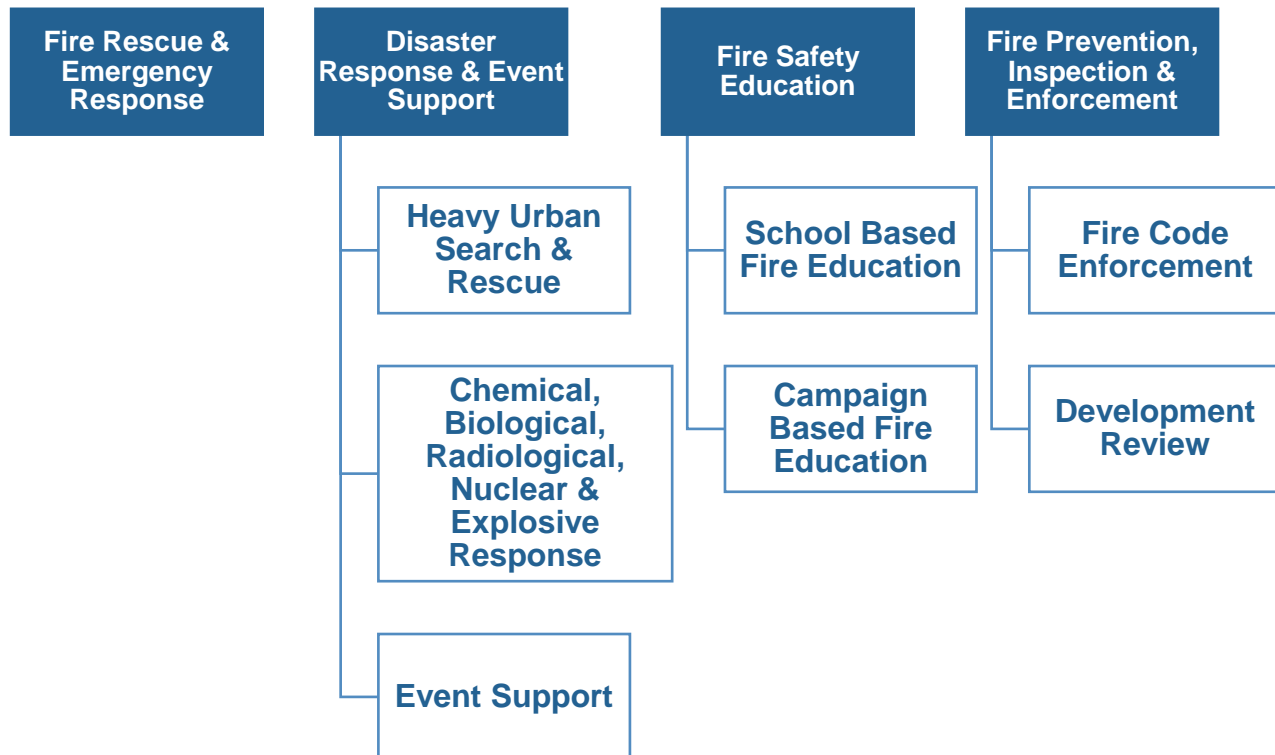




FIRE SERVICES

PROGRAM MAP

Fire Services



Toronto Fire Services is the City's only all hazards emergency response organization. TFS provides City of Toronto residents, visitors and businesses with protection against loss of life, property and the environment from the effects of fire, illness, accidents, and all other hazards through preparedness, prevention, public education, and emergency response, with an emphasis on quality services, efficiency, effectiveness, and safety.

SUMMARY OF PERFORMANCE MEASUREMENT RESULTS

Question	Indicator/Measure	Internal Comparison of Toronto's 2016 vs. 2015 Results	External Comparison to Other Municipalities (MBNC) By Quartile for 2016	Chart & Page Ref.
Service / Activity Level Indicators				
How many hours are fire vehicles in-service and available to respond to emergencies?	Number of Fire In-Service Vehicle Hours (Urban Area) per Capita (Service/Activity Level)	Decrease Vehicle hours in-service decreased (service level indicator)	4 Low rate of in-service vehicle hours compared to others (service level indicator)	9.1 9.2 pg. 6
How many emergency incidents does Fire Services respond to each year?	Number of Unique Incidents Responded to by Fire Services per 1,000 Urban Population (Service/Activity Level)	Stable Rate of total incidents responded was stable (activity level indicator)	3 Lower rate of total incidents responded to compared to others (activity level indicator)	9.3 9.4 pg. 7/8
How many property fires, explosions and alarms does Fire Services respond to each year?	Number of Property Fires, Explosions and Alarms per 1,000 Urban Population – (Service/Activity Level)	Decrease Rate of fires, explosions and alarms responded to decreased (activity level indicator)	1 Higher rate of fires, explosions and alarms responded to compared to others (activity level indicator)	9.3 9.4 pg. 7/8
How many rescues does Fire Services respond to each year?	Number of Rescues per 1,000 Urban Population (Service/Activity Level)	Stable Stable in rate of rescues (activity level indicator)	2 Higher rate of rescues responded to compared to others (activity level indicator)	9.3 9.4 pg. 7/8
How many medical calls does Fire Services respond to each year?	Number of Medical Calls per 1,000 Urban Population (Service/Activity Level)	Increase Increase in the rate of medical responses (activity level indicator)	3 Lower rate of medical responses compared to others (activity level indicator)	9.3 9.4 pg. 7/8

