

Volume 13, Issue 1

March/April 2004

The ONTARIO FIRE SERVICE MESSENGER

a publication of the Office of the Fire Marshal

Ontario Fire College Expansion

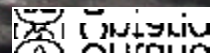
Making Room for Interagency Training

Alcohol-related Fire Fatalities

How Much of a Role Does Alcohol Play?

Artificial Smoke

Is it bad for you?



Ministry of Community Safety
and Correctional Services

Ministère de la Sécurité communautaire
et des Services correctionnels

The Ontario Fire Service Messenger

**Published in the interest of fire
protection and fire prevention
in Ontario.**

Comments, suggestions, questions
and articles are welcome. Please
send them to the attention of:

Chris Slosser, Editor
Office of the Fire Marshal
5775 Yonge Street, 7th Floor
Toronto, Ontario M2M 4J1
Tel: 416-325-3120
Fax: 416-325-3162
chris.slosser@jus.gov.on.ca

Unless otherwise indicated, the
opinions expressed in any material
published herein are those of the
authors and do not necessarily
represent the official policy of the Of-
fice of the Fire Marshal.

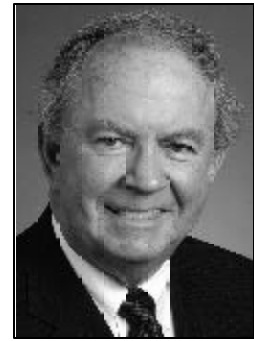
The reproduction of original arti-
cles appearing in this publication
is permitted and encouraged, how-
ever permission to reproduce ma-
terial for commercial purposes
must be obtained from the Office
of the Fire Marshal. Permission to
use articles reprinted from other
sources must be obtained from the
original source.

ISSN 1188-7524

Thank you to everyone who
contributed to this issue, parti-
cularly Bev Gilbert, Janice
Johnstone, Beth Tate, Robert
Harpur, Alison Wilson, Rose
Barg, Karen Bauman, Leslie
Kennedy, Donald Donaldson,
Kevin Foster, Sharon Corston,
Debbie MacLean, Mike Scarland
and Larry Williams. Cover photo
courtesy of the Ontario Fire
College.

Sparky®, *Learn Not to Burn®*
and *Risk Watch®* are registered
trademarks of the National Fire
Protection Association, Quincy,
MA 02269, U.S.A. Used with
permission.

The Hon. Monte Kwinter, Minister of Community Safety and Correctional Services



It was a great honour when Premier Dalton McGuinty appointed me to the post of Minister of Community Safety and Correctional Services last October, and I am pleased to have been asked to contribute to this issue of the Ontario Fire Marshal's *Messenger* magazine.

Many of you will know that my government experience has been largely in the economic portfolios, including serving as Minister of the former Ministry of Consumer and Commercial Relations (now Consumer and Business Services), the Ministry of Financial Institutions, and the Ministry of Industry, Trade and Technology. Coming from such a background, it was – and is – exciting to be responsible for a ministry devoted to protecting Ontario's physical safety and economic security.

Since my appointment, I've visited the Ontario Fire College in Gravenhurst and have had many other opportunities to meet representatives of the Ontario fire service. I've been impressed, but not surprised, by your commitment to public service and professional excellence. Firefighters are ready to risk their lives every day for their fellow citizens, and I look forward to participating in ceremonies such as the Ontario Medal for Firefighter Bravery, when we express our thanks in a tangible way.

As firefighters, you contribute to your communities in so many ways. Fighting fires and responding to medical and other emergencies are the most obvious, but inspecting buildings for fire hazards, educating the public about smoke alarms and escape plans, and participating in local activities that bring people closer together are all aspects that improve the quality of life in your communities.

One of the newer challenges facing the fire service is posed by the threat of terrorist attacks. The Office of the Fire Marshal played a leadership role in developing Ontario's ability to respond to chemical, biological, radiological and nuclear incidents, and in promoting heavy urban search and rescue capabilities. While these initiatives were prompted by terrorist attacks in the United States, they have also heightened our ability to deal with a wider range of emergencies, whether caused by nature or human beings.

Our government is committed to strengthening the communities in which we live and to providing Ontarians with a quality of life second to none. One of our key priorities is to ensure we have safe, clean, livable communities, because the strength of Ontario depends on the strength of our cities and rural communities. We understand that Ontario residents want cleaner air and water, safer communities, and cities and towns that work for the people who live in them.

I look forward to continuing to work with the men and women of the Ontario fire service. Many of the issues we face are difficult, especially in a time of strained financial resources. However, I'm confident that by presenting our respective points of view clearly and openly, we will be able to work towards the sorts of solutions that will contribute to our common goal of real, positive change that will make a difference in every Ontarian's quality of life.

The Ontario Fire Service Messenger

March/April 2004

www.ofm.gov.on.ca

Volume 13, Issue 1

Update Ontario News from around the province	2
'Spring into Summer' campaign Cottage, outdoor and BBQ safety	5
Q&A: Smoke alarms	6
Shaking off the winter rust MNR Fire Simulations	7
Ontario Fire Watch—Statistics	8
Alcohol Use and Fire Fatalities How much of a role does alcohol play?	9
Firefighter leaves 'the best of gifts' Bequest given to burn victims at hospital	12
OFM News Update	13
Education & Training	14
Lessons from fires around the world	16
Wildfire Prevention Week April 18-24	17
Tasty turkey at a cost Turkey fryers present hazard	18
InDetail The dangers of metal halide lamps	19
Fire Service Calendar 2004	21
Firefighters' Memorial	21
Can-Am Police-Fire Games London hosts this year's event	Back Page

Cover Story:

Expansion of the Ontario Fire College

Two new additions to the Ontario Fire College in Gravenhurst are expected to result in coordinated training for fire, police and health care service providers.

Story on page 6



Artificial smoke passes the health test

The artificial smoke used in fire simulations for training or demonstration purposes is considered safe for humans, though some precautions need to be taken by those who are using it.

Story on page 11



New training facility opens in Sudbury

Alertech, a new training facility in Sudbury that will provide training to all emergency responders in the area, is the result of a multi-sector collaboration involving the City of Sudbury, Cambrian College and Falconbridge Ltd.

Story on page 13





Update ONTARIO

News from around the province

Search and rescue team is ready for anything

BY GORD YOUNG

A provincial team trained to deal with large-scale disasters could be deployed in Northern Ontario if needed, law enforcement and emergency personnel were told during a recent meeting.

"We are a specialized resource if you need us," said Capt. Alan Thomas, of the Toronto Fire Services, during a presentation at North Bay Police Service headquarters.

Thomas, a member of Ontario's Heavy Urban Search and Rescue unit (HUSAR), delivered his presentation about the team to about 30 people, including city police officers, Ontario Provincial Police, paramedics and firefighters.

Assembled following the Sept. 11, 2001, terrorist attacks in the U.S., Thomas said the team isn't just available in southern Ontario.

Although some of the team is still being assembled, he said, the 65 members include police officers, firefighters, paramedics, dispatchers, technicians and public works employees — each with particular

expertise.

The team uses such equipment as cranes and heavy machinery, sensors that can measure underground acoustic noise, dogs to help locate victims buried beneath rubble and specialized cameras.

DISASTER RESPONSE

Thomas said the team can be deployed to help at disasters in communities throughout Canada. Similar units exist in Vancouver and Calgary.

Although it wasn't required for rescue efforts, the team most recently responded to the collapse of the Uptown Movie Theatre in Toronto a few months ago. One man died and 14 people were injured when demolition work triggered a cave-in.

Thomas said the team led in the search for human remains last April following a gas explosion at a mall, which killed seven people.

This article originally appeared in The Sudbury Star. Reprinted with permission from the North Bay Nugget.

Conferences set for 2004

Two conferences related to public education and fire prevention are being held this year.

The first, entitled "Times they are a-changin', Injury Prevention Solutions" will be held on April 29 and 30 in Fort Frances. For more information, contact Deputy Fire Chief Ken Peterson, Kenora Fire & Emergency Services by phone at 807-467-2090.

The Renfrew County Mutual Aid Fire Service Association will host this year's Fire and Life Safety Educators' Conference entitled "Naturally Wonderful." The conference will take place November 3, 4 and 5 in Pembroke. For more information, contact the Association by phone at 613-754-5221.

Thank you for all your submissions

Thank you to all those who submitted information and/or photographs since the last issue of The Messenger in September/October 2003.

We received many submissions but were unable to print them all. We apologize if we were not able to print your story. Please continue to send us your news. We look forward to hearing about all the goings-on across the province.

The Messenger needs your news

If you have an item you would like to see published in Update Ontario, please send it to: The Editor, The Ontario Fire Service Messenger, Office of the Fire Marshal, Place Nouveau Building,

5775 Yonge Street, 7th Floor, Toronto, Ontario M2M 4J1. Tel: 416-325-3120, Fax: 416-325-3162 or email chris.slosser@jus.gov.on.ca.

