

10 Fire Services



What is the Service?

The goal of Fire Services is to protect the life and property of citizens and businesses from fire and other hazards. There are three primary fire safety activities provided in communities.

Specific objectives include:

- Public education and fire prevention
- Fire safety standards and enforcement
- Emergency response

Influencing Factors:

Geography: Topography, urban/rural mix, road congestion, fire station locations and travel distances from those stations.

Fire Prevention and Education: Enforcement of the Fire Code, and the presence of working smoke alarms.

Nature and Extent of Fire Risk: The type of building construction or occupancy, i.e. apartment dwellings vs. single family homes vs. institutions such as hospitals.

Response Agreements: Depending on response agreements between Fire Services, Emergency Medical Services (EMS), and hospital protocols, responses to medical calls can be a significant activity.

Service Levels: Set by municipal councils, based on local needs and circumstances (staffing, resources, response expectations, etc.), and in accordance with the Fire Protection & Prevention Act, Section 2(1)(b).

Service Standards: The service level standard included in the OMBI measures is each municipality's 90th percentile response time standard (minutes and number of personnel) in the urban component of the municipality. These standards affect the number/locations of stations, vehicles and firefighters required.

Staffing Models: Use of full time firefighters or composite models that include both full-time and part-time or volunteer firefighters.

Additional Information:

To improve the comparability of the information in this report, separate urban and rural results have been provided where appropriate:

- **Urban areas** have been defined as those served by full-time firefighters stationed with their vehicles on a continuous basis
- **Rural areas** are defined as those served by volunteer firefighters who are engaged in other professions, but are on call to respond to emergencies as they arise

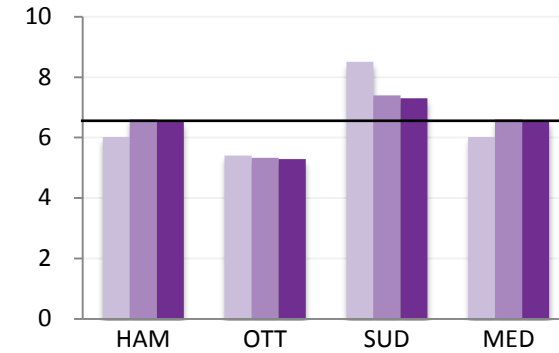
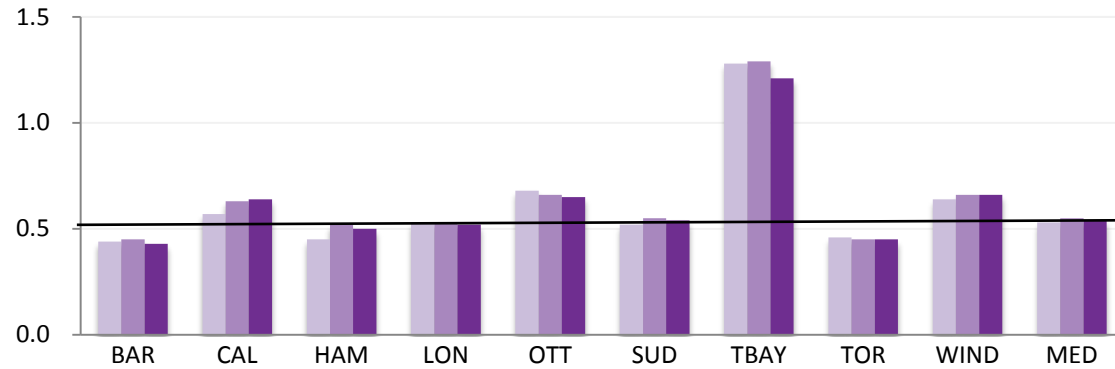
The one notable OMBI exception to this is the City of Thunder Bay, which uses full-time firefighters to serve both urban and rural areas. Where this report provides separate rural and urban data, Thunder Bay's results have been summarized entirely as "urban" to improve the comparability with other municipalities served by full-time firefighters.

The Ontario Fire Safety and Protection Model identifies three lines of defense in providing public fire protection: public education and prevention, fire safety standards and enforcement, and emergency response. Some of the more detailed OMBI measures address the rates of fire related injuries and fatalities as well as the incidence rate of residential, commercial and industrial fires, which can be significantly, influenced by public education, fire prevention, fire safety standards and enforcement activities.

Fire Services

How many hours are staffed fire vehicles available to respond to emergencies?