Question	Indicator/Measure	Internal Comparison of Toronto's 2016 vs. 2015 Results	External Comparison to Other Municipalities (MBNC) By Quartile for 2016	Chart & Page Ref.
How many public hazard and other incidents does Fire Services respond to each year?	Number of Public Hazard & Other Incidents per 1,000 Urban Population – (Activity Level)	Decrease Decrease in the rate of public hazard & other incidents responded to (activity level indicator)	4 Lower rate of hazard & other incidents responded to compared to others (activity level indicator)	9.3 9.4 pg. 7/8
Community Impact Measures				
How many residential fires, with property loss, occur?	Rate of Residential Structural Fires with Losses per 1,000 Households – (Community Impact)	Increase Rate of residential fires increased	2 Residential fires are lower compared to others	9.5 9.6 pg. 9
What is the rate of injuries from residential fires?	Residential Fire Related Injuries per 100,000 Population – (Community Impact)	Increase Rate of fire related injuries increased	2 Lower rate of fire related injuries compared to others	9.7 9.8 pg. 10
What is the rate of fatalities from residential fires?	Residential Fire Related Fatalities per 100,000 Population – (Community Impact)	Increase Rate of fire related fatalities increased	2 Lower rate of fire related fatalities compared to others	9.9 9.10 pg. 11

Customer Service Measures					
How long does it take (response time) for Fire Services to arrive at the scene of emergency?	Actual – 90 th Percentile Station Notification Response Time for Fire Services in Urban Component of Municipality – (Customer Service)	Decrease Station notification response time decreased	2 Station notification response time is shorter compared to others	9.11 9.12 pg. 12/13	
	Actual – 90 th Percentile Total Fire Services Response Time – excludes 911 time (Customer Service)	Decrease Total Fire Services response time decreased	N/A	9.11 pg. 12	
Efficiency Measures					
What does it cost per hour, to have a front-line fire vehicle available to respond to emergencies?	Fire <u>Operating Cost</u> per In-Service Vehicle Hour (Efficiency)	Increase Operating cost per in-service vehicle hour was increased	4 Higher cost per in-service vehicle hour compared to others	9.13 9.14 pg. 14/15	
What does it cost per hour, to have a front-line fire vehicle available to respond to emergencies?	Fire <u>Total Cost</u> per In-Service Vehicle Hour (Efficiency)	Increase Total cost per in-service vehicle hour increased	4 Higher total cost per in-service vehicle hour compared to others	9.13 9.14 pg. 14/15	
Overall Results		Service Level Indicators (Resources) 0-Increased 0-Stable 1-Decreased 0% stable or increased	Performance Measures (Results) 2-Favourable 0-Stable 5- Unfavourable 29% favourable or stable	Service Level Indicators (Resources) 1-1st quartile 1- 2 nd quartile 2-3 rd quartile 2-4th quartile 33% in 1st and 2nd quartiles	Performance Measures (Results) 0-1st quartile 4-2nd quartile 0-3rd quartile 2-4th quartile 66% in 1st and 2nd quartiles

For an explanation of how to interpret this summary and the supporting charts, please see the Guide to Toronto's Performance Results. These quartile results are based on a maximum sample size of 10 municipalities.

SERVICE/ACTIVITY LEVELS

9.1 - HOW MANY HOURS ARE TORONTO'S FIRE VEHICLES IN-SERVICE AND AVAILABLE TO RESPOND TO EMERGENCIES?

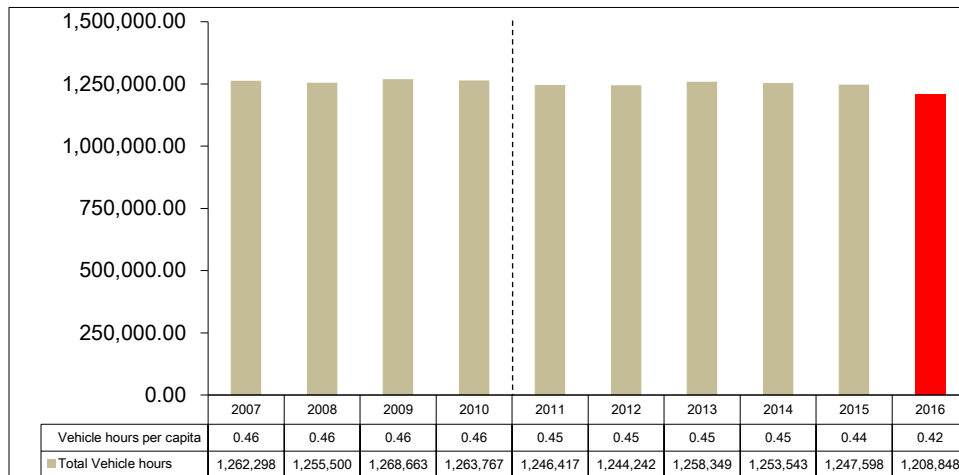


Chart 9.1 provides Toronto's results for both the total number and rate of in-service vehicle hours per capita.

Chart 9.1 (City of Toronto) Number of Staffed Fire In-Service Vehicle Hours per Capita

In 2016, vehicle hours per capita decreased by 4.5% and total in service hours decreased by 3.1%. In-service vehicle hours includes hours responding to, and/or available to respond to, emergencies. The hours when vehicles are removed from service for mechanical repairs or insufficient staffing are excluded. The key front-line fire vehicles included in this measure are pumpers, aerials, water tankers and rescue units. The results for 2010 and prior years are not based on the revised population estimates.

9.2 - HOW DOES TORONTO'S IN-SERVICE VEHICLE HOURS COMPARE TO OTHER MUNICIPALITIES?

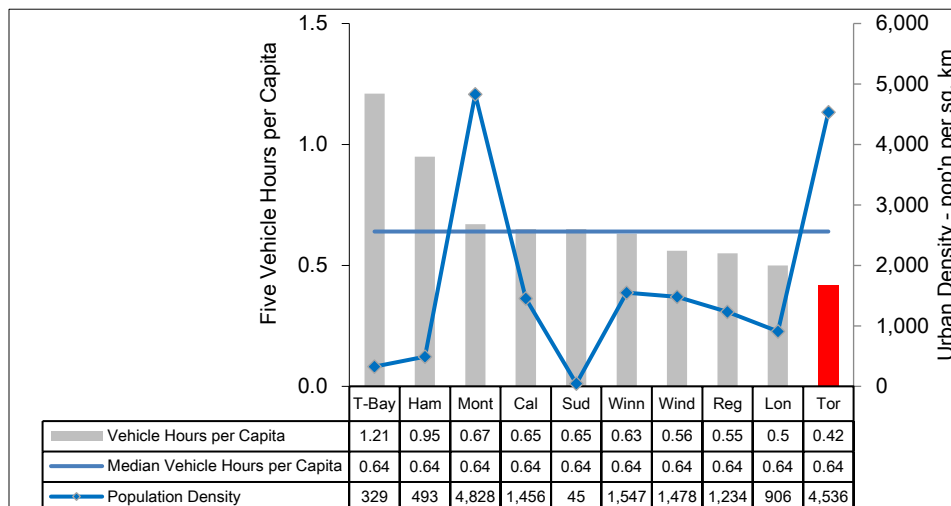


Chart 9.2 compares Toronto's 2016 in-service vehicle hours per capita (shown as bars relative to the left axis) to the urban areas of other municipalities.