No cost for help from the TSSA

The OFM has received inquiries about whether fire departments are responsible for costs associated with requesting the assistance of the Technical Standards and Safety Authority (TSSA) at emergencies or other events.

According to Mike Scarland, Manager of Operations, Fuels and Safety Division at the TSSA, fire departments are not responsible for paying when they request TSSA assistance.

"We work with fire personnel as partners in ensuring public safety," Scarland wrote in an email to the OFM. "In circumstances where we attribute a fire cause to be related to a specific issue, we may invoice our investigation time to the owner of the equipment, the owner of the home, the person who caused the fire, etc.," Scarland continued.

"However, in no cases would we ever invoice the fire personnel contacting us to have us assist in an investigation, regardless of whether or not the OFM is involved."

According to Scarland, far too often the TSSA hears about problems after a site has been turned over to the insurance reps, when evidence continuity is gone. "Most fire personnel are simply unaware we exist and that we can assist each other."

TSSA fuels inspectors are Provincial Offences Officers who have extensive private industry fuels backgrounds.

Their expertise, combined with the expertise of fire personnel, make for a solid team in determining the root causes of fires. TSSA can be reached 24 hours a day, 365 days a year for incidents by contacting the Spills Action Centre at 1-800-268-6060. Technical inquiries can be made on fuels subjects at 1-877-682-8772.

Three municipalities achieve compliance

Three more municipalities have achieved compliance with the minimum acceptable model of the Fire Protection and Prevention Act with respect to public education and prevention services.

The Town of Bruce Mines', located along the north shore of Lake Huron, new Fire Chief, Maxwell Loughren, and new officers have made a commitment to public fire safety education and fire prevention in the community in adopting the educational approach and outlook of the operations of the fire department.

The Town of Gananoque, located east of Kingston, received its certificate of compliance on October 21, 2003.

The Township of Gillies, located west of Thunder Bay, has developed a fire protection and prevention program that includes distribution of literature and batteries for smoke alarms to 250 homes and businesses.

Town of Bruce Mines



Back: Larry Brunke, Pat Lannigan, Lawrence Andrews, Bob Thorpe, Howie Bowes, Maxwell Loughran. **Front:** Donna Brunke, Stacey Bennett, Jean Kettles, Ed Golec, Gord Post.

Town of Gananoque



Back: Councillor Greg Dobbie, Fire Fighters Association President Mike Prior, Fire Chief Gerry Bennett, FPO Dave Balderson, Deputy Mayor Grover Clair and Councillor Roger Gipson. **Front:** Councillor Frank O'Hearn, Mayor Sylvia Thomas, Office of the Fire Marshal Adviser Peter O'Hare and Councillor Cheryl Prichard.

Gillies Township



Gillies Reeve Rudy Buitenhuys, centre, holds the certificate of compliance presented by the Office of the Fire Marshal's fire protection advisor Aime Spencer, right. Gillies Emergency Fire Chief Scott Hole joins them.
(Photo by Linda Turk)

Lending helping hand to Habitat

BY JANIS LEERING

Firefighters in Midland have a sense of relief and altruism after



Midland Firefighter Ken Corriveau installs a new smoke alarm into a Habitat for Humanity home built by local volunteers in the community. The new homeowners, Victoria Wilkes and her son George, look on.

installing fire protection equipment in a home for a low-income family.

The new homeowner of a Habitat for Humanity house in Midland is prepared for the possibility of a fire, thanks to the Midland Fire Department and the help of the Midland Professional Firefighters Association.

A new smoke alarm and fire extinguisher were installed into the home.

"We put up the smoke alarm in the hallway, just outside the bedrooms," said Ken Corriveau, Midland firefighter.

As fire professionals know, if the smoke alarm is installed near the kitchen or bathroom there tends to be nuisance alarms that will react to the oven or shower.

"This is no good," Corriveau continued, "because the homeowner will then pull out the batteries and the smoke alarm won't work in case of a real fire."

He said the local firefighters'

association has made a commitment to put the safety equipment in all future Habitat for Humanity homes in the North Simcoe area, which includes Midland, Penetanguishene, Tiny and Tay Townships.

By putting in the safety equipment, and educating the homeowners, it gives both the firefighters and homeowners peace of mind.

"There should be one smoke alarm on every level of the house and it shouldn't be installed too close to a wall because of the way smoke circulates."

Normally, the homes will also have a carbon monoxide alarm but since this Habitat for Humanity home is warmed with electric heat and has only electric appliances, the chance of having harmful carbon monoxide in the home is very minimal.

Corriveau reminded the new homeowners, Victoria Wilkes and her son George, to change the batteries when they change the clocks for Daylight Savings Time.

Janis Leering is a reporter with The Mirror newspaper in Midland. To find your local Habitat for Humanity affiliate, visit www.habitat.org.

Award nominations due

Nominations for the 2004 Fire Marshal's Public Fire Safety Council's Fire Safety Awards are due April 22, 2004.

We are looking for individuals or organizations that have made an exceptional contribution to bring the fire safety message to the community. Nomination forms were sent to fire departments in February. Return them to Gina Pontikas at the OFM. Fire service personnel are not eligible to receive awards and nominators must be members of a fire department.

This year's awards are sponsored by the Pyrene Corporation, Angus Fire and Kidde Safety Canada. The awards ceremony will be held on June 17 at the Royal York Hotel in Toronto.

Chalk River gets new station

On October 4, 2003, the Town of Laurentian Hills opened a new fire station in Chalk River. Pictured are, (left to right) Fire Chief Kevin Waito, Deputy Fire Marshal Doug Crawford and Mayor Paul Curtis, cutting the ribbon.

Members of the new department also received their certificate of compliance for meeting the minimum acceptable model of the Fire



Protection and Prevention Act. The new station will be shared with a crew of Renfrew County paramedics to improve emergency response in the community.

Fire chiefs snuff out candle fires

Fire chiefs from across the Greater Toronto Area converged on Toronto's Harbourfront Fire Station on December 11, 2003, for a news conference introducing a public awareness campaign designed to snuff out deadly candle fires.

The news conference launched the release of a new television public service announcement, "Meant to Come Back," produced by the OFM, the Fire Marshal's Public Fire Safety Council and SmartRisk.

"Fires caused by candles are on the rise across Ontario," Fire Marshal Bernard Moyle said at the event. "While we're seeing a gradual decrease in virtually every other type of fire, candle fires are a growing problem."

Joining the Fire Marshal at the event were the Honourable Monte Kwinter, Minister of Community Safety and Correctional Services and fire chiefs from across the GTA, including Toronto Chief Bill Stewart.

From 1995 to 2001, candle fires in Ontario increased by 47%. Over that period, there were 2,004 reported candle fires, resulting in 315 injuries and 22 fatalities. By comparison, during the same time frame, fires caused by cooking decreased by 41%.

"The number one cause of candle fires is leaving candles unattended," said the Fire Marshal. "Candles should always be snuffed out before leaving a room or going to bed. They should also be left out of the reach of children and pets, and away from anything that can burn."

"It saddens me to know that people in Ontario are dying in fires caused by the misuse of candles," Mr. Kwinter said. "But I'm very proud that our fire services are doing everything they can to prevent these unnecessary tragedies."

Ontario television stations received a copy of the public service announcement, while radio stations received an audio version on CD. Scripts for the radio PSAs are available on the Fire Marshal's Public Fire Safety Council's web site at www.firesafety-council.com/english/pubsafet/psaart.htm.

40 years of service



On Nov. 17, 2003, Fire Marshal Bernard Moyle received his 40 Year Long Service Bar. Above, pictured with Mr. Moyle are (from left) his son, Firefighter and Acting Captain with the Toronto Fire Service, Steven Moyle, the Honourable Monte Kwinter, Minister of Community Safety and Correctional Services, Mr. Moyle's wife, Karen Booth Moyle and Deputy Fire Marshal Doug Crawford.

'Spring into Summer' campaign launches

The Fire Marshal's Public Fire Safety Council's "Spring into Summer...Spring into Safety" campaign will launch on April 19. The campaign will focus on cottage, outdoor and camping safety, and the safe use of barbecues and fuel.

To assist fire departments and school teachers take an active role in the campaign, the Council has developed several materials and tools, including: a special insert for a magazine distributed to 94,000 teachers in Ontario, safety lesson plans, a spring fire safety kit and a variety of resources available at www.safecommunities.com/teachers.

Sponsors for the campaign include: the Canadian Standards Association, Canadian Tire Corporation, Direct Energy, Energizer Canada, Kidde Safety, State Farm Insurance, the Technical Standards and Safety Authority and the National Fire and Life Safety Foundation.