Fig 10.1 Number of Staffed Fire In-service Vehicle Hours per Capita (Urban and Rural)



2010	0.44	0.57	0.45	0.53	0.68	0.52	1.28	0.46	0.64	0.53	6.01	5.40	8.50	6.01
2011	0.45	0.63	0.52	0.53	0.66	0.55	1.29	0.45	0.66	0.55	6.60	5.32	7.39	6.60
2012	0.43	0.64	0.50	0.52	0.65	0.54	1.21	0.45	0.66	0.54	6.55	5.28	7.30	6.55

Source: FIRE230-Urban, FIRE232-Rural (Community Impact)

Comment: Rural areas tend to have higher vehicle hours because a proportionately greater number of vehicles are necessary to adequately cover broader geographic service areas with an acceptable response time. Rural areas typically do not have fire hydrants, necessitating the use of water tanker vehicles that are not required in urban areas.

How many injuries and fatalities resulted from residential fires?

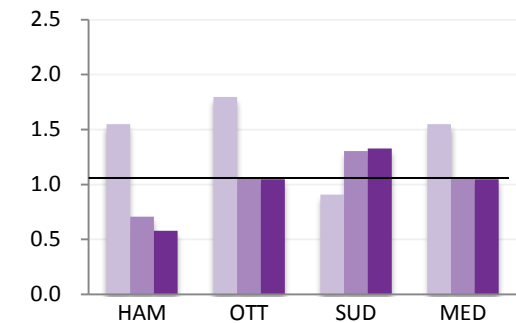
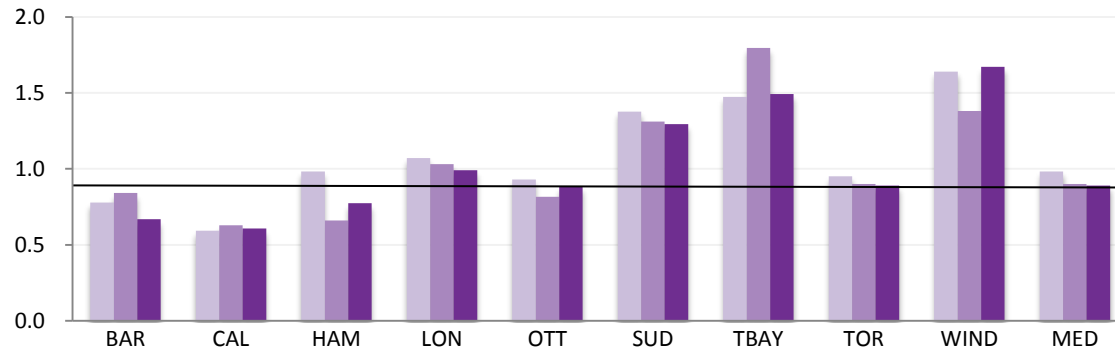
Fig 10.2 Residential Fire Related Injuries and Fatalities per 100,000 Population (Urban and Rural)

Municipality	Residential Fire Related Injuries per 100,000 Population (Urban and Rural) (FIRE105)			Residential Fire Related Fatalities per 100,000 Population (Urban and Rural) (FIRE110)		
	2010	2011	2012	2010	2011	2012
Barrie	4.26	4.26	4.90	0.71	0.71	0.70
Calgary	2.61	1.74	1.79	0.19	0.18	0.27
Hamilton	7.76	6.97	7.85	0.76	0.19	0.19
London	6.57	10.10	6.49	0.82	0.00	0.27
Ottawa	2.83	2.80	3.32	0.11	0.43	0.21
Greater Sudbury	5.66	4.37	4.94	0.63	0.62	0.62
Thunder Bay	9.17	11.99	5.54	0.00	1.85	2.77
Toronto	1.98	2.90	4.59	0.58	0.61	0.39
Windsor	9.70	16.12	13.28	0.46	1.90	0.95
Median	5.66	4.37	4.94	0.58	0.61	0.39

Source: FIRE105, FIRE110 (Community Impact)

How many fires resulted in property loss?

Fig 10.3 Number of Residential Structural Fires with Losses per 1,000 Households (Urban and Rural)



2010	0.780	0.594	0.984	1.073	0.932	1.378	1.475	0.953	1.640	0.984	1.548	1.796	0.909	1.548
2011	0.843	0.630	0.661	1.033	0.818	1.312	1.797	0.901	1.381	0.901	0.707	1.057	1.306	1.057
2012	0.670	0.608	0.776	0.993	0.884	1.296	1.493	0.891	1.673	0.891	0.579	1.047	1.329	1.047

Source: FIRE116–Urban, FIRE117–Rural (Community Impact)

How long does it take to respond to an emergency call from the time the station is notified to arrival on scene?

