

Technical Standards and Safety Authority

Annual State of Public Safety Report

2019 Edition

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Summary

The Annual State of Public Safety Report (ASPR) provides information on Ontario's public safety sector in the areas overseen by the Technical Standards and Safety Authority (TSSA). This year's ASPR provides the seventh year of the predictive measure 'risk of injury or fatality', to facilitate prediction of expected injury burden during the upcoming year. Compliance trend analysis over a rolling five-year average is included; occurrence trends are provided for twelve years (since data recording started). The metric is a valuable public policy tool as it enables temporal cross-sector and cross-jurisdiction comparisons. This is the 19th annual edition.

Similar to last year the five highest risks (actionable areas) identified are: (i) carbon monoxide risks in apartments and condominiums, (ii) elevator risks in hospitals, (iii) fuel-related risks at private dwellings, iv) user interactions on elevators in retirement and long-term care homes, (v) fuel risks in schools. Fuel risks in business units remains an area warranting enhanced monitoring.

This remains a review of TSSA's analysis of collected data and compliance trends (as reported by TSSA staff), and is not an assessment/audit of provided data. Two separate random reviews of ASPR data were conducted by the CSRO. Several shortcomings were observed, mainly communications between inspectors and *ad hoc* record keeping. The CSRO agrees with the Auditor General's recommendation that checklists be used by inspectors and clear management systems be developed (TSSA would likely be well-served by adopting an agency-wide management system, e.g. ISO 14001).

Comments and Recommendations

TSSA's top sources of risk in 2019 are: CO in apartments and condominiums; hospital elevators; fuel risks in private dwellings; user interactions on elevators in retirement and long-term care homes, and; fuels in schools. Areas demanding enhanced monitoring include fuel risks in business units. These remain shared risks where TSSA is only one of several key safety partners.

TSSA deserves credit for addressing these complex risks. Again, the ASPR could suggest what aspect of these risks fall solely within TSSA's mandate, and how these are linked (or not) to the overall, broader risk. The ASPR could also present a plan to address overall risks, and suggested outlines (or summaries of published plans) for various safety partner accountabilities. The ASPR's strength is its annual publication, allowing credible monitoring of trends. TSSA's top risks could be presented in a disaggregated manner, with TSSA-mandated risk trends outlined relative to human behaviour, and other key safety partners.

The shift to an 'outcome based regulator' is a laudable goal and reasonable request, however for those overseeing the TSSA's mandate, as credibly outlined (again) in the ASPR, the five most important actionable areas raised do not lend themselves well to simple performance indicators where TSSA can be assessed on an 'achieved' or 'not-achieved' basis.

To date, TSSA has relied on DALY (disability-adjusted life year), simplified to FE (fatality equivalent) to convey overall risk to Ontarians. This is best practice and facilitates comparisons across jurisdictions, and over time, however more outcomes need to be defined, some of which may not be directly linked to safety.

For example, elevator 'safety' is not the key metric a user applies when waiting again more than ten minutes for an elevator. Nor is the entrapped elevator rider reassured that the device is

'safe'. The Board and staff of TSSA should propose a suite of performance indicators for the actionable areas presented in this year's ASPR. Key agencies should be invited to comment on these (and in some cases be tasked with monitoring the indicator). TSSA can oversee collection of the information, but likely not sole responsibility for delivery. The indicators should also include aspects of 'regulatory burden' and overall cost.

As highlighted with the new signs around ski lifts, signs can be an important contributor to enhanced public safety. Directors should be tasked with opining on the enhancement, or detracting, of public safety with regard to signs around TSSA regulated activities. For example, do the recently mandated signs by Province of Ontario (the cost of the carbon tax) have a safety impact?

The following comments and recommendations also include updates of previous CSRO reviews.