Chart 9.2 (MBNC 2016) Number of Staffed Fire In-Service Vehicle Hours per Capita

In terms of the highest number of in-service fire vehicle hours per capita, Toronto ranked tenth of ten (fourth quartile). The most significant factor in Toronto's lower ranking is its significantly higher population density, plotted on the line graph relative to the right axis of Chart 9.2. Despite the fact that Toronto has a lower number of in-service fire vehicle hours per capita, Toronto outperformed other municipalities in regard to Total Response Time (90th percentile) (Chart 9.12).

Toronto Fire Services is actively pursuing the implementation of exploring what are known as "Store Front" fire stations (i.e. two-bay fire stations that can be constructed through partnerships with new developments in the downtown core and across the city in high growth areas) in an effort to keep pace with Toronto's growth.

Toronto's urban form, with a growing number of high rise buildings, also requires different response capabilities and equipment. For example, the National Fire Protection Association's (NFPA's) 1710-2016 Standard recommends deploying an Effective Firefighting Force of 43 operational staff to effectively respond to an incident at a high rise building.

9.3 – HOW MANY AND WHAT TYPE OF EMERGENCY INCIDENTS DOES TORONTO FIRE SERVICES RESPOND TO EACH YEAR?

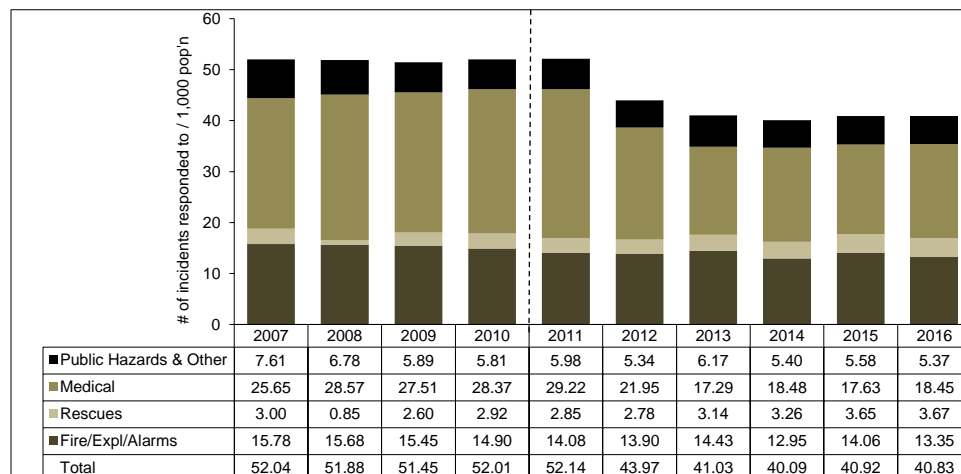


Chart 9.3 provides the number and type of incidents responded to by Toronto Fire Services per 1,000 population.

Chart 9.3 (City of Toronto) Number of Incidents Responded to by Fire Services (by Type) per 1,000 Population

In 2016:

- Total of 117,427 unique incidents were responded to, which is an increase of 1.5% from 2015;
- The total unique incidents per 1,000 population was relatively stable with a 0.2% decrease;
- Public Hazards & Other per 1,000 population decreased by 3.8%;
- Medical calls per 1,000 population increased by 4.6%;
- Rescues per 1,000 population remained relatively stable with a slight increase of 0.4%;
- Fire/Explosions/Alarms per 1,000 population decreased by 5%.

Emergency Medical incidents decreased starting 2012 due to changes made in tiered response protocols with Toronto Paramedic Services in July 2012, which removed Fire Services from the

response to many medical call types. Since 2013 the number of unique incidents have been increasing relatively proportional to population.

Toronto's urban form is changing with additional high rise buildings completed, under construction, and in the development pipeline. Fires and explosions in these structures require multi-unit responses and a greater number of firefighters to mitigate risks, compared to single family dwelling units. The time it takes to reach the site of an incident within a high rise structure (between 5:01mins and 5:19mins in 2016) is also significantly longer than to a single family dwelling.

9.4 – HOW MANY EMERGENCY INCIDENTS ARE RESPONDED TO IN TORONTO COMPARED TO OTHER MUNICIPALITIES?

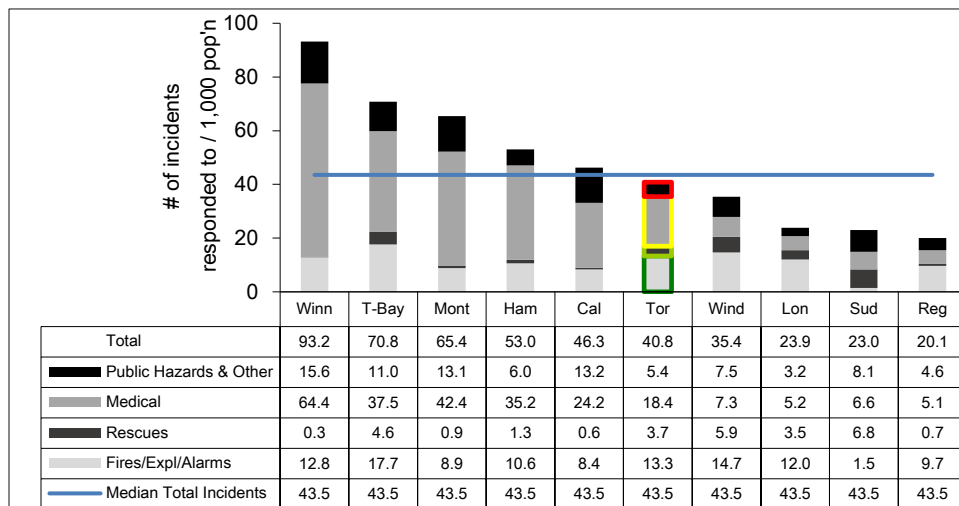


Chart 9.4 compares Toronto's results for the number of unique incidents per 1,000 persons to the urban areas of other municipalities.