For more information, contact Anne Miller at 416-325-3152 or visit www.safecommunities.com.

Hydrant colour codes mislabeled

An article in the September/October 2003 issue of The Ontario Fire Service Messenger about Niagara Falls' colour coding of fire hydrants included incorrect information.

The Fire Code's hydrant colour code lets firefighters know what the water flow out of a hydrant is.

An orange hydrant cap indicates 1,900–3,789 litres (500–999 gallons)

of water per minute.

A green cap indicates 3,785–5,675 litres (1,000–1,499 gallons) per minute.

We apologize for any confusion.

Additions to Fire College expected to improve training

Two additions to the Ontario Fire College are expected to improve interagency training for emergency response, according to officials at the college. An 836 square metre addition to the technology building, and a new fire station that is about 929 square metres, will allow fire, police and health care service providers to train together and better coordinate responses to emergencies.

"After the events of September 11, 2001, we saw the need to improve our capacity to respond to emergencies in Ontario," said Ed Godden, Academic Manager at the Fire College. Key to this improved capacity, Godden continued, is the ability to train with other emergency response providers so that any future disasters can be met with coordinated, effective action.

"In order to do this, we needed more space," Godden said. The renovation of the old fire station will serve as an auditorium seating up to 150 people. It will allow members of the fire, police and health care

services to come together to participate in joint training programs. The auditorium can be divided by a folding wall to produce two smaller classrooms that will be used for training on a daily basis.

The addition to the technology building is a resource centre with a collection of resources related to major disasters – including chemical, biological, radiological and nuclear – and emergency responses to them.

The new fire station is located east of the main campus.

The new station includes a room for communications training that will allow communications teams from up to three different agencies to train together.

"The new additions to the college will allow us to better partner with community agencies," Godden said, "which will only improve the way we all respond to emergencies."

Construction, which began in the fall of 2003, is expected to be completed this spring. The additions will cost \$3 million.



The addition to the technology building is a resource centre with a collection of resources related to major disasters and emergency responses to them.

(Photo courtesy of the Ontario Fire College)

Questions & Answers: Smoke Alarms

- Q.1** What is the estimated percentage of households in Canada with smoke alarms?
- Q.2** In residential fires in Ontario:
- what percentage of residences had no alarm?
 - what percentage had an alarm that didn't operate?
- Q.3** Of those with an alarm that didn't operate, what percentage had a power failure or weren't connected?
- Q.4** Of those where the power failed or they weren't connected:
- what percentage had no battery?
 - what percentage had a dead battery?
- Q.5** In preventable, fatal, residential fires between 1995 and 2002:
- what percentage of smoke alarms worked?
 - of those smoke alarms that didn't work in these settings, what percentage had no battery or power?

Answers on page 21

Shaking off the winter rust

Simulations provide 'tremendous benefit to teaming up'

As temperatures begin to rise and spring turns to summer, people in northwestern Ontario once again have to prepare for the coming possibility of forest fires.

To help with this preparation, the Ontario Ministry of Natural Resources (MNR) carries out forest fire simulations as an important part of forest firefighting training.

"At the start of the year, you're a little rusty," Forest Fire Management Technician Dan Coulson said, "but the idea is that you can do a couple of these simulations and get through that."

According to Coulson, Fire Ranger crew leaders take part in refresher simulations as part of their annual training program.

Each fire simulation, designed by a team of fire suppression specialists from across Ontario, is done using computers, radios and video equipment. A handful of firefighters act out scripts to make the scene realistic.

Simulations have become a vital part of training since they were introduced in 1993 and Coulson said the MNR is finding more uses for simulation technology. He expects that in the future multi-agency simulations will be common.

Last summer, members of the MNR Pickle Lake forest fire attack base invited Pickle Lake Fire Chief Eric Dalzell to participate in a forest fire simulation. It was the first time a municipal fire chief took part in an MNR simulation in Sioux Lookout District, and it was part of an MNR initiative to familiarize other agencies with how the ministry



Firefighters and MNR Fire Ranger crews worked together in this simulation, conducted last summer, to practice coordinating their responses to future fire emergencies.
(Photo courtesy of the MNR)

fight fires.

"The aim of the simulation was to essentially help the crew leaders in making decisions on the fire as they approach by helicopter," Dalzell said. "But it turned into a very good tool for myself to learn more about how the MNR operates."

The realism of the simulation impressed Dalzell. "It's a really neat tool," he said. "This kind of stuff is way above the old traditional scenario written on a piece of paper."

Dalzell hopes to participate in more simulations with the MNR and said that fire departments and Ranger crews across the province need to train together more often.

"There's a tremendous benefit to teaming up," Dalzell said. "I know that a lot of departments have just started getting involved with the MNR. I think it's long overdue. I think it should almost be mandatory in the northwest."

Dalzell is speaking from first-hand experience. In 2002, high winds fanned a small bush fire near Pickle Lake, causing the dry forest to burst into a massive wildfire. In only minutes, flames threatened the nearby town of Central Patricia.

On one side of town, local MNR Fire Ranger crews scrambled to set up protective sprinklers around the homes and businesses of the 60 people who were evacuating. On the other side of town, the Pickle Lake volunteer fire department prepared for the onslaught of flames and burning embers.

During the fire, quick, clear communications – the kind that the simulation trains crew leaders for – informed Dalzell that the fire might reach the town before the sprinklers could soak the area. So he reassigned some of his men to help out. Those efforts, coordinated with those of several other community groups, were key to fighting the fire.

ONTARIO FIRE WATCH: Fatal Fire Summary

The OFM compiles statistics on all fatal fires that occur in Ontario. These statistics can assist the fire service to determine fire trends, plan fire prevention initiatives and target public education activities. Due to the methods and criteria used in reporting fire deaths, statistics are subject to change.

Year End Totals for 2003: 96 fatal fires resulting in 113 fire deaths					
Age Group	Male	Female	Total	Fire Cause	Time of Day
0-15	7	5	12	Accidental	37 0001-0800
16-64	44	25	69	Undetermined	8 0801-1600
65 and over	17	15	32	Under Investigation	34 1601-1800
Total	68	45	113	Incendiary	17 1801-0000

September 2003: 5 fatal fires resulting in 5 fire deaths			
Age Group	Male	Female	Total
0-15	0	0	0
16-64	3	1	4
65 and over	1	0	1
Total	4	1	5
Fire Cause	Time of Day		
Accidental	1	0001-0800	1
Undetermined	0	0801-1600	2
Under Investigation	1	1601-1800	0
Incendiary	3	1801-0000	2
Locations of fatal fires: Cambridge (1); Kingston (1); Middlesex Centre (1); Red Lake (1); Welland (1).			

October 2003: 6 fatal fires resulting in 6 fire deaths			
Age Group	Male	Female	Total
0-15	0	1	1
16-64	2	1	3
65 and over	0	2	2
Total	2	4	6
Fire Cause	Time of Day		
Accidental	4	0001-0800	2
Undetermined	0	0801-1600	3
Under Investigation	2	1601-1800	0
Incendiary	0	1801-0000	1
Locations of fatal fires: London (1); Toronto (1); Oakville (1); Ottawa (2); Waterloo (1).			

November 2003: 7 fatal fires resulting in 8 fire deaths			
Age Group	Male	Female	Total
0-15	0	0	0
16-64	6	1	7
65 and over	1	0	1
Total	7	1	8
Fire Cause	Time of Day		
Accidental	2	0001-0800	4
Undetermined	0	0801-1600	1
Under Investigation	5	1601-1800	1
Incendiary	0	1801-0000	1
Locations of fatal fires: McNab/Braeside (1); Toronto (1); Mulmur (1); Niagara Falls (1); Ottawa (1); Wabigoon (1); Whitby (1).			

December 2003: 17 fatal fires resulting in 18 fire deaths			
Age Group	Male	Female	Total
0-15	1	1	2
16-64	6	3	9
65 and over	5	2	7
Total	12	6	18
Fire Cause	Time of Day		
Accidental	4	0001-0800	9
Undetermined	0	0801-1600	4
Under Investigation	9	1601-1800	0
Incendiary	4	1801-0000	4
Locations of fatal fires: Gravenhurst (1); Hearst Town (1); Innisfil Township (1); Toronto (2); New Tecumseth (1); Oshawa (1); Ottawa (2); Perth East (1); Peterborough (1); Prince Edward (1); Sarnia (1); The North Shore (1); Thunder Bay (2); Tillsonburg (1).			