- (i) Elevator reliability (availability) is a complex issue with facets exceeding TSSA's safety mandate, however on EDs (and possibly escalators) a short discussion on risk of inoperability (availability) continues to be warranted. This is not strictly a risk metric of the existing inspection regime, however absence of elevator (escalator) service can pose serious risks that could be acknowledged. Similarly, for EDs a discussion on entrapment trends is warranted (even though entrapments are not regulated by TSSA). The elevator availability process is likely a precursor for other areas in which TSSA has key oversight responsibilities, e.g. CO in private residences and fuels in schools.
- (ii) The ED and EM contractor rating system as proposed in the 2015 ASPR remains an important advancement, as is the suggestion of a clear time-bound strategy for improving compliance levels. The importance of information on ED contractors is increasing in light of growing entrapments and (possibly) maintenance backlogs. Licenced condominium managers may also be a good source of information. Ideally no later than 1 June 2020, this information should be developed for monitoring, publicizing (perhaps with international comparators), and setting compliance levels (and service standards). These compliance level targets may need to be differentiated by type and location of building.
- (iii) As raised in earlier reviews, information on disaggregated risk highlighting the heterogeneity of risks by location could be a useful addition, e.g. certain risks in Northern Ontario vs City of Toronto, relative to the Province overall. Larger cities may concentrate certain risks (and economies of scale in oversight may be possible). Remote communities may require unique and collective approaches to maintenance and regulation. Most risk data is now disaggregated by populations. Disaggregating by location may be equally useful.

Review of Specific Sectors

Several recommendations from previous years remain relevant.

Boilers and Pressure Vessels (BPV)

- (i) The marked increase in the number of occurrences (e.g. from 4 in 2017, to 21 in 2018, and 13 in 2019) continues to reflect increased reporting by Ministry of Environment, Conservation and Parks on low-level releases of refrigerants. This remains a prudent addition by TSSA considering recent serious ammonia leaks in other jurisdictions. Continued monitoring of releases is warranted, with possible regulatory action.
 - (ii) There may be continued merit in integrating inspections of BPVs in schools with fuels inspections and energy efficiency – retrofit programs. Fuel risk in schools continues to be an actionable area.
 - (iii) Continued comparison to the National Board's Violations Tracking KPI that started in 2017 should continue. Adding comparators from outside North America may be informative.
- Compliance rate (2015 – 2019): 98.6% (no demonstrable trend)
 - In 2019 there were 13 reported occurrences with no permanent injuries
 - Predictive model estimates risk of injury or fatality to Ontarians (from BPVs) to be 0.02 FE/mpy (same as 2018)

Operating (Power) Engineers (OE)

- (i) TSSA should continue to publish the names of Operating Engineers licence holders, and where possible expand this for other licence holders.
 - (ii) Continued involvement with national public-safety advisory committee (NPSAC) on special requirements of ammonia cooled recreation facilities, and possibly enhanced monitoring, may be warranted.
- 40% compliance rate
 - Risk-based profile in Ontario remained 'low risk' (potential of 0.01 FE/mpy)
 - 3,280 plants and 11,742 operating engineers (a 7% decline over last year) in Ontario (3,280 plants and 12,571 operating engineers last year)
 - In 2019 there were 22 reported occurrences (a marked increase) mainly due to increased spills reporting, especially in refrigeration incidents
 - 78 high-risk facilities (120 in 2016; 46 in 2017; 34 in 2018 – refrigeration plants highest contributor at 24%)
 - Government of Ontario (MGCS) made changes to the Technical Standards and Safety Act, 2000 to allow for alternate rules for Operating Engineers Regulation, to provide flexibility for businesses to achieve compliance.

