

# 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:

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

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

**Nature and Extent of Fire Risk:** Type of building construction or occupancy, e.g. 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:

**Urban areas** is defined as those served by full-time firefighters stationed with their vehicles on a continuous basis

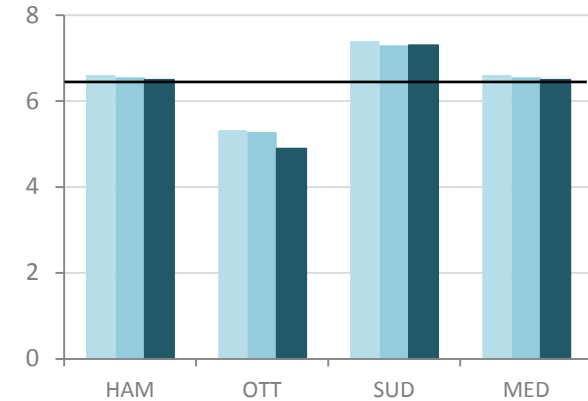
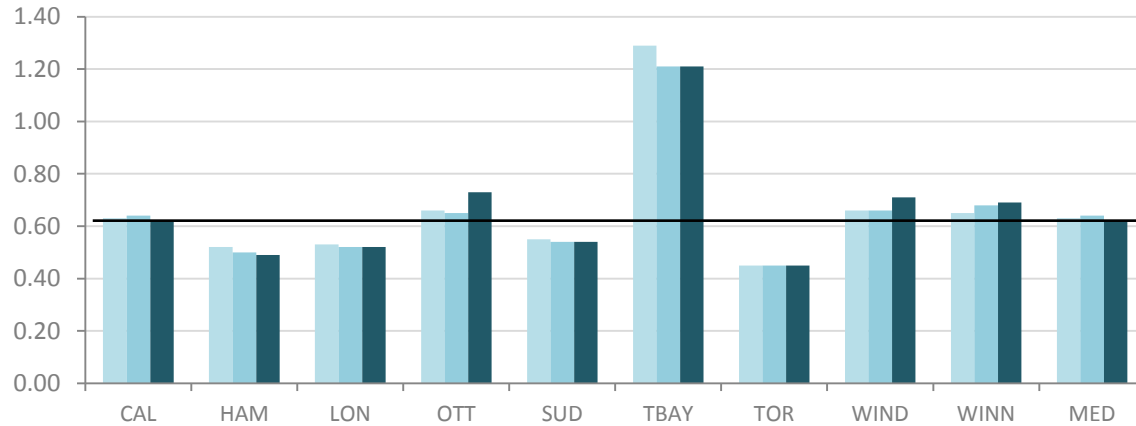
**Rural areas** is defined as those served by volunteer firefighters who are engaged in other professions, but are on call to respond to emergencies as they arise

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

# 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)



<b>2011</b>	<b>0.63</b>	<b>0.52</b>	<b>0.53</b>	<b>0.66</b>	<b>0.55</b>	<b>1.29</b>	<b>0.45</b>	<b>0.66</b>	<b>0.65</b>	<b>0.63</b>	<b>6.6</b>	<b>5.32</b>	<b>7.39</b>	<b>6.6</b>
<b>2012</b>	<b>0.64</b>	<b>0.50</b>	<b>0.52</b>	<b>0.65</b>	<b>0.54</b>	<b>1.21</b>	<b>0.45</b>	<b>0.66</b>	<b>0.68</b>	<b>0.64</b>	<b>6.55</b>	<b>5.28</b>	<b>7.3</b>	<b>6.55</b>
<b>2013</b>	<b>0.62</b>	<b>0.49</b>	<b>0.52</b>	<b>0.73</b>	<b>0.54</b>	<b>1.21</b>	<b>0.45</b>	<b>0.71</b>	<b>0.69</b>	<b>0.62</b>	<b>6.49</b>	<b>4.89</b>	<b>7.3</b>	<b>6.49</b>

Source: FIRE230 – Urban; FIRE232 – Rural (Service Level)

Note: 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?