Chart 9.4 (MBNC 2016) Number of Incidents Responded to by Fire Services (by type) per 1,000 Population in Urban Areas

In terms of having the highest number of incidents per 1,000 population compared to others, Toronto in 2016 ranks:

- Sixth of ten (third quartile) for the total number of incidents
- Eighth of ten (fourth quartile) for public hazards and other incidents
- Sixth of ten (third quartile) for medical calls
- Fourth of ten (second quartile) for rescues
- Third of ten (first quartile) for fires, explosions and alarms

The number of medical incidents responded to is determined by municipal-specific tiered response agreements between Fire Services, Paramedic Services and hospital protocols, for example, Winnipeg has a combined Fire and Paramedic Service.

COMMUNITY IMPACT

The main objective of Fire Services is to protect the safety of Toronto residents and visitors, property, and the environment. To determine if Fire Services is meeting its objective, MBN Canada measures the rate at which residential fires with injuries, fatalities and property losses occur.

9.5 – HOW MANY RESIDENTIAL FIRES, WITH PROPERTY LOSS, OCCUR IN TORONTO?

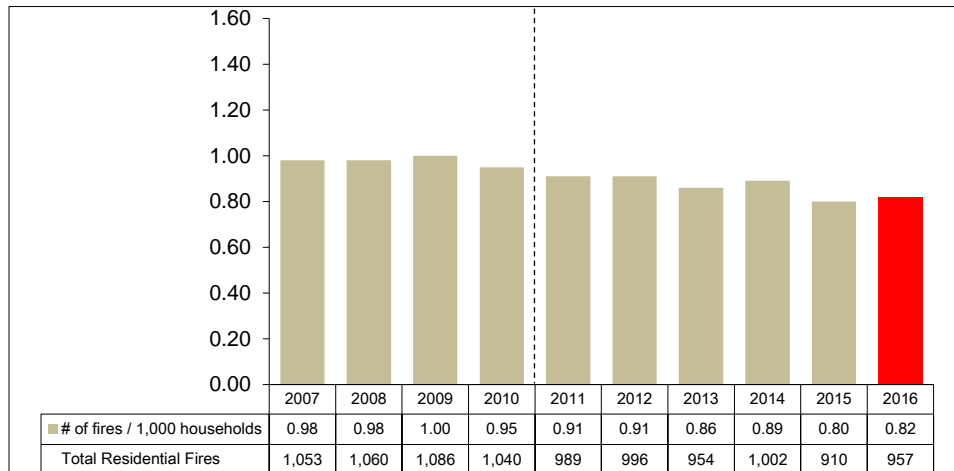


Chart 9.5 provides rate of residential fires with property loss in Toronto per 1,000 households.

Chart 9.5 (City of Toronto) Rate of Residential Structural Fires with Property Losses per 1,000 Households

9.6 – HOW DOES TORONTO'S RATE OF RESIDENTIAL FIRES COMPARE TO OTHER MUNICIPALITIES?

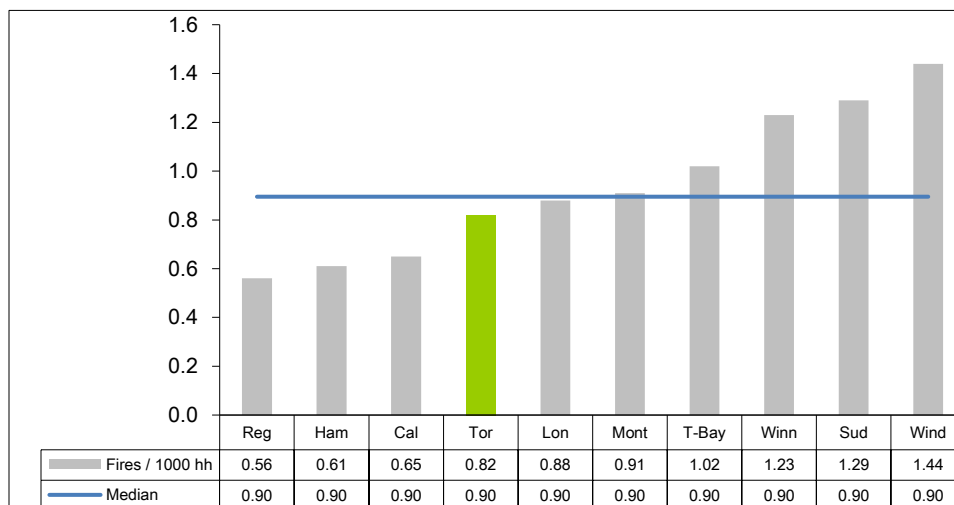


Chart 9.6 compares Toronto's 2016 rate of residential fires with property loss to other municipalities.

Toronto ranks fourth of ten municipalities in terms of the lowest rate of residential fires with property loss. One possible indicator for Toronto's favourable results is the higher number of

Chart 9.6 (MBNC 2016) Rate of Residential Structural Fires with Property Losses per 1,000 Households

Fire Prevention (Investigators) and Fire Education Staff which reduce the risk of fire loss.

9.7 – WHAT IS THE RATE OF INJURIES FROM RESIDENTIAL FIRES IN TORONTO?