Amusement Devices (AD)

- (i) TSSA's commitment to review incident data and relative safety of Ontario's amusement devices is commendable. There is likely merit in reviewing these

- incidents within a broader framework of other jurisdictions (e.g. Canada, US, international, and disaggregated by type).
- (ii) There may be merit in presenting number of riders at major facilities/rides (for trend analysis on number of users vs number of occurrences) – this is particularly relevant for waterslides
 - (iii) TSSA should be prepared to comment on emergency situation and evacuation plans for major amusement facilities (municipalities may request these plans of operators)
- Approximately 2,824 permitted amusement devices in Ontario (a 12% increase over 2018)
 - ‘The level of safety continues to be good’, plan to monitor more serious injuries such as concussions
 - 5,234 occurrences 2008 – 2019 (220 permanent and 4,745 non-permanent injuries; 29 permanent injuries in 2019, compared to 19 in 2018)
 - Potential risk of injury or fatality 0.21 FE/mpy (compared to 0.14 FE/mpy in 2018)
 - 54% compliance rate (with 5% per year decreasing trend, down 9% from 2018)
 - Increasing occurrences and injuries of approximately 5 to 6% per year
 - 95% of risk due to external factors (outside TSSA regulatory mandate, e.g. user behavior); 95% of all amusement occurrences due to human factors
 - Over the past 12 years injuries on waterslides make up 41% of observed injury burden
 - Increasing trends in number of occurrences and injuries reported over the last three years, likely attributable to better reporting
 - 29 high risk devices in Ontario (41% circular rides, 14% revolving or swing rides, 10% water slides)
 - Top amusement device types for occurrences of physical impacts – water slides 32%, zip lines 24%, coaster rides 15%, and observed injury burden – coaster rides 27%, circular rides 23%, water slides 21%

Elevating Devices (ED)

- (i) TSSA should make much of its elevator data readily available through website, e.g. licenses and inspection dates; perhaps as part of the Province of Ontario’s ‘Open Data’ efforts [either within or separate of TSSA 20/20].
- (ii) Identifying and targeting ‘actionable areas’ for higher risk in hospitals (3.33 FE/mpy) and user interactions in retirement and long-term care homes (0.59 FE/mpy) needs to continue.
- (iii) With concerns about continued trend in decreasing compliance, benchmarking with other jurisdictions may be informative. So too specific trend analysis on key manufacturers (and maintenance companies).
- (iv) As soon as practicable, TSSA should post when elevators (and escalators) are ordered shut-down by TSSA (in the City of Toronto this might be part of the new multi-unit residential building licensing program).
- (v) Elevator entrapment incidences are typically compiled by local fire departments (and 911 calls). Strictly speaking, elevator entrapments (and water exposure) are not under TSSA’s mandate, however as entrapments present a potential safety risk (e.g. people trying to escape), and are a general reflection of the efficacy of overall maintenance, incidents should be tracked (and possibly posted), particularly in the Greater Toronto Area. Flooding of elevators, and shafts, should be included in compiled data (this has started).

- (vi) TSSA and MGCS should ensure that mandatory courses required for licencing Condominium Mangers include information on elevator maintenance standards, industry practices, and best-practices in service contracts.
 - (vii) Elevator occurrences caused by damage due to water exposure continues to increase. 12.3% of water exposure occurrences are due to inoperative sump pumps.
 - (viii) A targeted elevator safety program (e.g. signs, education, and specific fines) should be considered for student residences. Perhaps a letter to building managers and Deans of Students outlining the growing and serious nature of entrapment injuries is warranted.
- 58,682 elevators licensed in Ontario (an increase of 2,870 from 2018)
 - Two actionable areas identified: elevator risk in hospitals and user interactions in retirement and long-term care homes
 - 4,880 occurrences 2008 – 2019 (9 fatalities, 83 permanent and 1,549 non-permanent injuries)
 - Observed injury burden of approximately 0.02 FE/mpy; potential health impact 0.61 FE/mpy
 - Median compliance rate of 22% (decreasing by 1.6% per year)
 - 63.3% of estimated historical risk (last twelve years) due to factors external to regulatory requirements (most external factor occurrences due to human factors)
 - Location types of the 102 'high-risk' devices: 20% offices, 16% industrial, 15% rental apartments.
 - Preliminary data collection by TSSA inspectors suggests an average uptime (availability) of only 90% for residential elevators (significantly worse than the Cunningham report).
 - Student residences make up 99.7% of external-factor observed injury burden (for entrapments).
 - Damage due to water exposure accounted for 43% of external-factor and near-miss occurrences
 - Passengers struck by closing doors remain the largest occurrence type (36%), while entrapments are the highest source of injury burden (64%).