January 2004: 14 fatal fires resulting in 19 fire deaths			
Age Group	Male	Female	Total
0-15	1	5	6
16-64	6	4	10
65 and over	3	0	3
Total	10	9	19
Fire Cause	Time of Day		
Accidental	7	0001-0800	7
Undetermined	3	0801-1600	4
Under Investigation	4	1601-1800	1
Incendiary	0	1801-0000	2
Locations of fatal fires: All First Nation Communities (1); Gananoque (1); King (1); Mapleton (1); Toronto (4); Midland (1); Moose Factory (1); Osnaburgh (1); Ottawa (1); Thunder Bay (1); Windsor (1).			

February 2004: 4 fatal fires resulting in 4 fire deaths			
Age Group	Male	Female	Total
0-15	0	0	0
16-64	2	1	3
65 and over	0	1	1
Total	2	2	4
Fire Cause	Time of Day		
Accidental	1	0001-0800	3
Undetermined	0	0801-1600	0
Under Investigation	3	1601-1800	1
Incendiary	0	1801-0000	0
Locations of fatal fires: Sudbury (1); Kingston (1); Kitchener (1); Oshawa (1).			

Alcohol responsible for 1-in-5 fire fatalities

The OFM investigates all fires involving fatalities and collects and maintains comprehensive records of each, including blood alcohol levels (BALs) of the deceased. The data from these records are input into the Ontario Fire Reporting System (OFRS). From this, quantitative assessments of the magnitude and characteristics of the fire problem are made. This report is based on data from the OFRS.

Fire is the fifth largest cause of unintentional deaths in Ontario, following deaths from motor vehicles, falls, poisoning and drowning/suffocation.¹ From 1995 to 2001,² 901 Ontarians died from fire-related injuries.³ Of these, 175 fatalities (19%) were impaired by alcohol. Even as the population increased during this period,⁴ the seven-year trend of per capita fire fatalities was down 27%; and alcohol-related fire fatalities trended down 40%.

TIME OF DAY

Fires and fire fatalities vary by time of day. Fire fatalities peak between midnight and 2:00 a.m., when most people are asleep. After 2:00 a.m., [fatal] fires and fire fatalities decline until 2:00 p.m., after which both increase. Slightly more than half of fatalities (52%) occur between 10 p.m. and 6 a.m. There is a slight peak in fire fatalities from 6:00 to 8:00 p.m., which corresponds to the dinner hour and an increase in cooking fires.

Alcohol-impaired fire fatalities

exhibit a different pattern from all fire fatalities, with larger numbers of fatalities occurring in the evening hours. This is not unexpected, since alcohol consumption usually begins in the late afternoon and early evening hours.

Sixty-six percent of all alcohol-related fire deaths occurred during the eight-hour period from 10:00

Over a 7-year period (1995-2001), 19% of fire fatalities in Ontario were alcohol impaired. The trend in alcohol-related deaths, however, decreased over these 7 years.

p.m. to 6:00 a.m. The number of these fatalities was highest from 4:00 to 5:00 a.m. (19 deaths) and second highest from 2:00 to 3:00 a.m. (17 deaths). These early morning hours may correspond to normal sleeping patterns and to the depressant effects of alcohol.

MONTH OF YEAR

Over the seven-year period from 1995 to 2001, there were an average

of nine fatal fires and 11 fire fatalities per month. Fire fatalities ranged from a low of 51 in July to a high of 115 in March. Spring and summer months (May through September), on average, had the fewest number of fires and fire fatalities. The number of fires and fire fatalities increased gradually from October through January. This increase may reflect the change in temperature when heating fires add to the other types of year-round fires.* From March to May, fire and fire fatalities dropped nearly 50%.

February is an unusual month in that the number of fires and fire fatalities decreases significantly compared to January and March - other cold months. Part of the decrease can be explained by the fact that February has fewer calendar days than other months; statistically, however, this deviation requires further investigation.

The monthly occurrence of alcohol-related fire fatalities follows a similar pattern. March is the highest month of alcohol-impaired fire fatalities. Spring and summer months have the fewest number of fires and fire fatalities (May through September). Unlike the general pattern, however, alcohol-impaired fatalities increased in August, with a decline in September and constant increase with minor variation from October through March.

See Alcohol-related on page 10

Alcohol-related fires claim the innocent

continued from page 9

AGE

The elderly (older than age 74) accounted for the largest number of

None of the 101 children under the age of 15 (11%) who died as a result of fire were impaired by alcohol; however, in some multiple-fatality fires, an adult was impaired by alcohol and a child below the age of 15 years died in the same fire.

fire deaths (153); only 3% of these victims were alcohol impaired. The age group from 35 to 44 accounted for slightly fewer fire deaths (149) than the elderly, but 30% of these victims were alcohol impaired.

None of the 101 children under the age of 15 (11%) who died as a result of fire were impaired by alcohol; however, in some multiple-fatality fires, an adult was impaired by alcohol and a child below the age of 15 years died in the same fire.

GENDER

Males accounted for 62% of the 901 fire deaths from 1995 to 2001. Among the total of 175 alcohol-impaired fire fatalities in Ontario, men substantially outnumbered women, accounting for 78% of these fatalities.

CAUSE**

Open flame, smoking, cooking and heating were the four leading causes of fire fatalities in which alcohol was a factor. These four causes accounted for 59% of all

fatalities and 92% of all fatalities for which cause is known (the cause for 33% of the fatalities is unknown).

Open flame was the leading cause of fire fatalities in Ontario. Smoking, the second leading cause overall, was the leading cause in alcohol-related fatalities - 28% of alcohol-related deaths. Smokers who are incapacitated because of alcohol consumption may be more careless with their smoking materials than their sober counterparts.

Notes:

*A review of Ontario fatal fires shows that heating is not a significant factor accounting for increased fire fatalities in winter months.

**The inclusion of arson fires in this data analysis affects the ranking of

fire cause.

Footnotes:

¹ 2002 Chief Medical Officer of Health Report - Injury: Predictable and Preventable, Ontario Ministry of Health, November 2002.

² Data from 1990 to 1995 were analyzed in Establishing a Relationship Between Alcohol and Casualties of Fire, USFA, 1999.

³ Fatal Fires in Ontario - 1995-2001, Office of the Fire Marshal. (<http://www.gov.on.ca/OFM>)

⁴ Population and Dwelling Counts, for Canada, Provinces, and Territories, 1996 and 2001 Canadian Census. (<http://www12.statcan.ca/english/census01/products/standard/popdwel/TablePR.cfm>)

This article is an excerpt from a report produced by the U.S. Fire Administration/National Fire Data Centre called "Case Study: Contribution of Alcohol to Fire Fatalities in Ontario," Topical Fire Research Series, Volume 3, Issue 5, July 2003. The entire report is available online at <http://www.usfa.fema.gov/inside-usfa/nfdc/pubs/tfrs.shtm>.

Public Fire Safety Council gets a new partner

On March 16 Fire Marshal Bernard Moyle welcomed Daniel Langlois, Manager, Special Investigations, Corporate Audits and Investigations, CSA Group, to the Fire Marshal's Public Fire Safety Council.

Mr. Langlois was appointed to the Council by the Honourable Monte Kwinter, Minister of Community Safety and Correctional Services, on March 9.



Artificial smoke passes health test

Given the increasing use of artificial smoke in the simulation of fires for training or demonstration purposes, there is some concern about its effects on people's health.

The smoke is actually a mist or fog produced by vapourizing a chemical called propylene glycol and demineralized water that is considered safe for humans.

However, there is some evidence that people with asthma or allergies may react adversely to the smoke. For example, according to a Queensland, Australia Department of Education Manual, "The manufacturers of artificial smoke machines advise that the chemicals used in these machines have the potential to induce airflow obstruction in asthmatics or those susceptible to allergic responses."

Major adverse reaction is uncommon, the manual continues, and it is particularly important that smoke machines are not pointed directly at people. Further, adequate ventilation reduces the potential for adverse reaction.

While adverse reactions are uncommon, safety bulletins for the theatrical industry recommend that personnel not be exposed continuously for long periods of time

to artificial smoke without being given breaks.

The Health and Safety Executive in the United Kingdom recommends the following occupational exposure levels: in an eight hour day, exposure to propylene glycol should not exceed 10mg/cubic metre, exposure to glycerine BP grade should not exceed 10mg/cubic metre and exposure to white oil should not exceed 5mg/cubic metre. The Health and Safety Executive notes that while dense artificial smoke concentrations exceed these levels, the relatively short period of time people are exposed to them means adverse health reactions are uncommon.

For those using artificial smoke generators, it is recommended that:

- Only commercial smoke generators made for use with people should be used (i.e. theatrical smoke generators). Homemade smoke generators should never be used.
- Only the products recommended by the manufacturer should be used to produce smoke.
- Warning signs should be posted warning of the potential effect on people with asthma. When dealing with young children, supervisors should ensure that none of them

have asthma.

- Personnel should not be exposed to artificial smoke continuously for long periods of time without a breathing apparatus or without taking periodic breaks.