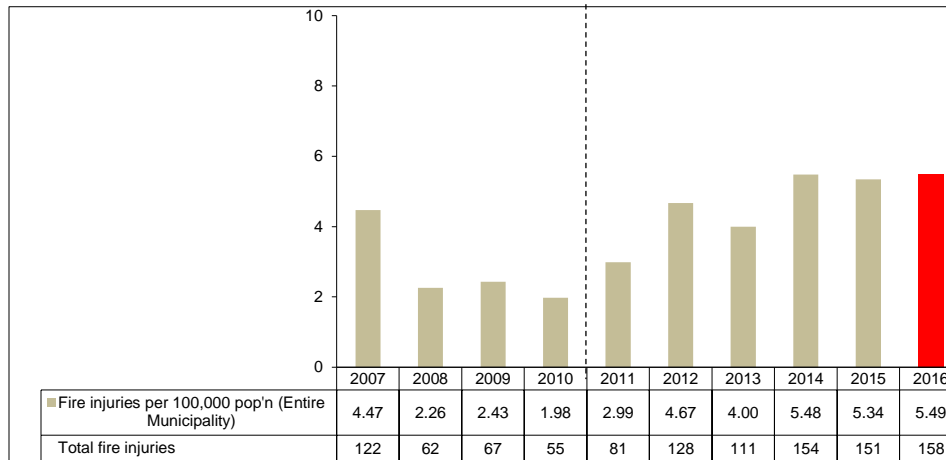


Chart 9.7 provides the total number and rate of residential fire related injuries in Toronto per 100,000 persons. From 2008 the trend in injuries is generally increasing.

Chart 9.7 (City of Toronto) Rate of Residential Fire Related Injuries per 100,000 Persons

In 2016, residential fire injuries per 100,000 population increased by 2.8%. The 10 year rate of change (2007 to 2016) was 22.8%. The number of injuries per unique residential fire incident has increased in more recent years.

9.8 – HOW DOES TORONTO'S RATE OF INJURIES FROM RESIDENTIAL FIRES COMPARE TO OTHER MUNICIPALITIES?

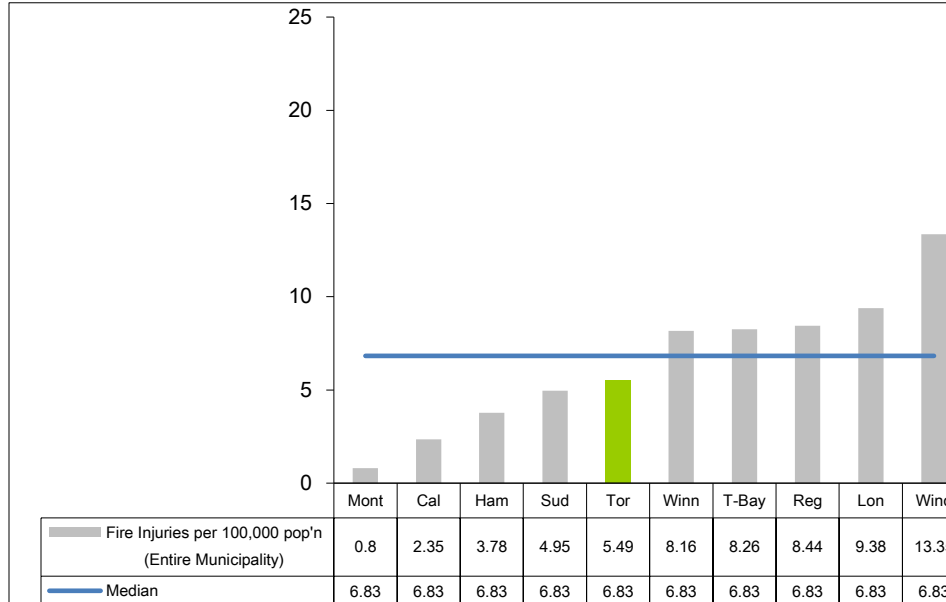


Chart 9.8 compares Toronto's 2016 rate of residential fire related injuries per 100,000 population to other Canadian municipalities.

Toronto ranks fifth of ten municipalities (second quartile) in terms of the lowest rate of injuries.

Chart 9.8 (MBNC 2016) Rate of Residential Fire Related Injuries per 100,000 Persons

9.9 – WHAT IS THE RATE OF FATALITIES FROM RESIDENTIAL FIRES IN TORONTO?

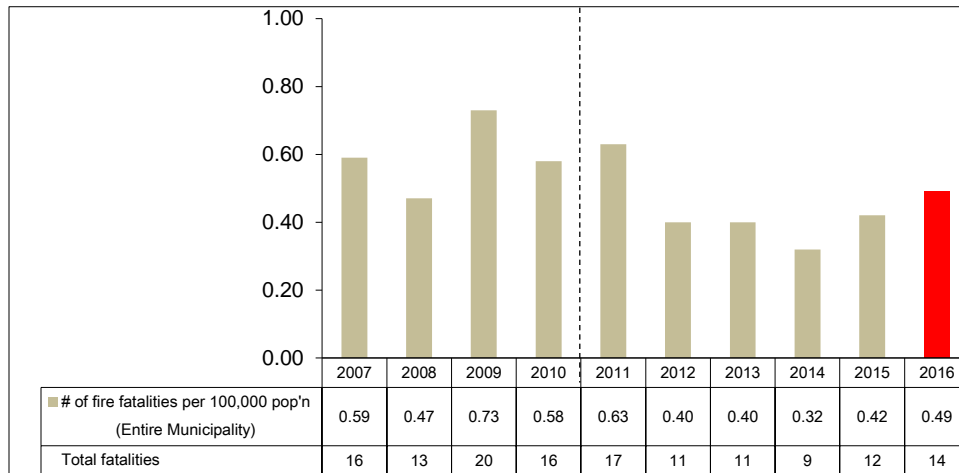


Chart 9.9 provides the total number and rate of residential fire related fatalities in Toronto per 100,000. In 2016, the number of fatalities per 100,000 population increased by 16.7%.