Escalators and Moving Walks (EM)

- (i) Continued focus at mass transit facilities is warranted. Trip/fall occurrences continue to increase 8.7% per year. Operating escalators in transit facilities are particularly important in emergency events (affect of water exposure not clear).
 - (ii) The links and commonality with elevators may be important ('escalator availability' likely also an issue to emerge, similar to elevator availability).
- Over 2,282 installations regulated by TSSA in Ontario
 - 7,291 occurrences 2008 – 2019 (1 fatality, 44 permanent and 4,945 non-permanent injuries – occurrences increasing by 4% per year)
 - 10.8% compliance rate (no demonstrable trend)
 - 98% of risk may be caused by factors external to regulatory requirements
 - Predictive model estimates a risk of injury or fatality to Ontarians of 0.05 FE/mpy
 - Trips and falls account for 79% of external factor occurrences and 89% of associated injury burden
 - Mass transportation locations account for nearly 57% of occurrences (increasing by 6% per year)

Ski Lifts (SL)

- (i) Addressing major non-compliance through complementary services such as Ski Instructors continues to provide benefits. With 93% of risk continuing to be due to factors external to the regulatory environment public education remains critical (perhaps in conjunction with other risks on the ski hill).
 - (ii) The partnership with the Ontario Snow Resorts Association to modernize signs around resorts appears to be already providing benefits – again, highlighting potential benefits of seemingly ‘small’ improvements.
- 253 ski lifts in Ontario
 - 1,051 occurrences 2008 – 2019 (27 permanent and 851 non-permanent injuries)
 - 93% of estimated risk caused by factors external to regulatory requirements
 - External factors 41% trips/falls, 34% physical impacts, 14% falls from height.
 - No discernible trend for occurrences, fatalities or injuries
 - 50% inspection compliance rate (8.4% decreasing trend)
 - Predictive model risk of injury or fatality to Ontarians of 0.02 FE/mpy (same as 2017-18)

Fuels (FS)

- (i) Fuels continue to represent the largest risk center under TSSA’s oversight. The potential risk of injury or fatality is 1.41FE/mpy (an ‘unacceptable level’). The fuels sector warrants continued focus for enhanced regulatory approaches.
- (ii) The need for a long term strategy to address CO risk (across all sectors and facilities) remains. As a minimum, special buildings (especially schools and health-, long-term care facilities) and new building technologies (e.g. net zero energy homes) need to be included in the strategy. The strategy also needs to reflect that the largest source of risk at residences continues to be CO release (e.g. an unacceptably high of 3.86 FE/mpy at apartments and condominiums; 7.09 for CO in private dwellings; overall fuel risk is 2.78 FE/mpy at private dwellings).
- (iii) The CO strategy might take advantage of the requirement that Home Inspectors are now licenced in Ontario (MGCS may be able to facilitate discussions with inspection programs to include potential CO release assessments, with input from TSSA – this is already taking place on resilience – adaptation – enhancements for single-family dwellings).¹
- (iv) The special buildings inspections pilot for schools is complete, however future reviews should include a focus on integrated support by various safety partners, and facilities upgrading, e.g. replacement of boilers and HVAC systems.²
- (v) MGCS should ensure that through the recently enacted licencing requirements for Home Inspectors, (single family) home inspections consider CO poisoning potential

¹ The largest cause of CO occurrences is improper installation. Inadequate maintenance, e.g. venting issues including blocked or broken venting and chimneys is also contributory. Perhaps this aspect alone could be assessed by home inspectors and energy auditors.

