Total 6	1	5

Assets

Assets: Vehicle reliability

Subway

T1 Train: Mean Distance Between Failures (MDBF)



Results

The MDBF for April was 242,265 kilometres, down from the 451,501 achieved in March, and also lower than the same period in 2017 when this measure achieved 323,388 kilometres.

Analysis

In April, there were 12 delay incidents. The top offending system was the Passenger Door System with 11 delay incidents greater than or equal to five minutes. This was followed by the Truck System with one delay incident.

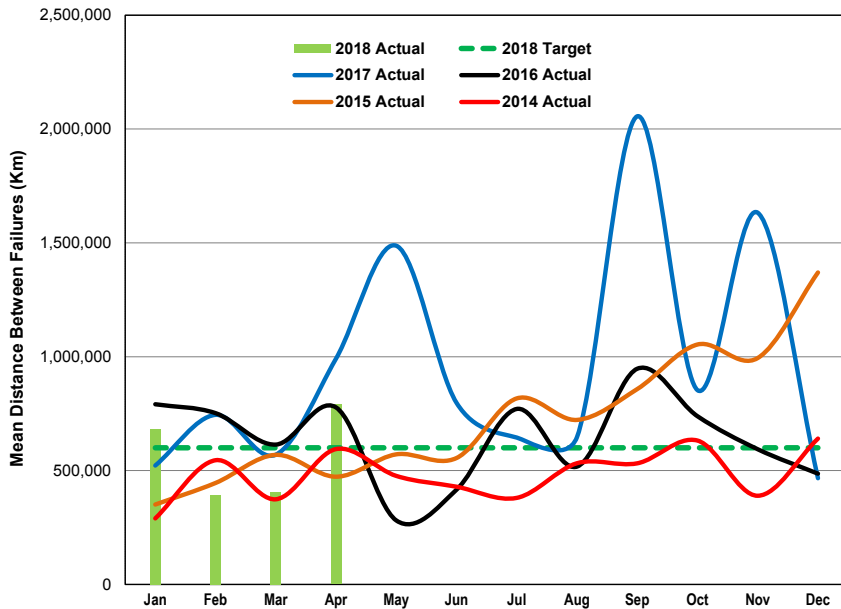
Action Plan

A program to install re-manufactured door lock assemblies is scheduled for 2018. These components include upgraded door close switches that will restore reliability to the Passenger Door System. The

door-related delays were a result of three misaligned door guides, three door lock assemblies, one door control relay panel, one drum switch, one egress switch, one door cylinder and one air pressure/locking pin. The T1 Door Pocket Guides Overhaul Program was completed in 2017, and has resulted in a reduction in door delay incidents due to this failure mode.

In addition to this, Master Controller Brake upgrades were completed in Q1 2017. Benefits from both the Door Pocket Guides and Master Controller overhauls have been observed and performance will be monitored in the coming periods. The Rail Vehicle Engineering group has developed a solution to increase the reliability of the Friction Brake Electronic Control Units.

TR Train: Mean Distance Between Failures (MDBF)



Results

The MDBF for April was 790,406 kilometres. This is up sharply from the 407,535 kilometres achieved in March, but down from the 991,626 kilometres achieved in April of 2017.

Analysis

In April there were five delay incidents. The top offending system was the Passenger Door System with four delay incidents each greater than or equal to five minutes. This was followed by the Train Line System with one delay incident.

Action Plan

The Passenger Door related incidents were a result of one faulty malfunctioning Door Closure Unit (DCU), one Door Electronic Closure Unit (DECU), one malfunctioning door locking mechanism, and a misaligned door nosing. Monitoring and corrective actions for these failure modes are in process.