Fig 10.4 Actual 90th Percentile Fire Station Notification Response Time (mins:sec) (Urban and Rural)

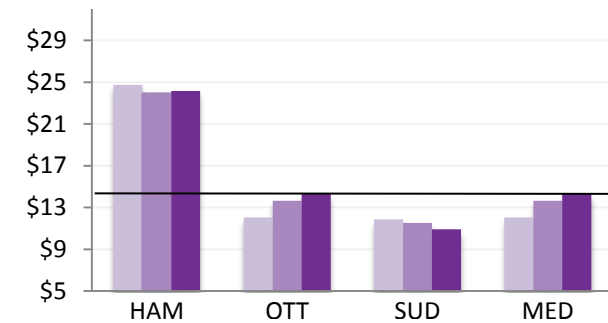
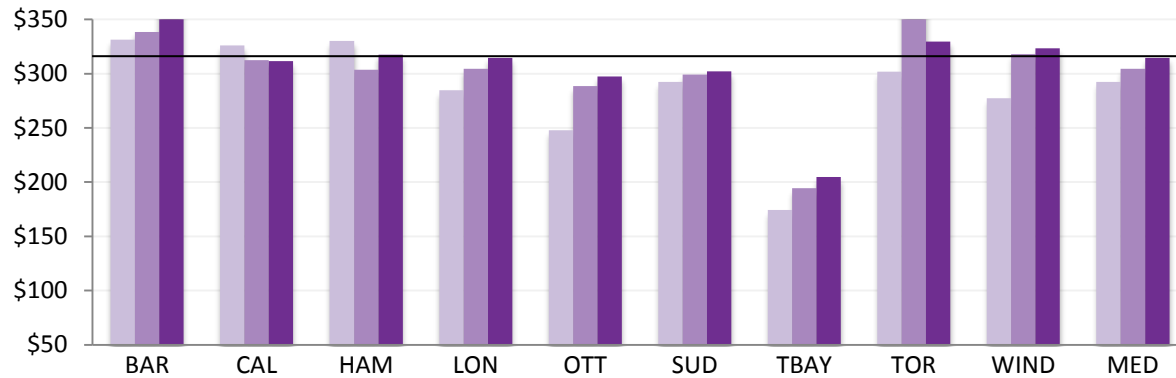
Municipality	Station Notification Response Time 90th Percentile (min:sec) (Urban Area) (FIRE405)			Station Notification Response Time 90th Percentile (min:sec) (Rural Area) (FIRE406)		
	2010	2011	2012	2010	2011	2012
Barrie	08:54	08:54	08:25			
Calgary	07:36	07:15	07:14			
Hamilton	06:25	06:56	06:36	12:36	12:57	12:57
London	06:13	06:13	N/A			
Ottawa	06:52	07:00	06:39	13:18	14:39	14:48
Greater Sudbury	09:29	09:11	09:20	17:55	17:23	19:30
Thunder Bay	06:24	06:32	06:27			
Toronto	06:42	06:47	06:31			
Windsor	06:36	06:29	06:31			
Median	06:42	06:56	06:37	13:18	14:39	14:48

Source: FIRE405, FIRE406 (Customer Service)

Comment: Hamilton, Ottawa and Greater Sudbury are the only municipalities with both Urban and Rural components. London is currently implementing a new Business Intelligence program and at the time of this report, 2012 response time data was not available.

What is the total cost per hour to have a front-line fire vehicle available in the urban and rural areas?

Fig 10.5 OMBI Total Fire Cost per In-Service Vehicle Hour (Urban and Rural) (includes amortization)



2010	\$331	\$326	\$330	\$285	\$248	\$293	\$175	\$302	\$278	\$293	\$24.76	\$12.05	\$11.87	\$12.05
2011	\$339	\$313	\$304	\$305	\$289	\$299	\$195	\$367	\$318	\$305	\$23.94	\$13.65	\$11.54	\$13.65
2012	\$402	\$312	\$318	\$315	\$298	\$302	\$205	\$330	\$324	\$315	\$24.16	\$14.31	\$10.93	\$14.31

Source: FIRE305T-Urban, FIRE304T-Rural (Efficiency)

Comment: In order to respond to emergencies, each municipality has a different mix of vehicle types and staffing modes, reflecting its fire and community risks. The cost per vehicle hour for rural areas served by volunteer firefighters tend to be much lower than urban areas served by full-time firefighters because volunteer firefighters are paid only for the hours in which they are actively responding to emergencies.