² TSSA partnering with OMC of the OASBO (maintenance arm of the school boards) is an excellent initiative. How the lack of maintenance in schools, and its contribution to CO risk, relates to other maintenance backlogs should be monitored, and communicated as necessary. Progress could be reported in subsequent ASPRs.

- and assessment of common avenues of risk (as part of inspection process). Similarly, condominium licence-holders should be provided a rudimentary understanding of CO risks in buildings through their course-work requirements.
- (vi) Vigilance is needed on the issue of signs on gas pumps – are they distracting (leading to safety issues), should TSSA inspectors be required to provide oversight of a non-safety aspect (e.g. setting a precedent).
- Fuels represent the largest risk center under TSSA's oversight
 - 40,270 occurrences 2008 – 2019 (50 fatalities, 169 permanent and 565 non-permanent injuries). 4,207 liquid fuel and 1,343 propane facilities.
 - From 2008 – 2019 there were 27,485 pipeline strikes (1,822 in 2019)
 - Average injury burden of 0.27 FE/mpy and predictive estimate (potential) of risk of injury or fatality from fuel-fired appliances of 1.41 FE/mpy.
 - Largest source of risk continues to be CO release (estimated at 3.86 FE/mpy CO risks at apartments and 7.09 FE/mpy at private dwellings; well above international benchmark of 1.0 FE/mpy)
 - 74 high-risk liquid fuel sites (74% gas stations, 23% marinas, 3% bulk plants)
 - 50 high-risk propane sites (86% cylinder refill centers)
 - Fuel-related risks in retirement and long-term care homes and food service locations no longer qualify for enhanced monitoring (possibly reflecting the targeted programs for both of these issues in recent years)
 - Programs planned for fuel oil distributors and pipeline audit programs (NB almost 97% of Ontario's pipelines operated by one company)

Emerging Issues in Fuels Safety

Continued and updated from last year – Impending introduction of hydrogen fueling stations along 400-series highways for heavy-duty trucks; recent granting of permission to use cell-phones near fuel-pumps; hydrogen production and transmission by pipeline (e.g. Hydrogenics, Enbridge – Markham Power power-to-gas pilot); liquefied natural gas (LNG) for small plants; refueling and vehicles standards development; possible Canada-US-Mexico fuels standards harmonization; increasing incidence of carbon monoxide poisoning in residential buildings (where TSSA has limited regulatory capacity); closure of fuel stations, particularly in Northern Ontario; the Fuels sector in Ontario may provide a good platform for innovation and proactive management relative to North America wide programming,

Interest in fugitive emissions (leaks), especially those from natural gas pipelines and equipment, will grow. Natural gas (methane) has a global warming potential (GWP) more than 25-times CO₂. These emissions are of concern because of their potential to: (i) contribute to climate change (growing concern); (ii) impact public health (growing area of research), and; (iii) potential for fire and explosion.

As efforts continue to make homes more energy efficient (e.g. net energy zero), the potential of CO poisoning may increase, as homes are actually more air-tight. Municipalities will need to ensure that final building inspections of new homes consider this (perhaps with advice from TSSA).

Most of the 'special buildings' as defined in the fuels sector and reviewed in the now closed pilot program are government managed (and financed) facilities, e.g. hospitals and schools, Punitive fees and shutting down elevators and fuel systems may therefore target and impact people with little recourse. A comprehensive program with a consolidated, integrated maintenance program

is likely the most effective way to enhance compliance in a cost-effective manner, while also meeting other ancillary facilities requirements. Local municipalities are also important safety partners, e.g. Fire Departments.

Signs (safety and advertising) around gas pumps (and other areas such as escalators) need to be considered for impact on public safety and day-to-day operations of TSSA inspectors, i.e. being tasked with inspecting non-safety aspects at gas stations. This issue is under increased scrutiny with the recent requirement for stickers on gas pumps (with implementation and enforcement concerns raised recently by the Liquid Fuels Advisory Council).