Chart 9.9 (City of Toronto) Rate of Residential Fire Related Fatalities per 100,000 Persons

9.10 – HOW DOES TORONTO'S RATE OF FATALITIES FROM RESIDENTIAL FIRES COMPARE TO OTHER MUNICIPALITIES?

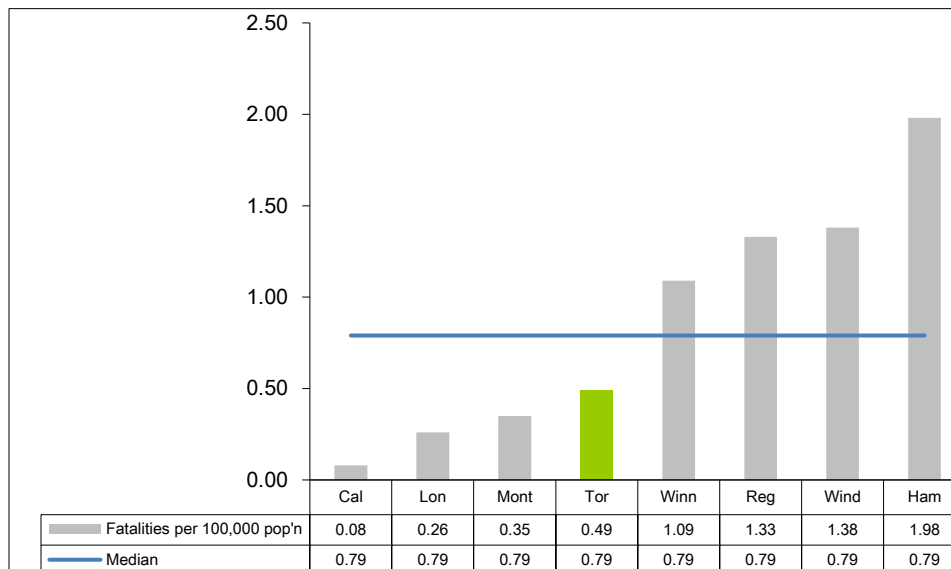


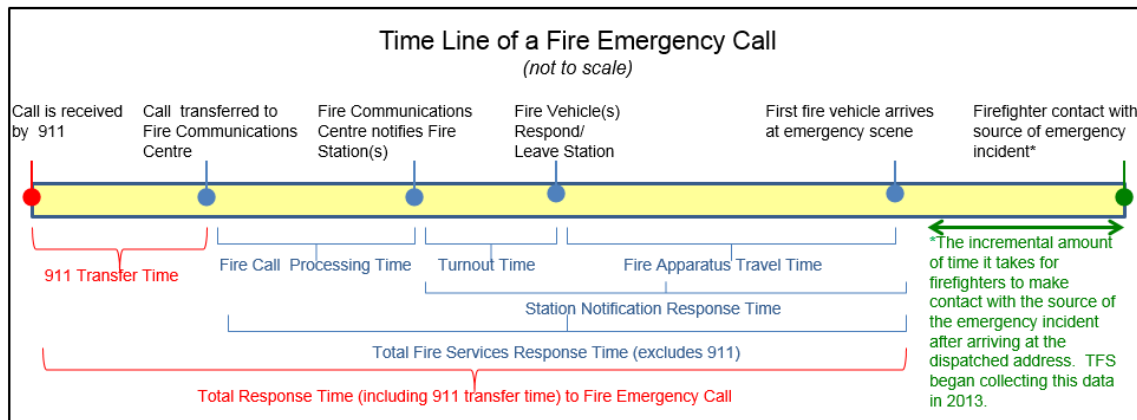
Chart 9.10 compares Toronto's 2016 rate of residential fire related fatalities to other Ontario municipalities.

Chart 9.10 (MBNC 2016) Rate of Residential Fire Fatalities per 100,000 Population

Toronto ranks fourth of eight municipalities (second quartile) in terms of the lowest rate of fatalities. Toronto is undertaking a number of initiatives to reduce fire-related injuries and fatalities, some of which are described at the end of this section. Information on the number of fire/alarm incidents in each of Toronto's 140 neighbourhoods as well as other indicators is available at [Wellbeing Toronto](#).

CUSTOMER SERVICE

The time it takes for fire vehicles to arrive at an emergency scene from the time the emergency call is placed is called Total Response Time. The illustration below provides the time line segments of a fire emergency call/incident. Note that 911 transfer time is not included in the results presented in this Chapter.



9.11 – HOW LONG DOES IT TAKE FIRE SERVICES TO ARRIVE AT THE EMERGENCY SCENE (RESPONSE TIME) IN TORONTO?

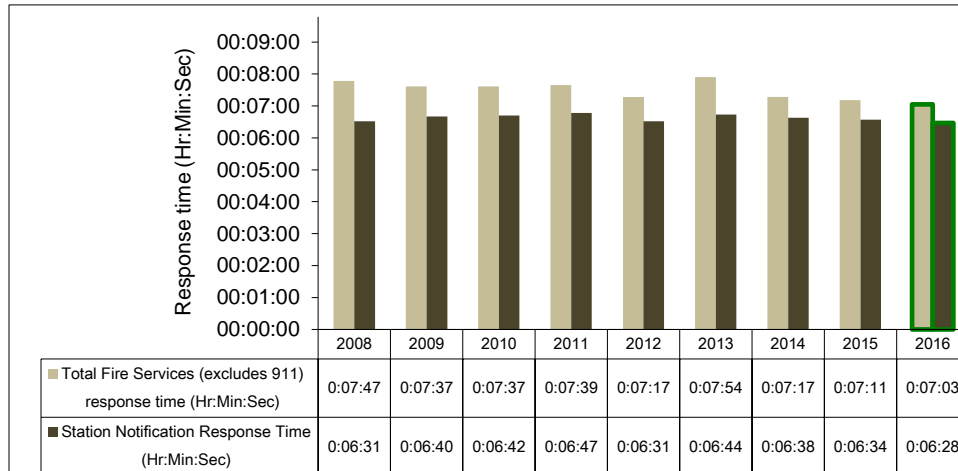


Chart 9.11 provides Toronto's 90th percentile response times (90 percent of all emergency calls have a response time equal to or less than the time period shown on the graph) for:

Chart 9.11 (City of Toronto) 90th Percentile Fire Station Notification Response Time and Total Fire Services Response Time

- Fire station notification response time is measured from the point that the fire station has been notified by the fire dispatcher, to arrival of the first apparatus at the emergency scene.
- Fire Services response time is measured from the time the call is transferred from 911 to the Fire Communication Centre, to arrival of the first apparatus at the emergency scene.