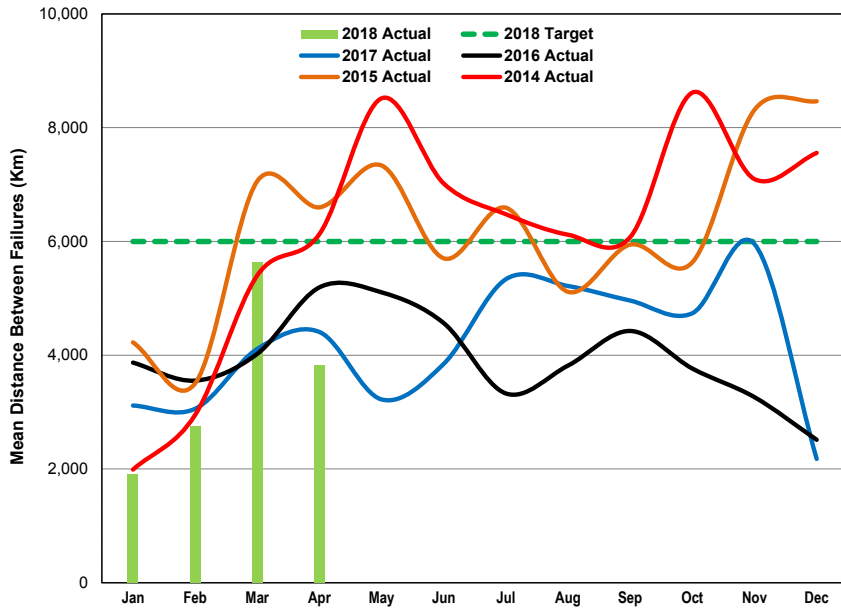
The Train Line incident was a result of a network issue. The network switch has since been replaced and the train tested okay.

In addition to this, the Passenger Door System has received numerous modifications to the control units; fleet retrofits of the new modifications are in progress. The Carhouse and Reliability, Availability, Maintainability, Safety (RAMS) technical staff are closely monitoring door failures while, the Equipment Control Desk and Transit Control are working towards ensuring that the incident recovery times are returned to average levels (below the five minute threshold).

The brake system continues to receive numerous modifications/improvements to the electronic controls; fleet retrofits of the new modifications and validation testing of the proposed upgrades are in progress, with anticipated improvements in future periods.

Streetcar

CLRV Streetcar: Mean Distance Between Failures (MDBF)



Results

The MDBF for April was 3,822 kilometres. This is a decrease of 586 kilometres from April 2017 and a decreased of 1,816 kilometres from March 2018.

The MDBF continues to remain below the target of 6,000 kilometres.

Analysis

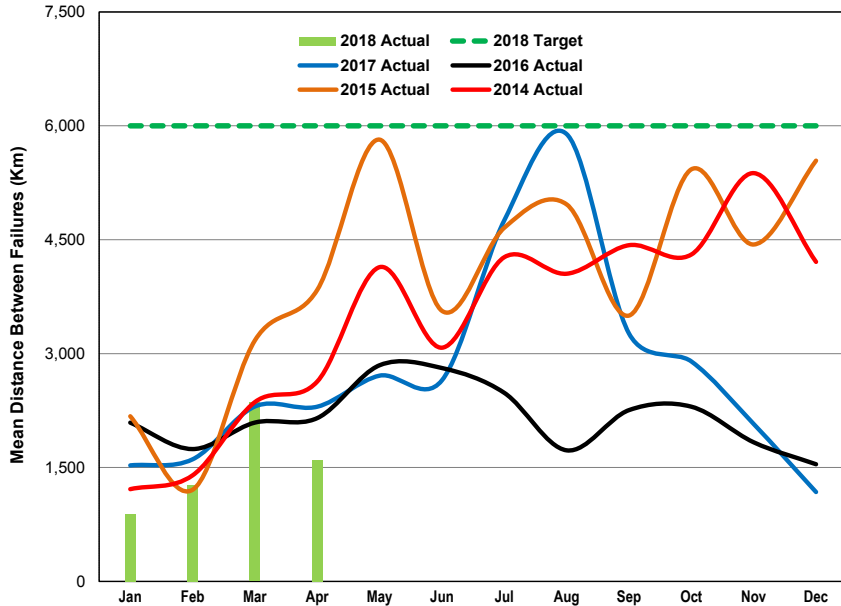
High rainfall and below average temperatures affected the reliability of the vehicles in April. A severe ice storm resulted in a significant increase in road calls.

Action Plan

Staff will continue with existing maintenance and fleet management plans which

include the State of Good Repair programs and decommissioning of vehicles. As of May 2018, 70 of the original 196 CLRV have been decommissioned from service.

ALRV Streetcar: Mean Distance Between Failures (MDBF)



Results

The MDBF for April was 1,602 kilometres. This is a decrease of 699 kilometres from April 2017 and a decreased of 755 kilometres from March 2018.