Upholstered and Stuffed Articles (USA)

On December 6, 2018 the Government of Ontario announced its decision to revoke the Upholstered and Stuffed Articles Regulation (O. Reg 218/01) and as of July 1, 2019, provincial licensing, labelling, processing, cleanliness and sterilization requirements set out in the regulation no longer apply in the Province of Ontario. TSSA wound down USA activities; the USA Advisory Council is dissolved (last meeting was Feb 25, 2019).

Annex 1: Annual State of Public Safety Report – Background

Adapted from previous reviews: This is TSSA's eleventh enhanced Annual Public Safety Performance Report; now Annual State of Public Safety Report (ASPR). This is the 19th edition, and 6th in the current format. Publication of the ASPR is consistent with reporting requirements stipulated in the Technical Standards and Safety Act, 2000. The current CSRO's mandate as amended October 25, 2010, includes "review, analyze and report on TSSA's annual safety performance reports."

In the five actionable areas raised in this year's ASPR, TSSA is the paramount regulator, or oversight agency, in only one area – elevators in hospitals. And even in that area, TSSA's suite of regulatory and fiscal tools is highly limited to bring about required behavioral changes. In addressing TSSA's efforts at public safety broad and dynamic partnerships are needed.

General Overview

As outlined in previous reviews the ASPR provides an important state-of-the-Province risk benchmark. TSSA's mandated risk reduction efforts represent only about 0.1% of Ontario's fatality rate due to unintentional injuries. And even within TSSA's scope of oversight as stipulated in the Technical Standards and Safety Act, 2000, more than 95% of the residual risk of injury or fatality in some delegated sectors is caused by external factors, such as user behaviour, rather than inadequate regulatory systems. However the ASPR underpins the ability of regulated entities to enter into Public Safety Risk Management plans, as well as providing nascent analysis for emerging issues such as elevator availability and fuel supply.

TSSA's risk informed decision making (RIDM) framework and the term "risk of injury or fatality"³ provide an objective, evidence-based assessment and decision-making approach that helps

³ RIDM – risk informed decision-making – is a general risk industry standard that originated in systems engineering. Complex systems and their human interactions, like amusement devices, ski hills, elevators, and fuel systems can be assessed through RIDM, and quantified by metrics like disability adjusted life year (DALY)

TSSA's Statutory Directors discharge and assess their regulatory responsibilities as trends and impacts can be readily monitored. The framework also enables development and monitoring of associated educational campaigns; and increasingly, expansion of risk reduction efforts to related activities, for example fuels and carbon monoxide poisoning in residences.

With application of ALARP (as low as reasonably practicable) principles, TSSA classifies risk into 'Actionable Risks' (those where the risk acceptability criteria exceeds 1.00 FE/mpy for the general population, or 0.30 FE/mpy for sensitive sub-populations, e.g. residents of long-term care homes and school children), and those risks 'Requiring Enhanced Monitoring' (below 1.00 FE/mpy for general public and below 0.30 for sensitive sub-populations). TSSA core activities continue to be below risk levels requiring enhanced monitoring.

The majority of the estimated overall risk under TSSA's review continues to be caused by external factors, largely related to carbon monoxide poisoning; most of this in residences. This highlights the need for TSSA to increasingly work with safety partners and ensure, where practical, clear articulation of understood scope of mandate, and general input into a broader multi-stakeholder discussion on collective public safety needs.

This year's ASPR provides the seventh year of the predictive measure, 'risk of injury or fatality,' to facilitate prediction of the expected injury burden during the course of the upcoming year as well as trend analysis over a five year compliance period and twelve years for occurrences, injuries, fatalities. The metric enables cross-sector and cross-jurisdiction comparisons thereby providing a valuable public policy tool.