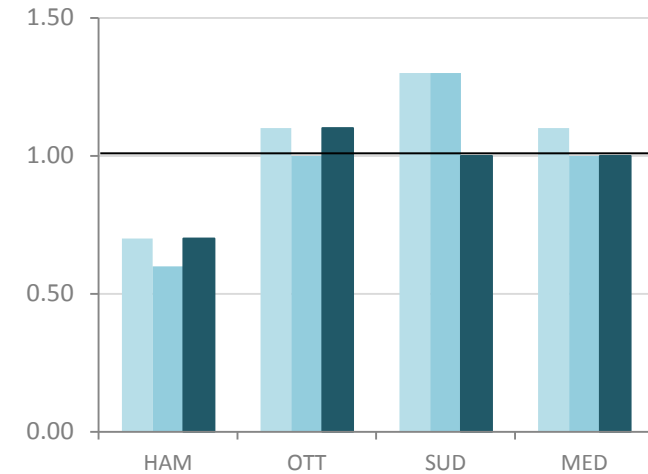
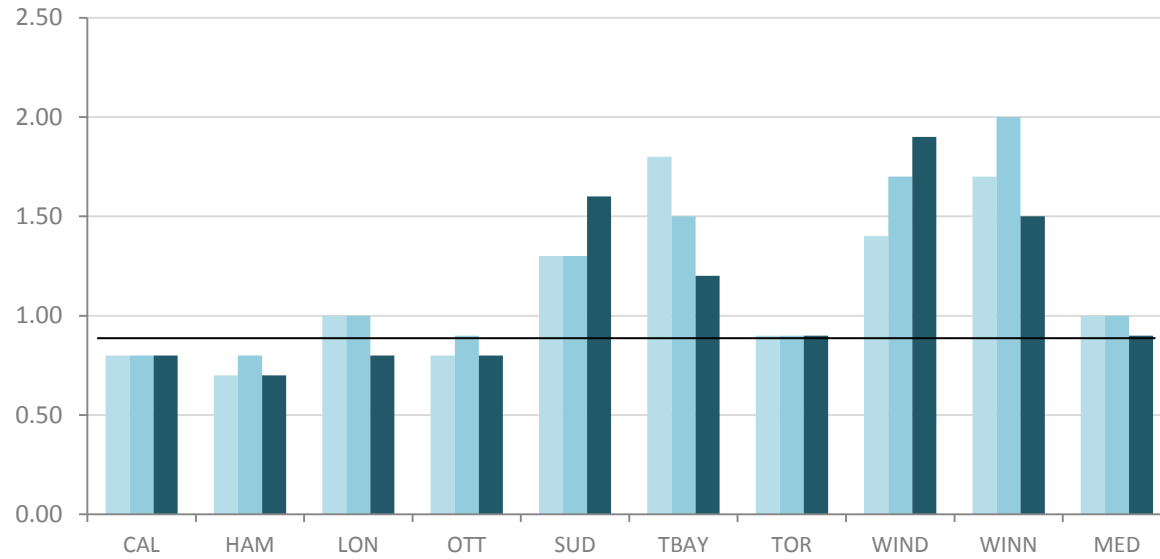
Fig 10.2 Residential Fire Related Injuries and Fatalities per 100,000 Population (Entire Municipality)

Municipality	Residential Fire Related Injuries per 100,000 Population (Entire Municipality) FIRE105			Residential Fire Related Fatalities per 100,000 Population (Entire Municipality) FIRE110		
	2011	2012	2013	2011	2012	2013
Calgary	1.74	1.79	0.78	0.18	0.27	0.43
Hamilton	6.97	7.85	7.22	0.19	0.19	0.19
London	10.10	6.49	6.96	0.00	0.27	0.54
Ottawa	2.80	3.32	2.44	0.43	0.21	0.32
Sudbury (Greater)	4.37	4.94	3.71	0.62	0.62	0.62
Thunder Bay	11.99	5.54	3.69	1.85	2.77	0.00
Toronto	2.99	4.67	4.00	0.63	0.40	0.40
Windsor	16.12	13.28	21.81	1.90	0.95	0.95
Winnipeg	21.25	22.49	13.30	0.89	1.02	0.72
Median	6.97	5.54	4.00	0.62	0.40	0.43

Source: FIRE105; FIRE110 (Community Impact)

## How many fires resulted in property loss?

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



<b>2011</b>	<b>0.8</b>	<b>0.7</b>	<b>1.0</b>	<b>0.8</b>	<b>1.3</b>	<b>1.8</b>	<b>0.9</b>	<b>1.4</b>	<b>1.7</b>	<b>1.0</b>	<b>0.7</b>	<b>1.1</b>	<b>1.3</b>	<b>1.1</b>
<b>2012</b>	<b>0.8</b>	<b>0.8</b>	<b>1.0</b>	<b>0.9</b>	<b>1.3</b>	<b>1.5</b>	<b>0.9</b>	<b>1.7</b>	<b>2.0</b>	<b>1.0</b>	<b>0.6</b>	<b>1.0</b>	<b>1.3</b>	<b>1.0</b>
<b>2013</b>	<b>0.8</b>	<b>0.7</b>	<b>0.8</b>	<b>0.8</b>	<b>1.6</b>	<b>1.2</b>	<b>0.9</b>	<b>1.9</b>	<b>1.5</b>	<b>0.9</b>	<b>0.7</b>	<b>1.1</b>	<b>1.0</b>	<b>1.0</b>

Source: FIRE116 – Urban; FIRE 117 - 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 (min:sec) (Urban and Rural)