In 2016, there was a decrease of 6 seconds in the station notification response time and a decrease of 8 seconds in the total Fire Services response time.

9.12 – HOW DOES TORONTO'S FIRE RESPONSE TIME COMPARE TO OTHER MUNICIPALITIES?

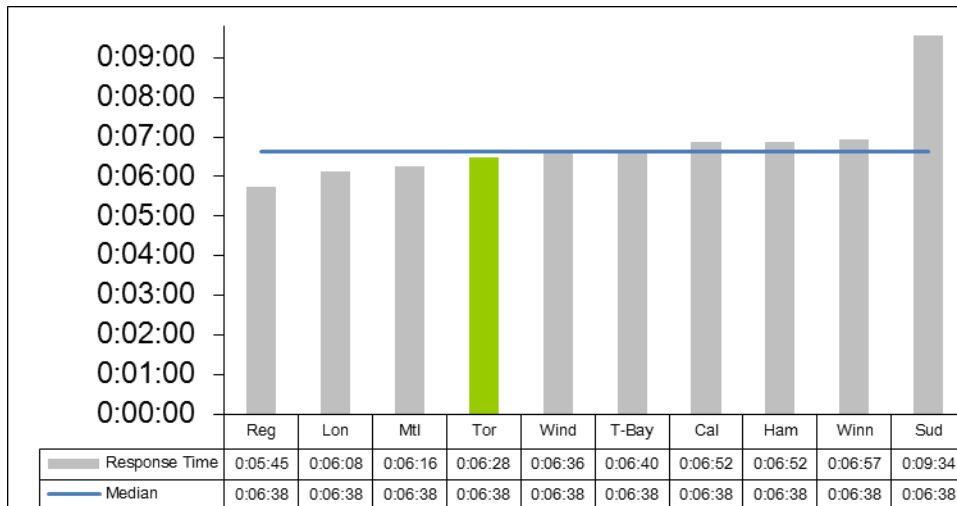


Chart 9.12 compares Toronto's 2016 station notification response time (90th percentile) to other municipalities.

Chart 9.12 (MBNC 2016) 90th Percentile Station Notification Response Time

Toronto ranks fourth of ten municipalities (second quartile) for response times. Travel distances and traffic congestion can be a significant influencing factor in these results. Vertical response is an issue that affects fire safety in Toronto more significantly than any other city in Ontario because of the proliferation of high-rise buildings in Toronto. TFS started tracking vertical response data in 2014. In 2016, the range of time that is required for the first crew of firefighters to ascend to the site of the fire in Toronto's high-rise buildings was between 5 minutes and 1 second and 5 minutes and 19 seconds (90th percentile).

Vertical response time is a measurement of the amount of time that is required to transition from the curbside of the affected property to the location of the actual emergency in high-rise buildings. No specific performance target exists in this area as of yet.

EFFICIENCY

9.13 – WHAT DOES IT COST PER HOUR, TO HAVE A FRONT-LINE FIRE VEHICLE AVAILABLE TO RESPOND TO EMERGENCIES IN TORONTO?

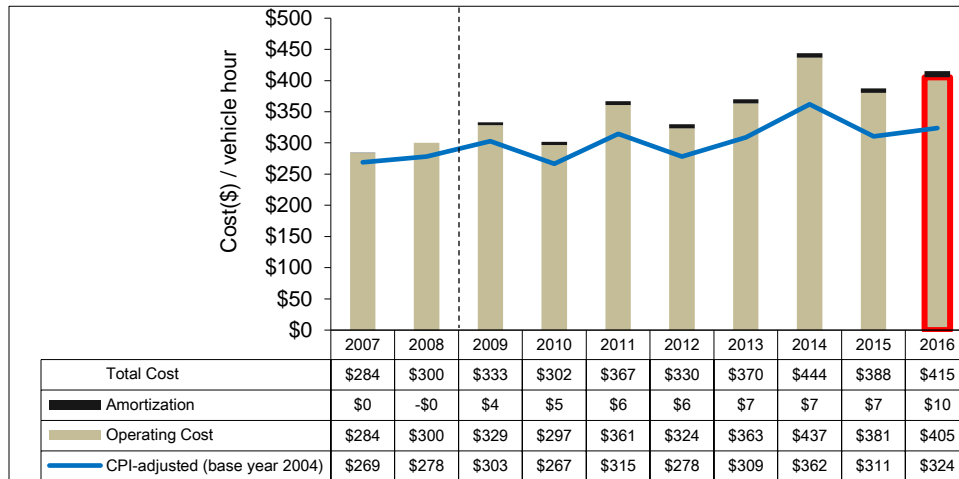


Chart 9.13 presents the efficiency of delivering these service levels, showing Toronto's operating and total (operating plus amortization) cost per hour to have a front-line vehicle in service, staffed and available to respond to emergencies.

Chart 9.13 (City of Toronto) Cost of Fire Services per In-Service Vehicle Hour

Starting in 2009, changes in accounting policies were instituted; therefore, results of 2009 and subsequent years are not as comparable to 2008 and prior years. To reflect the impact of inflation, the graph also provides Consumer Price Index (CPI) adjusted operating cost results (using the previous operating cost methodology of 2008 and prior years), which are plotted as a line graph. This adjustment discounts the actual operating cost result for each year by the change in Toronto's CPI since the base year of 2004. In 2016, total cost increased by 7.1% and operating cost increased by 6.5%.