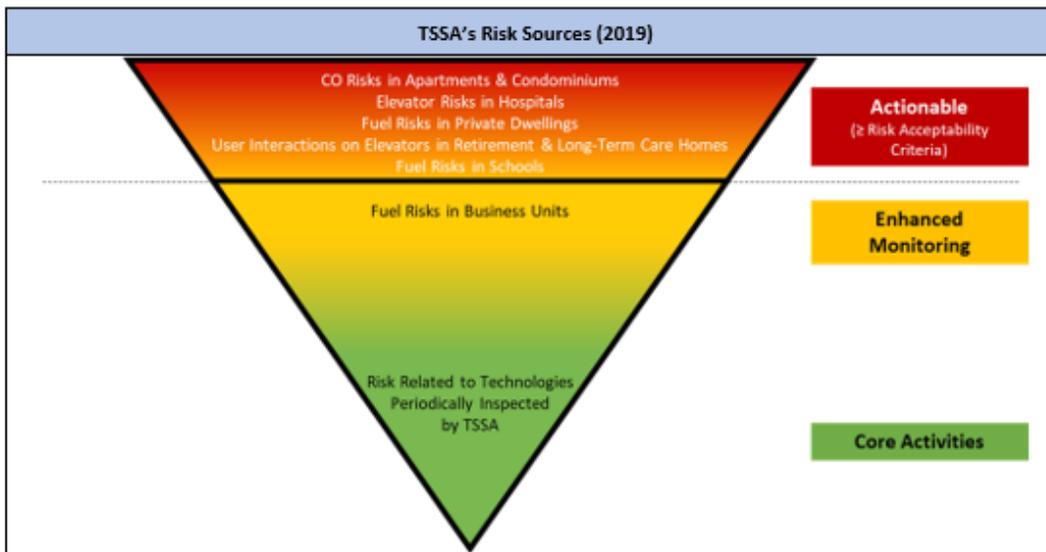
Application of risk of injury or fatality is useful for TSSA's internal planning and programming as well as reviewing risk analysis across other sectors and jurisdictions. For example, work continues on harmonized North American fuels standards, and the assessment of risk in areas such as pipeline and rail safety, and newly emerging issues like autonomous vehicles.

or the simpler "risk of injury or fatality" (used within TSSA's ASPR beginning 2012/2013 edition – as well as 'fatality equivalent'). 'Risk of injury or fatality' denotes a consistent unit that enables comparison of risk across time, societies and activities.

Annex 2: State of Public Safety in Ontario – 2019 ASPR Summary

STATE OF PUBLIC SAFETY IN ONTARIO

Areas of Concern (2019)			
Actionable Areas		Enhanced Monitoring Areas	
CO Risks in Apartments & Condominiums	3.86 FE/mpy	Fuel Risks in Business Units	0.57 FE/mpy
Elevator Risks in Hospitals	3.33 FE/mpy		
Fuel Risks in Private Dwellings	2.78 FE/mpy		
User Interactions on Elevators in Retirement & Long-Term Care Homes	0.59 FE/mpy		
Fuel Risks in Schools	0.42 FE/mpy		



Inspection Risk Spectrum (2019)		
	Major Issues	0.7%
	Minor Issues	74.4%
	Fully Compliant	25.0%

Inventory Risk Profile (2019)	
High Risk	1.9%
Medium Risk	11.1%
Low Risk	86.9%

Compliance Rate (2015 – 2019)
28.8%

Health Impact		
Observed		Potential
0.42 FE/mpy (2008 – 2019) Injury Burden	0.18 FE/mpy (2019) Injury Burden	0.84 FE/mpy (2019) Risk of Injury or Fatality