For more information, contact Robert Harpur at 416-325-3220 at the Office of the Fire Marshal.



Artificial smoke is considered safe, but people with asthma or allergies may react adversely to it.



Photo and story courtesy of the "Off-the-Job Safetygram," Alcoa Rockdale Operations.

Pressurized cans dangerous if heated

People often keep cans of WD-40, hair spray, Off, Fix-A-Flat, etc. in their vehicle. They should reconsider. The picture on the left is of a pressurized can that exploded in a car and imbedded itself in the back seat. The temperature outside of the closed vehicle was about 38°C (100°F).

People should be reminded:

- not to leave pressurized containers of any kind in their vehicle where the cans may be exposed to sunlight;
- to always read and follow the safety recommendations the manufacturer provides with the cans.

Firefighter leaves 'the best of gifts'

Bequest was a true indicator of his love of children and commitment to the fire service

BY COLLEEN TOMS

A former Paris firefighter's generosity will benefit countless young burn victims at Toronto Sick Children's Hospital for years to come.

Members of the Paris Firefighters Club and family of the late Robert (Bob) Burns handed Toronto Sick Children's Hospital Burn Unit representatives a cheque totalling \$438,640.87 during an emotional and heartfelt presentation at the Brant County Fire Department and Administration offices in Paris.

The funds were the proceeds of Mr. Burns' two life insurance policies. He died Nov. 26, 2003, after a courageous battle with cancer.

The bequest was a true indicator of his love of children and his selfless 40-year commitment to the local fire service. The hospital's director of gift and estate planning said it stirred not only the hearts of his fire department colleagues, but those of people who see first-hand the devastating effects of fire on young children.

"It's the best of gifts that he could have left," Ibrahim Inayatoli said. "This is something that could live

on forever. Children are the most vulnerable with their burns and it will help countless children."

That sentiment was echoed by Paris District Fire Chief John Emerson, who presided over the presentation with Brant County Fire Chief Dave Collings.

"It is so devastating when children are victims of fire and as firefighters that's what we try to pre-

ensure that happens.

Inayatoli said the funds will be used to create the "Robert Murray Burns and the Paris Firefighters endowment fund," which essentially means his selfless gift will live on in perpetuity to support work in the Sick Children's burn unit.

In addition to supporting clinical care including equipment, it will also go toward training and education for staff to enhance their skills for the treatment of burns, as well as to research programs. "We do have doctors who come here for

training so there will be opportunities for interaction with outside groups due to this gift," Inayatoli noted.

Mr. Burns' generosity may also aid in the area of preventive burning and scalding of youngsters, he added.

"The fourth area this may be used is the advocacy side of things, in influencing people to set standards that ensure the safety of children." This could include lobbying for the adjustment of acceptable household water temperatures to 49°C from about 60°C and fireplace safety guidelines.

Colleen Toms is a freelance writer and photographer. This article originally appeared in *The Brantford Expositor* on February 18, 2004. Reprinted with permission.



Honouring Bob Burns during the cheque presentation were, from left, back row: Dave Collings, Peggy Burns, Laurie McEnhill, Bernetta Scime, Paul Scime, Bill Burns, Ibrahim Inayatoli, John Emerson, Rick Shannon. Front row (children): Ashley McEnhill, Riley McEnhill, Amber Scime and Holly Scime. (Photo by Colin Everett)

vent at all costs. When that does happen, we want to make sure the kids get the best care they possibly can."

IN PERPETUITY

Mr. Burns would have been extremely proud, Emerson added, to know that his generosity will

OFM News Update

There have been a number of staff changes at the OFM in recent months, including:

- **Trevor Bain** is the new Manager, Operations in the Fire Investigations and Evaluation section.
- **Gerald Bartlet** began on Oct. 14 as a Fire Investigator. Gerald was a police officer with the Hamilton Police Service.
- **Frank Haylow** left the OFM on Nov. 28 to become Director of Fire and Emergency Services for the Municipality of Port Hope. Congratulations, Frank, and best wishes for your new job.
- **Jeffrey Post** began on Oct. 14 as a Fire Investigator. He was previously a police officer with the Hamilton

Police Service.

• **Wayne Trimble** retired from the OFM on June 30. He joined the OFM in Aug. 1987. Congratulations, Wayne, on your retirement and thanks for your years of dedicated service!

• **Pierre Yelle** is the new Operations Manager, Team C position in the Fire Investigations and Evaluation section. Pierre began his new role on Jan. 2.

The Messenger has a new editor!

Chris Slosser started at the OFM on Feb. 17 as the new editor of The Messenger. "I look forward to meeting you and learning about all the exciting work the fire services are doing across the province," Slosser said. "Please keep sending story ideas about events happening in your area."

Training facility opens in Sudbury

A new firefighting training facility, called Alertech (Academy of Leading Emergency Response Technologies) Training Centre, opened in Sudbury on September 18, 2003.

The facility boasts a flashover

survival training unit, a smoke tower burn building complete with an elevator shaft for technical rescue training, a large confined-space training unit, a pump operators training unit with an underground water tank, an auto extrication training pad and room for the development of a HAZMAT training unit when funds become available.

The idea for the centre arose in 1998, when there was a recognized need for a training facility in the northeastern part of the province, and more specifically in the Sudbury area. At the same time, the local community college was developing a Pre-Service Career Fire-fighter Preparation course. Discussions grew and three founding partners - the City of Greater Sudbury, Cambrian College and Falconbridge Ltd. - came together to make the idea a reality.

The centre is located on the grounds of the Lionel Lalonde Community Centre in the Azilda section of Sudbury. The site houses a storage garage, a smaller classroom building, and a garage area in the community centre that includes offices. Classroom space is available inside the building and



All emergency responders, including those working with local industry, will use the Alertech facilities.

the facility has a dormitory for out-of-town students.

The facility will serve the needs of all emergency responders, not just the fire service. To date, there have been training sessions with corrections officers, the local fire service and local mine rescue crews. Local industries are expected to use the facility for their emergency response training.

Financial support for the project came from the three original founding partners. Additional business partners include MSA and Draeger, and local safety industry suppliers.

Service awards



On January 28, Fire Marshal Bernard Moyle presented OFM staff with Awards of Service. Above, Wendy Walker receives her award. Other recipients that day included Amina Ahmed, Al Suleman, Dave Horne, Mary Prencipe, Sophie Greco, Robert French, Shelagh O'Neill and Marjorie Wright.

Climbing
the Ladder:
Education &
Training

The objective of Climbing the Ladder is to keep you informed and up to date on issues related to education and training within the Ontario fire service, and to adequately address your questions and concerns. If there is a particular issue you want covered then send the topic to the Editor of the Messenger and it will be passed on to the appropriate person in the OFM Academic Standards and Evaluation section.

Breaking down learning barriers

A multi-agency approach to emergency responder training

BY ROSE BARG,
ACADEMIC MANAGER, EMERGENCY
PREPAREDNESS ACADEMIC UNIT

The OFM is committed to increasing emergency preparedness across the province by promoting training among multi-agency first responders and other emergency response stakeholders.

EMERGENCY PREPAREDNESS

The Emergency Preparedness/Response Core Planning Committee was established in 2002 to ensure a multi-agency focus on our educational initiatives. This committee now has representatives from more than 15 agencies, including fire, police, Emergency Medical Services (EMS), Emergency Management Ontario (EMO), Emergency Health Services (EHS), Public Health and hospitals. The committee meets regularly to discuss issues relating to multi-agency training and education, and

to ensure a coordinated approach to multi-agency training initiatives in Ontario.

MULTI-AGENCY SENIOR OFFICER/MANAGER COURSE

Later this spring, the Multi-Agency Senior Officer/Manager Course will be rolled out for regional delivery. The first communities to be targeted for this opportunity are those who have partnered with the OFM as Level II (Operational Level) or Level III (CBRN Provincial Response) teams contributing to Ontario's Emergency Response Strategy.

The workshop will provide an opportunity to senior officers and managers from regional emergency management and response agencies to work through case studies of significant or complex emergencies. Participants will practice the implementation of a unified Incident Management System, using a coordinated multiagency approach highlighting their shared and separate roles and responsibilities.

To obtain further information, please contact Regional Delivery Program Coordinator Jim Coulson at Jim.Coulson@jus.gov.on.ca.

PROVINCIAL CBRN RESPONSE TEAMS

The next training initiative for the Provincial Chemical, Biological, Radiological/Nuclear (CBRN) Response Teams from Windsor, Ottawa and Toronto, will be held at the Ontario Fire College May 10 – 14, 2004. This session will include a series of workshops to enhance the teams' capabilities in responding to provincial emergencies. This year radiation safety, detection of radiation sources, as well as common mass decontamination procedures, will be highlighted. A one-day multi-agency exercise will test the response and decision-making actions within a unified Incident Management System. Participants and observers from OPP, EMS and EMO will support the team members in the exercise.