9.14 – HOW DOES TORONTO'S FIRE COST PER IN-SERVICE VEHICLE HOUR COMPARE TO OTHER MUNICIPALITIES?

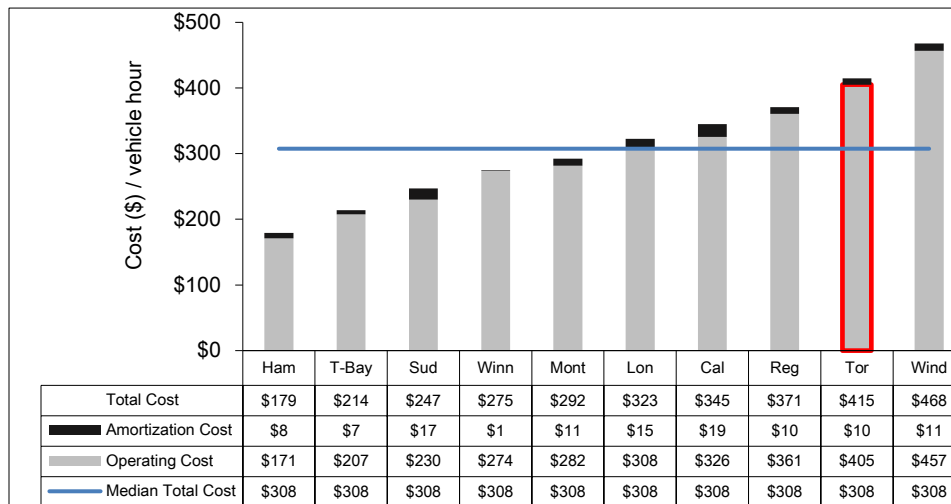


Chart 9.14 compares Toronto's 2016 fire cost per in-service vehicle hour to other Ontario municipalities.

Chart 9.14 (MBNC 2016) Cost of Fire Services per In-Service Vehicle Hour

Toronto ranks ninth of ten municipalities (fourth quartile) in terms of the lowest cost per hour.

Excluding the impact of the accounting policy changes, Toronto's 2016 operating and total costs continue to increase due to funding for Workplace Safety Insurance Board (WSIB) claims based on actual experience and known salary and benefit adjustments.

There are various factors that contribute to Toronto's higher costs including:

- A different (more expensive) mix of fire vehicles to accommodate Toronto's complex urban form.
- Capabilities such as HUSAR (Heavy Urban Search and Rescue), high angle rescue, ice/swift water rescue, confined spaces, etc. requiring additional training, and equipment, which often are not part of the response capabilities in other municipalities.
- Toronto's Firefighters tend to have more years of service, than other municipalities and accordingly their recognition pay (based on years of service) will be higher. Municipalities can also be at different points in their cycle of collective agreements, leading to wage differences between different fire services.

When there is insufficient staffing during a shift for a full complement of fire vehicles in Toronto, some vehicles are removed from service so that the remaining vehicles are fully staffed. Other municipalities may choose to leave vehicles in service with a reduced number of firefighters.

2016 ACHIEVEMENTS AND 2017 PLANNED INITIATIVES

The following initiatives have improved or are expected to further improve the efficiency and effectiveness of Fire Services in Toronto:

2016 Accomplishments & Achievements

- 24 senior staff completed Road to Mental Readiness (R2MR) training with both Association members and Management staff participating.
- Conducted 314 vulnerable occupancy inspections (including care occupancies, care and treatment occupancies, and retirement homes) to protect the most vulnerable residents in the city.
- 17 new Fire Prevention staff were hired in 2016.
- Firefighters attended 61,450 homes as part of the Alarmed for Life campaign.
- TFS responded to 1,262 media inquiries which accounted for 24% of all City of Toronto media inquiries.
- 1,677 truck requests and station tours, a 3.5% increase over 2015.
- Trained 82 new operational firefighter recruits in 2016.
- 40% of the 85 operations firefighter recruits hired in 2016 represent a minority group (females, Indigenous peoples, and visible minority groups).
- The recently acquired and refurbished William Thornton fireboat is now in service and actively running emergency calls on the water.
- New Fire Station 135 on Chaplin Crescent opened in October 2016.
- 13,427 high-rise residents received fire safety information during Safety Awareness Week.
- Published Pan Am After Action Report to share lessons learned with City of Toronto partners, future planners and other fire departments.
- In co-operation with the Office of the Fire Marshal and Emergency Management, developed and delivered a pilot program to over 500 Toronto Community Housing supervisory staff, outlining fire safety duties and responsibilities per the Ontario Fire Code.
- Acquired 200 thermal imaging cameras, which will improve firefighter safety, public safety, and reduction of property loss, was completed in the 2nd Quarter.
- Replaced 18 heavy emergency response apparatus and maintained the largest fire fleet in Canada.

2017 Planned Initiatives

The 2017 Operating Budget will enable the Toronto Fire Services to continue to:

- Provide 24-hour emergency response for the City of Toronto from 83 fire stations located across the City
- Enhance training and leadership development

- Develop a comprehensive Diversity and Inclusion Plan
- Develop efficiency models to improve deployment and service delivery
- Introduce Fire Code Re-Inspection Fees
- Develop an in-house capacity for fire investigations
- Enhance mobile Fire Prevention records
- Develop a mental health support and PTSD and suicide prevention plan
- Enhance internal communication and leadership visibility

Factors Influencing the Results of Municipalities

The results of each municipality included in this report can be influenced to varying degrees by factors such as:

- The age and densification of housing stock
- The nature or extent of fire risks, such as the type of building construction or occupancy (apartment dwellings versus single family homes)
- Differences in population densities
- Geography and topography
- Transportation routes, traffic congestion and travel distances
- Socio-demographics
- The extent of fire prevention and education efforts, enforcement of the fire code and the presence of working smoke alarms
- Staffing levels on fire apparatus/vehicles