The MDBF still remains below the target of 6,000 kilometres.

Analysis

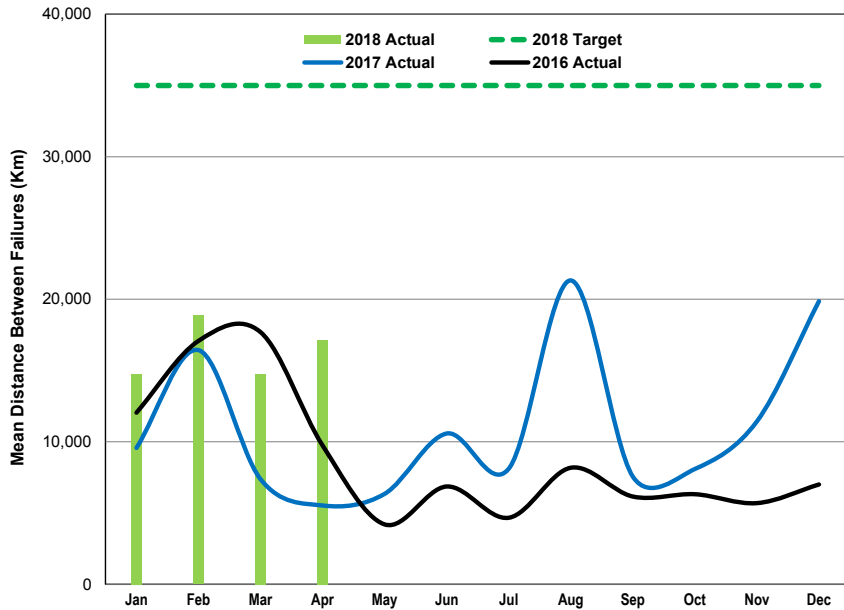
High rainfall and below average temperatures limited the improvements made by the maintenance initiatives.

Action Plan

Staff will continue with the existing maintenance plans and initiatives which include the State of Good Repair programs and decommissioning of vehicles.

As of May 2018, 25 of the original 52 ALRV have been decommissioned from service.

LFLRV Streetcar: Mean Distance Between Failures (MDBF)



Results

The MDBF for April was 17,149 kilometres.

This is an increase when compared to both April 2017 and the previous month of March 2018.

Although the overall LFLRV MDBF remains below the 35,000 kilometres target, the 12 month moving annual trend continues to be positive.

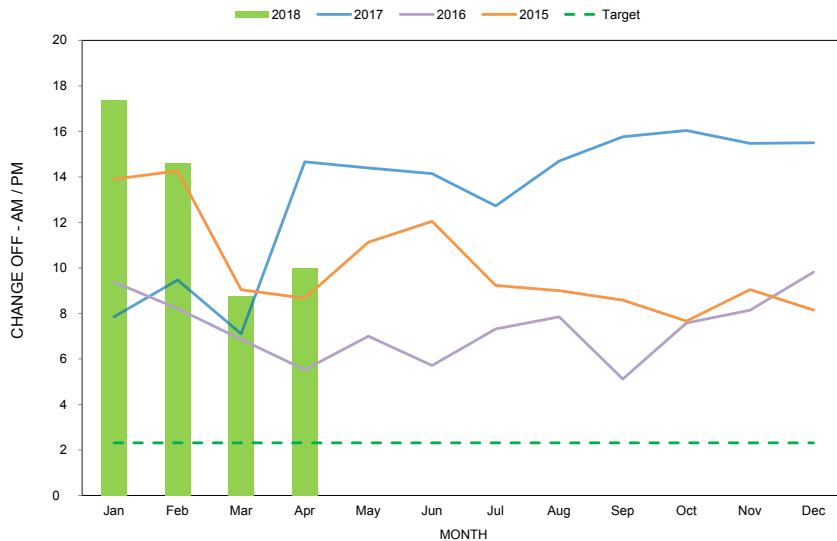
Analysis

There was a high number of door related failures and Train Control Management System problems in April.

Action Plan

Staff continues to work with Bombardier and its suppliers to resolve technical and design issues on the vehicles.