TERRORISM/HAZARDOUS MATERIALS AWARENESS TRAINING

The *Terrorism/Hazardous Materials Awareness for First Responders in Ontario: Self-Study* course continues to be available to first responders on the OFM Internet site at www.ofm.gov.on.ca.

RESOURCES AVAILABLE

Many books, videos and other resources related to Multi-Agency Emergency Preparedness and Response are available at the Ontario Fire College library or through the Fire Science Library in Toronto. To find out more about available resources, visit our website at www.ofm.gov.on.ca.

Meeting the standards

BY KAREN BAUMAN,
MANAGER, TESTING UNIT, ACADEMIC STANDARDS AND EVALUATION

OFM testing is current with the Ontario Fire Services Firefighter Standards for those enrolled in the *Ontario Firefighter Curriculum* or the *Pre-Service Firefighter Education and Training Program*. But the test questions are divided differently. Those familiar with the *Ontario Firefighter Curriculum* know that there are three tests: Component 1, 2, and 3. The tests may be taken one at a time or all together.

Those familiar with the *Pre-Service Program* know that there are two tests: A and B. They are taken in one day, after a student meets all requirements for community college graduation.

There continue to be provisions for re-writing a test until a "pass" or "successful" result is achieved.

FIREFIGHTERS AT DEPARTMENTS ARE TESTED

	# of Firefighters Tested in 2003	# of Person-tests Administered to Date (includes year 2003)
Component One	454	1899
Component Two	217	1204
Component Three	204	1061
Total	875	4164

SCHEDULING A FIREFIGHTER TEST

Fire departments wishing to host a test are encouraged to contact the OFM Test Unit three months in advance. Scheduled tests are posted on the OFM web site at www.ofm.gov.on.ca. Individuals may be able to join scheduled sessions and should contact the Test Unit at 416-325-3140 to discuss their requests.

COLLEGE PRE-SERVICE STUDENTS ARE TESTED

In 2003, nine colleges involved in the *Pre-Service Firefighter Education and Training Program* prepared for the OFM tests. Over 250 graduates from Algonquin, Conestoga, Durham, Georgian, Humber, Lambton, Northern, Seneca and Sir Sandford Fleming wrote the tests.

SCHEDULING A COLLEGE PRE-SERVICE TEST

Pre-Service coordinators need to contact the OFM Test Unit to request a test date. Individuals who miss their college's test date may be able to join another session and need to contact the OFM Test Unit at 416-325-3140 to discuss their requests.

COMMUNITY COLLEGES OFFERING THE ENDORSED PRE-SERVICE FIREFIGHTER EDUCATION AND TRAINING PROGRAM

Two colleges have recently received endorsement. The following now offer the program: Algonquin College, Conestoga College, Cambrian College, Durham College, Georgian College, Humber College, Lambton College, Northern College, Seneca College, St. Clair College, and Sir Sandford Fleming College.

FIRE SERVICES CERTIFICATION UPDATE

(Statistics as of February 24, 2004)

Firefighter Certification Program

	Departments	Firefighters
Enrolled	187	14,716
	Career Firefighters	Firefighters
Total Certified:	908	412

Fire Prevention Officer Certification Program

	Departments	Fire Prevention Officers
Enrolled	66	418
Total Certified:		21

Company Officer Certification Program

	Departments	Company Officers
Enrolled	24	650

FIRE PREVENTION OFFICER AND COMPANY OFFICER CERTIFICATION RENEWAL

The Certification Council, with input from practitioners, has prepared draft documents, which outline proposed renewal processes and requirements. These are in the approval process.

FIREFIGHTER AND FIRE PREVENTION OFFICER 'WINDOWS OF OPPORTUNITY' CLOSING

Please see the messages about the closings of the 'Windows of Opportunity' on the OFM web site in the box on the homepage entitled *Announcements*.

FIREFIGHTER JOB EXPERIENCE REQUIREMENT PERFORMANCE CHECKLIST

The checklist has been updated to reflect the revised Ontario Fire Services Firefighter Standards (2000). The Ontario Association of Fire Chiefs is in the process of printing it. Its use will be required for all firefighters entering the certification system after May 1, 2004.

ACCREDITATION GRANTED

The National Board on Fire Service Professional Qualifications (Pro Board) has accredited the *Public Fire and Life Safety Educators'* course to the levels of NFPA 1035, Public Fire and Life Safety Educator I and II.

The OFM is waiting for official confirmation that the International Fire Service Accreditation Congress (IFSAC) has accredited the *Public Fire and Life Safety Educators'* course to the levels of NFPA 1035, Public Fire and Life Safety Educator I and II.

Learning from fire tragedies around the world

In the early hours of November 24, 2003, a fire occurred at the Peoples' Friendship University dormitory located in Moscow, Russia, resulting in the death of 42 students. The preliminary investigation into this fire indicates that it was caused by the electrical malfunction of a heater that was located in a student's room.

According to officials, the high number of casualties was attributed to a significant number of deficiencies associated with the dormitory, brought on by years of neglect. Some of the deficiencies included:

- a lack of a fire alarm system;

- two permanently locked exit stairwells;
- a lack of fire extinguishers;
- a lack of evacuation plans;
- a lack of a voice communication system;
- the failure to address fire safety violations discovered in previous inspections.

Following this incident, the fire department immediately conducted an inspection of 312 dormitories across the city. Fire officials recorded nearly 5,000 violations through these inspections. The fire department subsequently demanded the immediate closure of 140 dorm-

itories and charged 2,000 people for not meeting safety standards.

This incident was the latest in a series of deadly fires in that country. In April 2003, two separate school fires in Russia resulted in the death of 50 children. In December 1999, 12 people died in a dormitory fire at Moscow's state university. Again, the high death toll associated with these fires was attributed to the same types of fire safety deficiencies.

According to the October 2003 "World Fire Statistics" report (available on-line at www.geneva-association.org/WFSC.htm), published by the Geneva Association, Russia averaged 8.1 fire deaths per 100,000 people between 1998 and 2000. News articles report that Russia's current fire death rate has increased to 12.5 deaths per 100,000 people (this compares to an Ontario death rate of 0.78 in 2002).

Since the dismantling of the Soviet Union, the number of fire fatalities in Russia has increased considerably due to reductions in social program funding. Limited

See Overseas on page 17

Table 1: International Fire Death Rate Comparisons (1998-2000 Average)

Country	Deaths per 100,000 persons	Country	Deaths per 100,000 persons	Country	Deaths per 100,000 persons	Country	Deaths per 100,000 persons
Singapore	0.16	Norway	1.28	Slovenia	0.91	Denmark	1.57
Switzerland	0.64 (1997-1999)	Greece	1.34 (1997-1999)	France	0.95 (1997-1999)	Japan	1.66
Spain	0.66	Belgium	1.35 (1995-1997)	Czech Republic	1.02	Finland	1.87
Netherlands	0.68 (1994-1996)	Poland	1.36 (1999-2000)	Ontario	1.03*	Hungary	1.96
Australia	0.71	Austria	1.37	New Zealand	1.08	Ireland	1.97 (1997-1999)
Italy	0.73	Sweden	1.53	UK	1.11	Russia	8.1
Germany	0.76	USA	1.55	Canada	1.26		

* In 2002, Ontario's fire death rate dropped to 0.78 deaths per 100,000 people.

Sources: Geneva Association Information Newsletter-October 2003; Ontario Fire Loss Database

Wildfire Prevention Week: April 18-24

The week of April 18 through 24 has been proclaimed as Wildfire Prevention Week.

Due to recent wildfire tragedies in British Columbia and California, the Ministry of Natural Resources, the OFM, and the Ontario Association of Fire Chiefs have developed a wildland/urban interface fire safety education package for use in communities that could be affected by wildfire. The theme of the material contained in the package is focused on *Protecting Your Home From Wildfire*. The educational material provides a resource for the fire service to assist



With the recent wildfire events in British Columbia, wildland/urban interface fires are becoming a serious concern to communities across Ontario.

them in delivering wildfire safety messages to elementary school age

children and the public.

See Wildfire on page 20

Overseas tragedies

continued from page 16

resources within the fire service have not allowed departments to keep pace with inspection and enforcement programs. At the same time, owner negligence and general disregard of fundamental fire safety standards have left many buildings in a bad state of repair.

Of course, multi-fatal fire tragedies are not restricted to Russia. A review of international news reports over the past several years revealed many other such incidents throughout the world. The following is a synopsis of some of these recent events:

1. On February 20, 2003, in Rhode Island, USA, 100 people died in a nightclub fire. The use of pyrotechnics without the required city permit, combustible interior finishing material and the improper use of exits by the patrons contributed to the high number of deaths.