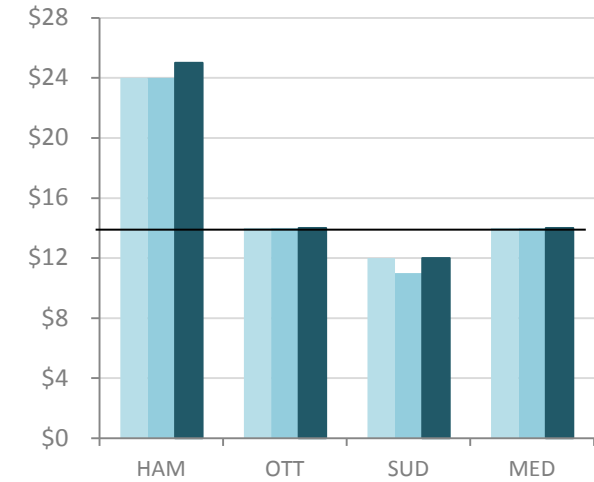
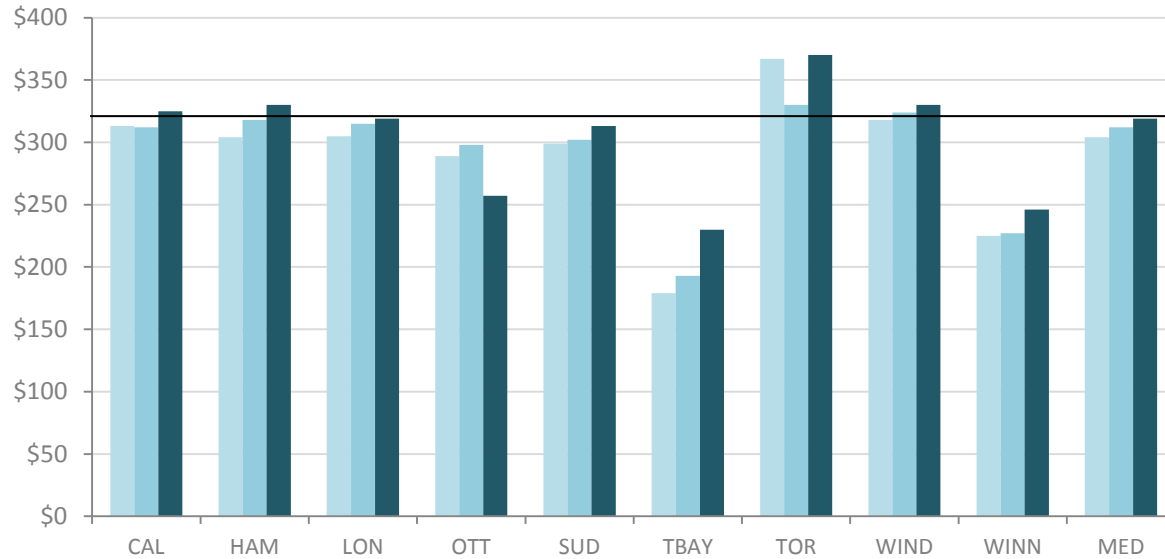
Municipality	Station Notification Response Time 90th Percentile (min:sec) Urban (FIRE405)			Station Notification Response Time 90th Percentile (min:sec) Rural (FIRE406)		
	2011	2012	2013	2011	2012	2013
CAL	07:15	07:14	07:08			
HAM	06:56	06:36	06:45	12:57	12:57	13:20
LON	06:13	06:07	06:05			
OTT	07:00	06:39	06:50	14:39	14:48	13:59
SUD		06:29	06:57	17:23	19:30	16:41
TBAY	06:32	06:27	06:40			
TOR	06:47	06:31	06:44			
WIND	06:29	06:31	06:58			
WINN	06:49	06:47	06:49			
MED	06:48	06:31	06:49	14:39	14:48	13:59

Source: FIRE405 – Urban; FIRE406 - Rural (Customer Service)

Comment: Hamilton, Ottawa and Greater Sudbury are the only municipalities with both Urban and Rural components. In order to respond to emergencies, each municipality has a different mix of vehicle types and staffing modes, reflecting its fire and community risks.

## 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)



<b>2011</b>	<b>\$313</b>	<b>\$304</b>	<b>\$305</b>	<b>\$289</b>	<b>\$299</b>	<b>\$179</b>	<b>\$367</b>	<b>\$318</b>	<b>\$225</b>	<b>\$304</b>	<b>\$24</b>	<b>\$14</b>	<b>\$12</b>	<b>\$14</b>
<b>2012</b>	<b>\$312</b>	<b>\$318</b>	<b>\$315</b>	<b>\$298</b>	<b>\$302</b>	<b>\$193</b>	<b>\$330</b>	<b>\$324</b>	<b>\$227</b>	<b>\$312</b>	<b>\$24</b>	<b>\$14</b>	<b>\$11</b>	<b>\$14</b>
<b>2013</b>	<b>\$325</b>	<b>\$330</b>	<b>\$319</b>	<b>\$257</b>	<b>\$313</b>	<b>\$230</b>	<b>\$370</b>	<b>\$330</b>	<b>\$246</b>	<b>\$319</b>	<b>\$25</b>	<b>\$14</b>	<b>\$12</b>	<b>\$14</b>

Source: FIRE 305T – Urban;, FIRE304T - Rural (Efficiency)

Note: 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.