Streetcar: Road Calls and Change Offs (RCCO)



Result

The target for the maximum number of Road Calls and Change Offs (RCCO) is 1.5% of peak daily service. In April, the peak daily service was 154 streetcars. The average number of RCCO was 10 vehicles per day which equated to 6.5% of peak daily service. This was an increase of 1.2 RCCO (0.6%) from the previous month.

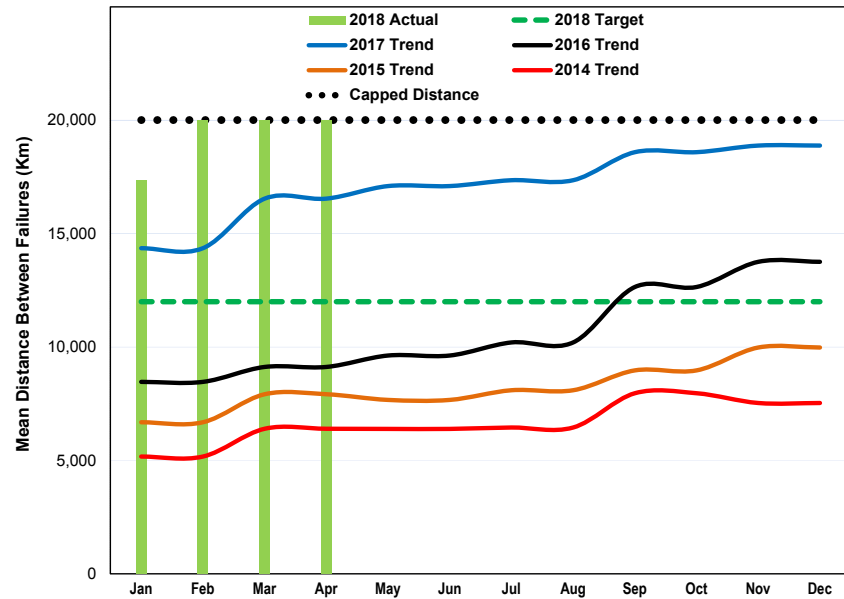
Analysis

The increase in streetcar change offs in April was the result of high rainfall and below average temperatures. These conditions offset various maintenance and fleet management initiatives, which include the State of Good Repair maintenance programs, the continued decommissioning of worst performers in the ALRV and CLRV fleets, and the addition of new LFLRV.

Action Plan

Staff will continue with existing maintenance and fleet management plans to improve overall fleet reliability. In turn, this will help to reduce the number of RCCO which impact customer journeys.

Bus: Mean Distance Between Failures (MDBF)



Results

The April 2018 MDBF of 20,000 kilometres has exceeded the target of 12,000 kilometres and is well above the April 2017 average of 16,972 kilometres.

Analysis

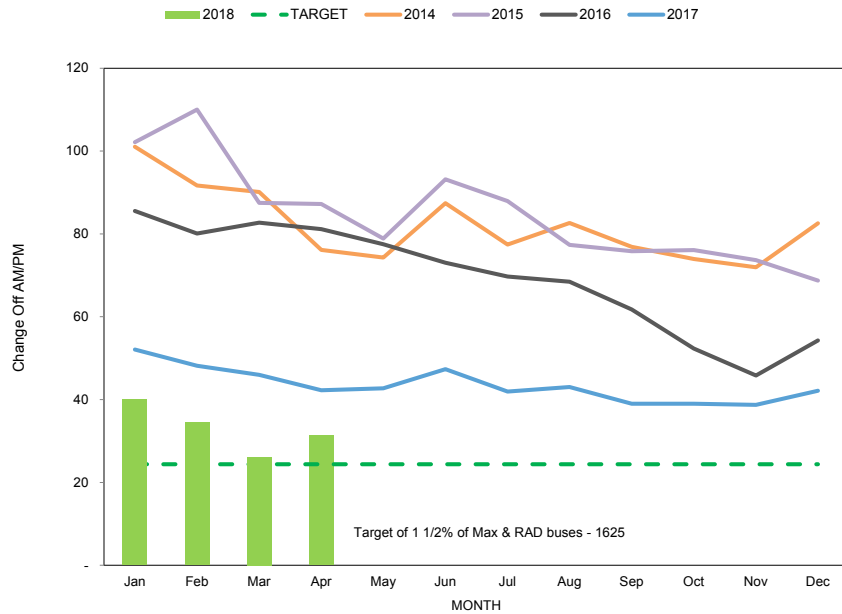
Bus Maintenance continues to decommission the older 1201 Series Orion VII Detroit Diesel 7400-7882 buses, which have contributed to emission issues with the Ministry of Energy and Environment (MOEE). Thus far, 361 of these buses have been removed from service. The remaining 121 buses will be removed by the end of 2018. A favourable MDBF score is expected to remain throughout 2018.