2. On February 2, 2003 in Harbin, China, a hotel fire killed 33 people. Inadequate and locked exits were blamed for the high death toll.

3. On December 1, 2002 in Caracas, Venezuela, a fire occurred in a basement nightclub, killing 47

people. Overcrowding and inadequate exits were determined to be significant factors in the high number of fatalities.

4. On July 20, 2002 in Lima, Peru, 28 people perished in a nightclub fire. Poorly marked exits and the lack of sprinklers, a fire alarm system and fire extinguishers were blamed for the high number of deaths.

5. On June 16, 2002 in Beijing, China, 24 people lost their lives in a fire at an internet café. The cause was determined to be arson but the high number of casualties was attributed to the lack of exits, locked doors and windows sealed with iron grills.

6. On September 1, 2001 in Tokyo, Japan, a fire in a mah-jongg club killed 44 occupants. Inadequate exits and the lack of windows prevented the victims' escape.

7. On January 1, 2001 in Volendam, Netherlands, a fire in a dance hall resulted in 10 deaths. One of the three exits was inaccessible and there was speculation that fireworks were smuggled into the building.

8. On December 25, 2000 in Luoyang, China, 311 lives were lost in a

nightclub fire. The building lacked sprinkler protection and a fire alarm system. The exits were both blocked and locked.

9. On October 26, 2000, in Mexico City, Mexico, 20 people died as a result of an electrical fire in a disco. Flammable decorations, insufficient and locked exits and the lack of a firefighting water supply contributed to the high number of deaths.

10. On December 8, 1998, a fire at an orphanage in Manila, Philippines killed 27 people. Locked exits and barred windows were blamed for the high number of deaths.

11. On October 29, 1998 in Gothenburg, Sweden, 62 people died at a dance in a cultural center. Overcrowding, blocked exits and barred windows contributed to the high number of casualties.

One cannot rule out the possibility of such a tragedy occurring in Ontario. The reality is that some of the aforementioned incidents occurred in countries that also have impressively low fire death rates. We need to learn from these tragic fire incidents and be vigilant and responsive to the need for refinements or change. There is no room for complacency.

Tasty turkey, but at what cost

Fryers present hazard if not used properly

BY BETH TATE,
OFM FIRE PROTECTION ENGINEER

The growing popularity of fried turkey in the United States, and more recently in Canada, has resulted in an increase in the number of people who use turkey fryers. While people rave about the tasty turkey, the potential dangers of the fryers are often unrecognized.

In the last year the OFM, the National Fire Protection Association (NFPA) in the United States, and the Consumer Product Safety Commission (CPSC) in the U.S. have all issued communiqués, media releases and reports highlighting the fire risks presented by turkey fryers. But still, public education is required.

One major fire safety hazard associated with turkey fryers is the overheating of oil prior to placing the turkey in the fryer. The typical fryer holds about 13.6 litres of oil and it can take about 45 minutes to get the oil to the desired 350 - 375°F (177-190°C) cooking temperature. Because the oil in the fryer cools about 25°F (-4°C) when turkey is placed in it, people tend to pre-heat the oil to about 390 - 400°F (199-204°C).

The fryer becomes a major hazard when people leave the heating oil unattended. Too often they become distracted or involved in some other activity and forget to come back to see if the oil is at the correct temperature. By the time they return, the oil is smoking or on fire.

If left unattended, it is possible for the cooking oil to overheat to a point of self-ignition (approximately 700°F or 371°C). The re-

sulting fire is both difficult to extinguish and spreads quickly as the burning oil overflows the pot. The potential for overflowing makes it extremely important that people not use turkey fryers on wooden decks or near any combustible material.

An additional concern is the length of time the oil remains hot after the turkey is done and the burn hazard this presents.

The potential dangers have resulted in a review of the standards governing turkey fryers. The OFM

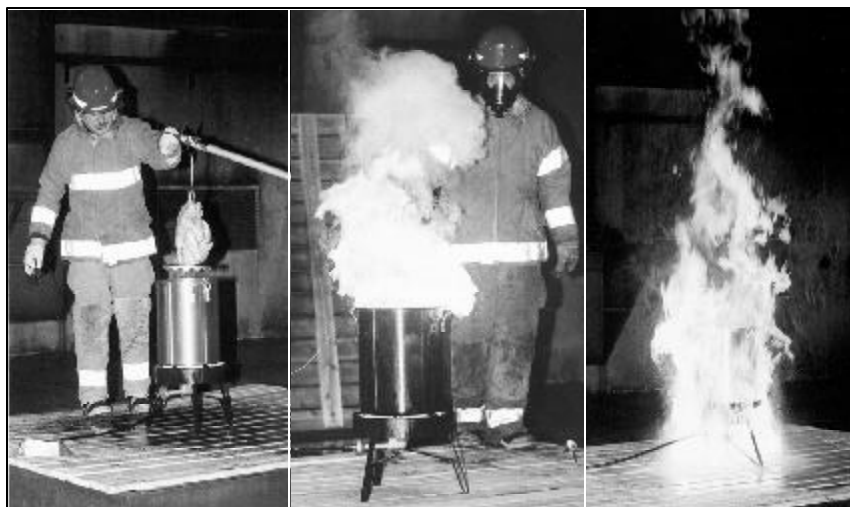
Options will include measures such as timers to shut off the burner after a pre-set time and temperature controls.

Other revisions are likely to include clear markings on the appliance and pot, and instructions on how to deal with hazards caused by over-filling the pot and excessive moisture in the bird. Both instances can cause hot oil to spill over the pot and ignite.

Turkey frying can be done safely if properly monitored, with knowledge of the associated hazards and with appropriate precautions. However, increased public education and awareness of the potential dangers is still required.

Notes:

¹ The standard relevant to this issue is ANSI Z21.89/CSA 1.18, "Outdoor



A firefighter demonstrates the potential hazards of turkey fryers.
(Photo courtesy of Underwriters Laboratories Inc.)

is part of a Joint Technical Advisory Group (TAG) overseeing a series of standards that are being harmonized so they can be applied consistently in both Canada and the United States. The TAG's revisions to the standard governing turkey fryers are expected in late 2004 or early 2005.¹

Although numerous changes to the standard are anticipated, a primary consideration will be to address ways of preventing the oil in the fryer from overheating in the pre-cook stage when the appliance is most likely to be unattended.

Cooking Specialty Gas Appliances," which deals with all types of fryers and boilers. The current edition of the standard is 2002.

For more information on the safety of turkey fryers, see: www.ofm.gov.on.ca, for Communiqué 2003-02; www.nfpa.org, www.cpsc.gov and www.csagroup.org for news releases and safety information, and www.ul.com/consumers/turkeys.html for a video clip of a turkey fryer test conducted by Underwriters Laboratories Inc.

InDetail: Halide lamps can ignite fires

InDetail **highlights relevant technical information on topics of interest to the fire service.**

The objectives of InDetail are to:

- **enhance the understanding of fire protection, fire prevention and life safety principles;**
- **promote the use of established and state-of-the-art technology to enhance public fire safety;**
- **raise awareness with respect to ongoing fire research and code development.**

Topics will be selected based on various factors, including, requests for information/clarification from the fire service, OFM staff perception of fire service needs, new developments in the fire safety and fire protection fields, new OFC and OBC requirements, current OFM research, and OFM evaluation of products. We hope to take what are sometimes fairly complex technical issues and present them in an easy to read and interesting format that will benefit the fire service. Your input is welcomed and encouraged. Please direct your comments to the Editor.

Metal halide lamps are high efficiency lamps which have become increasingly popular in the past decade for use in buildings such as warehouses, factories, arenas, parking garages and high-rise buildings. However, without proper care they can be hazardous.

BY ROBERT HARPUR,
OFM FIRE PROTECTION ENGINEER

Recently Gary Jarrett, Assistant Division Chief of the Brampton Fire and Emergency Services, expressed concerns to the OFM about fires caused by the rupturing of metal halide lamps. The rupturing of lamps caused two recent fires in his jurisdiction resulting in approximately \$11 million in property damage.

The National Electrical Manufacturers Association (NEMA) estimates that there are approximately 40 million metal halide lighting systems installed in North America and that over 100 million have been sold in the last 10 years. While the NEMA states that there have been "very few reported instances of property damage claims resulting from the rupture of a metal halide system," the experiences in Brampton indicate that such losses do occur.

The potential hazard of these lamps has been recognized for some time. In 1986, the U.S. Department of Labor issued a Hazard Information Bulletin on the dangers presented by the failure of metal

halide lamps made by one company. The same problem exists with lamps made by most lamp manufacturers.