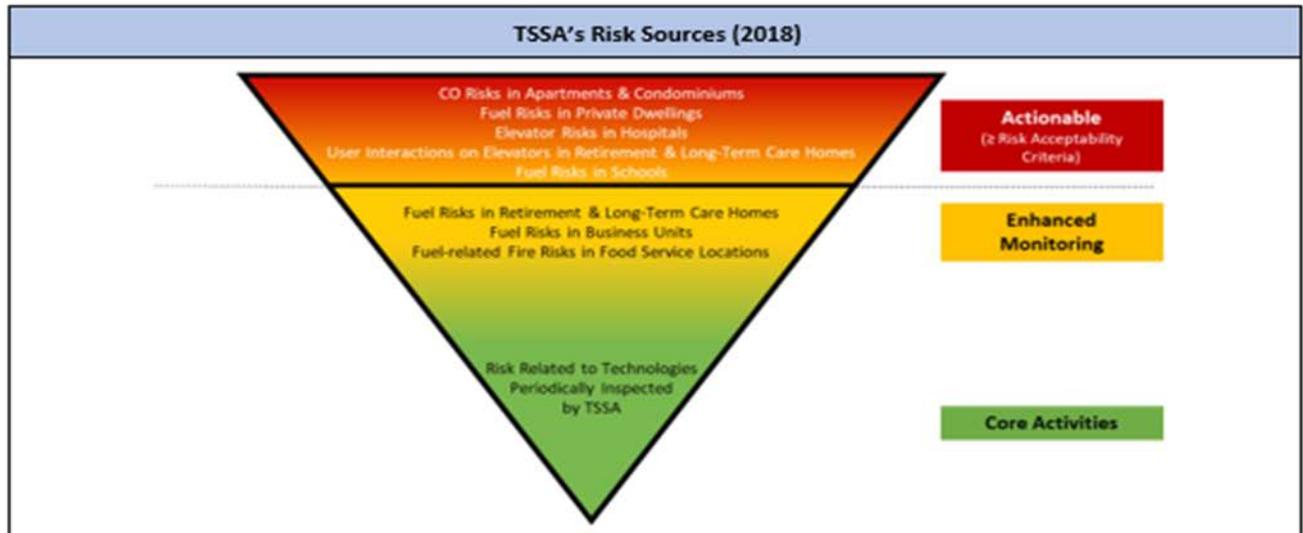
Safety Numbers ¹ (Safety at a Glance)				
Reporting Period	Incident & Near-Miss Occurrences	Non-Permanent Injuries	Permanent Injuries	Fatalities
2008 – 2019	58,863	12,665	553	60
2019	5,302	1,746	48	0

¹ In this year's ASPR, discovery of petroleum products, liquid petroleum spills, leaks and pipeline strikes have been included in these numbers.

Annex 3: State of Public Safety in Ontario – 2018 ASPR Summary

STATE OF PUBLIC SAFETY IN ONTARIO

Top Safety Issues (2018)			
Actionable Areas		Enhanced Monitoring Areas	
CO Risks in Apartments & Condominiums	5.32 FE/mpy	Fuel Risks in Retirement and Long-Term Care Homes	0.26 FE/mpy
Fuel Risks in Private Dwellings	3.73 FE/mpy	Fuel Risks in Business Units	0.73 FE/mpy
Elevator Risks in Hospitals	3.49 FE/mpy	Fuel-related Fire Risks in Food Service Locations	0.61 FE/mpy
User Interactions on Elevators in Retirement & Long-Term Care Homes	0.70 FE/mpy		
Fuel Risks in Schools	0.56 FE/mpy		



Inspection Risk Spectrum (2018)		
	Major Issues	1%
	Minor Issues	69%
	Fully Compliant	30%

Inventory Risk Profile (2018)	
High Risk	1%
Medium Risk	9%
Low Risk	89%

Compliance Rate (2014 – 2018)
32%

Health Impact		
Observed		Potential
0.46 FE/mpy (2008 – 2018) Injury Burden	0.14 FE/mpy (2018) Injury Burden	0.99 FE/mpy (2018) Risk of Injury or Fatality

Safety Numbers (Safety at a Glance)				
Reporting Period	Incident & Near-Miss Occurrences	Non-Permanent Injuries	Permanent Injuries	Fatalities
2008 – 2018	27,457	10,821	499	57
2018	2,827	1,236	35	1