Action Plan

Ongoing 2018 Scheduled Maintenance Programs:

- 1) Articulated Bus Cooling System – Completed
- 2) Heating Systems – Orion VII 1274CD at Queensway Garage followed by Mount Dennis Garage to correct high level of no heat conditions.
- 3) State of Good Repair – Ongoing at all locations.
- 4) Roof Repair – All Orion VII buses to address water egress caused by environmental/sun damage to roof and antenna seals.
- 5) Spring Checks – Completed 82% of the fleet (1,777 of 2,166 including Wheel-Trans). Spring checks and air conditioning service is on schedule to be completed by the end of May.

Bus: Road Calls and Change Offs (RCCO)



Result

The average number of change offs in April 2018 was 31 per day. This is an increase from March 2018 where the average number of change offs per day was 25.3. Incremental improvement can be seen over the period 2014 to 2018, resulting in a higher level of equipment availability.

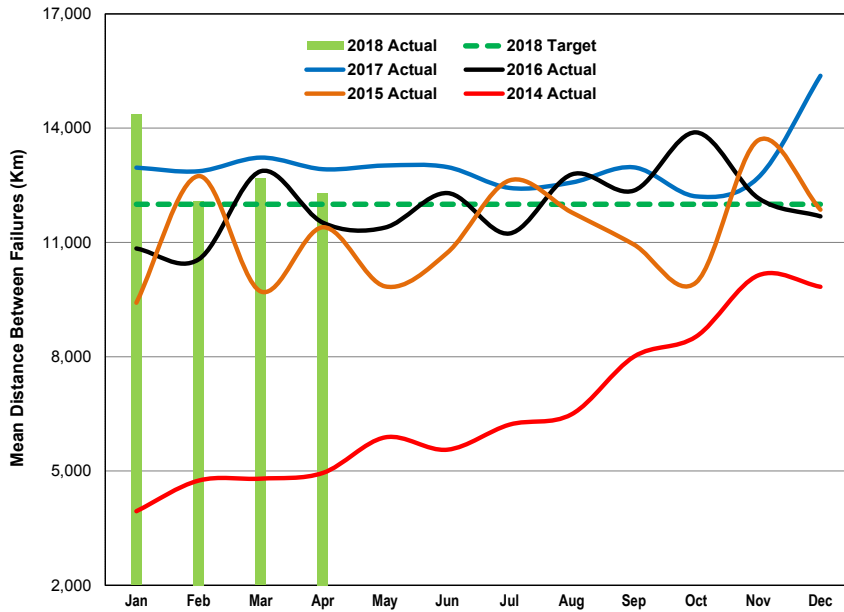
Analysis

With peak revenue service at 1,591 buses per day, including Run as Directed (RAD) buses in April 2018, the average number of change offs per day equates to 1.95% of service. Inclement weather contributed to a spike in RCCO and the ice storm of April 14, 15 and 16 caused an unprecedented number of change-offs; 195 over the three day period.

Action Plan

Bus Maintenance continues to analyse all RCCO to address fleet specific issues. No new fleet specific systems affecting RCCO where identified in April.

Wheel-Trans: Mean Distance Between Failures (MDBF)



Results

The April 2018 MDBF of 12,292 kilometres is marginally above target and below April 2017 performance. Above target MDBF is expected throughout 2018.