Metal halide lamps consist of a clear quartz arc tube containing mercury and other metals that are enclosed within a glass bulb. The arc tubes can operate at temperatures of 900 – 1100°C (1652 – 2012°F) and pressures of 5 – 30 atmospheres (73.5 – 440.9 psi). If the arc tube ruptures, it can do so with enough force to fracture the outer glass bulb, releasing quartz fragments hot enough to ignite nearby combustibles.

The rupture of an arc tube is most likely to occur because of stresses caused by crystallization of the quartz tube. This can result in regions of different thermal expansion that can lead to the quartz cracking and eventual failure of the arc tube.

The American National Standards Institute (ANSI) has three classifications for metal halide lamps:

- E-type lamps can only be used in suitably rated enclosed luminaires;
- S-type lamps may be used in open luminaires if certain conditions are met;
- O-type lamps may be used in open luminaires.

The O-type lamps generally have an additional quartz shroud around the arc tube that can contain the arc tube fragments or reduce their momentum sufficiently that they will not break the outer glass bulb. Lamps with a protective shroud are frequently designated as MP-type metal halide lamps. It should be noted that lamps that have a plastic safety coating cannot

See Follow on page 20

Fire Marshal welcomes visitors from Tokyo

A delegation from the Tokyo Fire Department visited the OFM to learn about the role of the OFM and the delivery of fire protection services in Ontario. Joining Fire Marshal Bernard Moyle were (from left) Translator Makiko Ogasawara, Fire Lieutenant Hiroshi Morijiri and Fire Sergeant Tamiko Inoue.



Wildfire prevention

continued from page 17

Fire departments will receive the education package that includes print material and a CD containing information: a lesson plan that can be used to teach adults, a teacher lesson plan for grades 3, 4 and 5 that can be delivered to elementary school teachers for use in the classroom, facts regarding wildfire in Ontario and a Fire Smart Home Owner's Manual.

For more information on this package contact Gerry Armstrong at 807-274-0907.

Follow warnings to reduce the risk

continued from page 19

contain an arc tube rupture. Exclusionary sockets are available which permit an O-type lamp to be installed but prevent the installation of E- or S-Type lamps.

Recommendations to Reduce Risk of Arc Tube Rupture

1. Users must follow all of the warnings and instructions provided by the lamp or luminaire manufacturer.

2. Replace lamps at the interval recommended by the manufacturer. Although the lights may still continue to function for some time after the recommended replacement time, this is the time when an arc tube rupture is most likely to occur.

3. If lights are in continuous operation (i.e. 24 hours/day, seven days/week) they should be turned off at least once a week for a minimum of 15 minutes. This has two purposes:

a. Arc tube ruptures are more likely to occur when a lamp approaches the end of its life. The lamp is also harder to start as it approaches the end of its life. The shut down time decreases the chance the lamp will restart, thus

also decreasing the chance of an arc tube failure.

b. As the lamp cools down the arc tube will be subject to increased thermal stresses. Any weaknesses created by the crystallization of the quartz tube will cause the arc tube to fail when it is not operating at high temperature and pressure and it is more likely that the outer glass bulb will be able to contain any fragments.

4. Ensure that lamps and luminaires are listed by an accredited testing agency to UL 1572 *High Intensity Discharge Lighting Fixtures* or CSA C22.2 No. 9.0 *Luminaires* or the Bi-national Luminaire Safety Standard UL 1598 *Luminaires* and CSA 22.2 No. 250.0-00 *Luminaires*.

5. Follow the manufacturer's instructions for dimming metal halide lamps. Excessive dimming can increase the risk of an arc tube rupture occurring.

6. Do not locate luminaires directly above flammable or combustible materials, e.g. in warehouses. Locate luminaires over the centre of aisles rather than over the storage.

Except for article 4.1.5.3., which applies only to locations that have flammable or combustible liquids,

the Fire Code has no requirements that would apply to the use of metal halide lamps. Unless the fire department can show that the lamps are actually rupturing, the mere presence of metal halide luminaires is not sufficient justification for issuing an inspection order.

However, when metal halide lamps are encountered during inspections, the fire department can ensure that the owners are aware of the potential hazard and the recommendations to reduce the risk of a rupture and of a fire if a rupture occurs.

If any fire department has information concerning fires initiated by rupturing metal halide lamps, please contact Robert Harpur at the OFM at 416-325-3220. If you require more detailed information on metal halide lamps and appropriate operating procedures you can obtain the National Electrical Manufacturers Association standard LSD 25-2000 "Best Practices for Metal Halide Lighting Systems, Plus Questions and Answers about Lamp Ruptures in Metal Halide Lighting Systems". It is available online at no cost at http://www.nema.org/index_nema.cfm/1427/9A5EDCA1-6358-4EBF-9BB3E9EA018304F6/.

Fire Service Calendar 2004

April 21	CFSA Annual Seminar	Toronto
April 22	Nomination deadline for the Fire Marshal's Public Fire Safety Council's Fire Safety Awards	Call 416-325-3155 for nomination forms
April 29-30	Public Educators' Conference, "Times they are a-changin'"	Fort Frances
May 9-13	O AFC's Annual Meeting and Educational Seminar	Toronto
May 10-14	Training for the Provincial Chemical, Biological, Radiological/Nuclear (CBRN) Response Teams from Windsor, Ottawa and Toronto	Ontario Fire College
May 29-June 4	Municipal Fire Service Instructor's Association Spring Seminar	St. Catharines
June 7-10	Ontario Professional Fire Fighters Association Convention	Richmond Hill
June 17	Fire Marshal's Public Fire Safety Council's Fire Safety Awards Ceremony	Toronto
July 30-Aug. 1	Fire Fighters Association of Ontario's 103 Annual Conference	Blyth

Award-winning escape plans



On October 28, 2003, Firefighter Gord Harrison, from the Hastings Fire Department, handed out a back pack, Sparky dolls and a smoke alarm to Grade 3 students from the Hastings Public School for designing and practicing fire escape routes in their homes. Winners are (from the left) Dalton Fudge, Danielle Drysdale, Andrew McDermott and Nathan Deabreu (kneeling).

(Photo courtesy of The Community Press)

Firefighters' memorial

The Canadian Fallen Firefighters Foundation/Fondation canadienne des pompiers morts en service respectfully invites all Canadian firefighters, their families and members of the public to Parliament Hill, Ottawa, on September 12, 2004 for a morning memorial ceremony honouring the firefighters who have given their lives in the line of duty, especially those who died in 2003.

For details on the Foundation/Fondation and details as they are announced, please refer to www.cfff.ca.

Answers: Smoke Alarms

From page 6

A.1 In 1996, it was estimated that 95% of Canadian homes had smoke alarms.

A.2 In residential fires, 21% of homes had no smoke alarm. 23% had an alarm that didn't operate.

A.3 35% had a power failure or weren't connected.

A.4 80% had no battery. 20% had a dead battery.

A.5 29% of smoke alarms worked in preventable, fatal, residential fires. Of those alarms that didn't work in these settings, 57% had no battery or power.

MESSENGER Profile:

2004 Can-Am Police-Fire Games come to London

Over 2,000 fire service and law enforcement professionals from across North America are set to descend on the City of London, Ontario for the 2004 Can-Am Police-Fire Games running from July 11-18, 2004.

Community safety professionals will come together to compete in 60 team and individual events at 35 venues in London. The Games, which aim to foster camaraderie between safety professionals, will include a diversity of traditional and occupation-oriented sports. Competitors will participate in conventional events like basketball, rowing, weightlifting and track and field. Others will compete in more skill-specific events like auto extrication, fire attack, S.W.A.T. and narcotics dog.

"This is truly going to be an international event," Ken Heslop, London Police Service Inspector and Chair of the Games' Operational Management Committee, said. "We've had inquiries from France, Germany, Britain - we've even got entrants coming from New Zealand."

The Games started in 1977 as the Northwest Police-Fire Games when state police and fire officials in Washington state and Oregon, and a police-fire sports group from western Canada, formed an association to organize an annual multi-sport event for firefighters and police officers. This continued until

1996.

The event grew so large that the group then renamed itself the Can-Am Police-Fire Games and started holding the Games every two years. Over the years, competition to host the event became so stiff that cities now must go through a bid selection process up to four years in advance of a planned Games.

"We started planning for this in early 2001," Heslop continued.

The occupation-oriented sports give competitors the chance to show off the skills they use in their jobs every day.

The Toughest Firefighter Alive competition, for example, requires participants to complete four tasks that involve connecting fire hose to hydrants, carrying air bottles and water buckets or hoses up a ladder extended four stories high, carrying a 77 kilogram weight rack 182 metres, then climbing over a wall, and running up four stories of stairs. The contestant who completes all tasks in the fastest time is the winner.

As always, this year's Games are being organized by volunteers. It is expected that more than 500

volunteers will have donated their time for this year's event.

Those interested in finding out more about the Games in London, or registering to participate, should go online to www.canamgames.london.ca.