Analysis

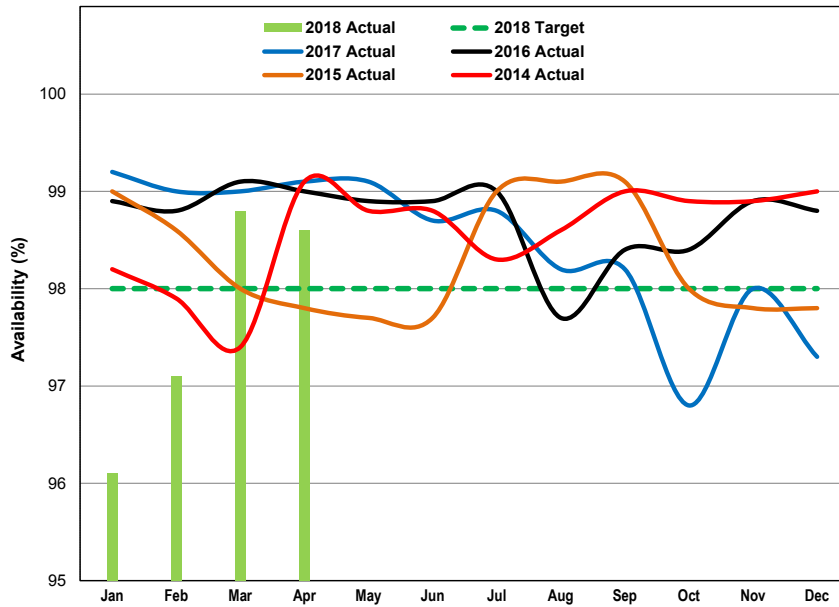
Twenty new RAM ProMaster buses were in service as of the end of April 2018. Three new ProMaster buses were delivered in April but, due to parts issues with the Init (AVL) System, these buses were not available for service. Parts are expected to arrive mid-May. Additional service requests are affecting the garage's ability to hold buses and complete State of Good Repairs.

Action Plan

Newly engineered ramp handles are being installed, as received. Spring checks and air conditioning service is on schedule to be completed by the end of May

Assets: Equipment availability

Elevators



Results

Although performance was above target in April, it did decrease slightly from the previous month 98.6%.

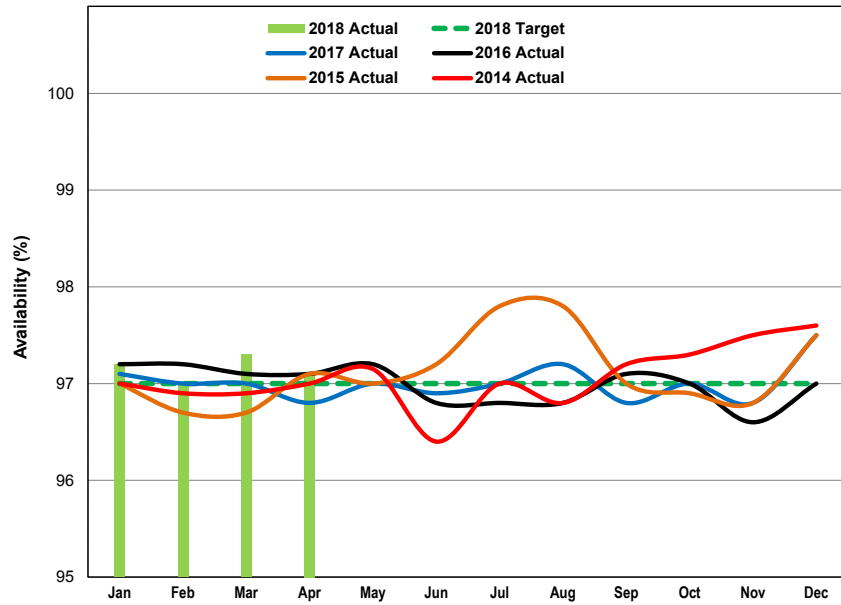
Analysis

Elevator maintenance was completed as planned and scheduled. However, performance in April was slightly decreased due to higher emergency calls directly related to power issues on Line 4.

Action Plan

Continue performing preventative maintenance to meet reliability and availability targets.

Escalators



Results

The availability level surpassed the target of 97% in April.

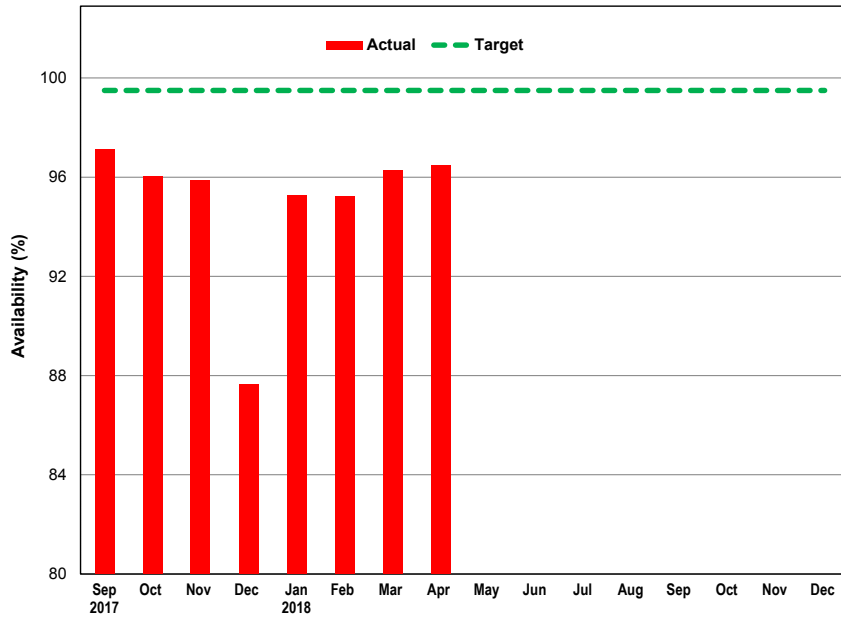
Analysis

Maintenance activities were completed as planned and scheduled.

Action Plan

Continue performing preventative maintenance to meet reliability and availability targets.

Fare Gate Availability



Results

Fare gate availability increased by approximately 0.17% to 96.46% but remains below the target of 99.5%.

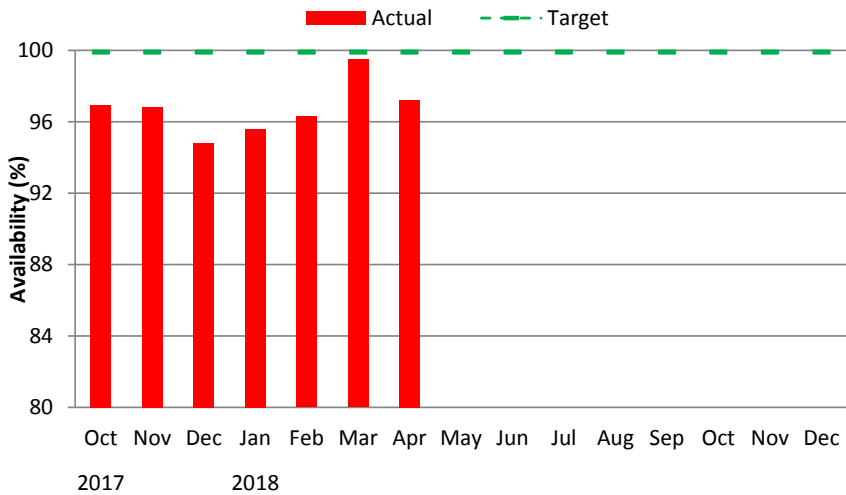
Analysis

This increase reflects the continued efforts of a number of groups ensuring issues are addressed in a timely manner and our work with our vendor, Scheidt & Bachmann to address gates with habitual problems. With the current hardware and software modification programs, we expect performance to improve through 2018.

Action Plan

We continue to work with Scheidt & Bachmann to address ongoing hardware and software issues. A number of plans have been developed and are currently being implemented, including: replacing the computers inside the gates, the continued replacement of gate motors with a modified version and software patches. These plans address issues such as: ghosting, tap/no entry, breakthroughs, and motor failures. We have additional software updates scheduled in 2018 which will add functionality and provide fixes to known problems and improve gate availability.

PRESTO Card Reader Availability



Results

PRESTO card reader availability decreased to 97.2% for April; performance remained below target.

Analysis

The availability of PRESTO card readers has increased by 2 percentage points since December 2017. During the month of March, the card readers on buses had an increase in the number of devices that were in the offline mode for prolonged periods due to communications and other device issues.

Action Plan

A software enhancement was applied to PRESTO card readers on May 11 to address device issues. The full impact of the enhancement is being assessed by field staff. PRESTO staff have also increased the level of maintenance support for card readers in the offline state. Both actions are expected to improve PRESTO card reader availability.

For further information on TTC
performance, projects and service,
please see www.ttc.ca



