

M THE ONTARIO FIRE SERVICE **essenger**

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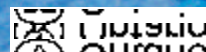
CBRN Training at the Fire College

Inside:

**Crashes cause more
firefighter deaths than fires**

**Smoke alarms: escape
time is just three minutes**

**Are safer cigarettes
on the way?**



Ministry of Community Safety and Correctional Services Ministère de la Sécurité communautaire et des Services correctionnels

Messenger

THE ONTARIO FIRE SERVICE

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

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Michael Fenn,
Deputy Minister of
Community Safety,
Ministry of Community Safety
and Correctional Services



My 30 years working in the local government field as a municipal administrator and deputy minister has taught me the essential role that local communities play in our lives. As a result, I was delighted to have this opportunity to work more closely with you – the people who deliver some of the most important public services to Ontario's residents and businesses. I have much to learn as Deputy Minister of Community Safety, but I am confident that my previous experience, together with the enthusiastic support I am enjoying from my new colleagues, will help me contribute to the success of our ministry's mandates in areas that include public safety and emergency management.

Earth-shattering events – terrorist attacks, natural disasters, massive industrial accidents – are the stuff of headlines; thankfully, however, they are relatively rare events. While they focus our attention on the work of first responders, they are not the primary reason we should be grateful for your presence. It is the everyday events – the driver freed quickly from a wrecked automobile, the child rescued from a burning house, the heart attack victim revived by timely CPR – that marks your real contribution to our health and our safety. There are thousands of incidents every day that give us reason to say, "Thank you."

At the same time, we cannot ignore the fact that there are bigger, more complex hazards in the world today, and the consequences of a natural or human-caused emergency have escalated. We must be prepared for a broader, more complicated range of emergencies, and we must expect them to test our abilities to respond quickly, effectively and cooperatively. That's why the new *Emergency Management Act* makes planning, training and exercising of emergency management plans mandatory for all municipalities. Fire services play an important part in fulfilling this mandate. I look forward to working with you, as we share the challenge of delivering on our priorities within the broader context of competing demands on public finances and the need to live within our means.

The provincial government is also improving its ability to plan for and respond to emergencies. The legislation mentioned above requires all provincial ministries to have emergency management and business continuity plans; these are well under way. The government has also appointed Dr. Jim Young, well known to everyone in the emergency services community, to the newly created post of Commissioner of Emergency Management. In that position, he will have broader authority to coordinate the efforts of the Ontario government and to work with other levels of government in developing mutually supporting emergency management systems.

When we activate our emergency plans, we hope it will be as a training exercise, not "the real thing." But regardless, when that time comes we know that our planning and preparation will pay off. We will understand our roles, we will have practiced our responses, and we will work together to safeguard the security of all Ontarians.

Best wishes to all of you as we move forward with our task of making Ontario an even safer, more secure place to live.

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Back A family of firefighters
Two generations committed to fire service



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SummerSmart campaign launches. A new campaign to raise awareness of outdoor safety and the safe use of barbecues and fuels was launched May 19. Fire departments across the province set up information displays in various locations within their communities.

CBRN Training at the Fire College. CBRN teams, OPP emergency response teams and the Muskoka EMS participated in CBRN training at the Fire College during the week of May 10. Training included preparing first responders for a 'dirty bomb'.



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Fire Safety Awards. Fifteen individuals and organizations, including five youths, were the recipients of this year's Fire Marshal's Public Fire Safety Awards, sponsored by Pyrene Corporation.



Update ONTARIO

News from around the province

Commissioner of Emergency Management appointed

Dr. James Young, former Commissioner of Public Safety and Security, is Ontario's new Commissioner of Emergency Management. Monte Kwinter, Minister of Community Safety and Correctional Services, announced Dr. Young's appointment to the newly created position on April 30.

"Dr. Young's appointment addresses the need for an overall leader responsible for planning for and responding to all emergencies in Ontario," Kwinter said.

In his new role, Dr. Young will report directly to the Minister on all policy and program matters related to emergency management in the Ontario government. In addition, he will:

- oversee the province's emergency planning and preparedness to ensure continuity of government and essential services and safety for citizens;
- monitor ongoing emergency situations, such as the current avian influenza outbreak in Asia and North America, to ensure that Ontario is prepared to respond should a similar situation occur here;
- take the lead in working with the federal government on the co-location of an emergency manage-

ment centre in Ontario and on negotiating an agreement to ensure co-operation and collaboration on emergency response measures;

- lead the development of necessary regulations to implement emergency management across key government ministries; and
- assist in the review of the existing *Emergency Management Act* and related legislation and regulations to ensure that the government has all of the powers and tools necessary to respond to an increasingly wide range of potential emergencies.

"Ontario has faced a number of challenges over the last few years," Dr. Young said. "My job will entail working with the provincial government and across all other levels of government to ensure we are prepared for all possible emergencies, however caused."

Among his previous appointments, Dr. Young served as the province's Chief Coroner. He also played an instrumental leadership role in Ontario's response to the SARS outbreak in the spring of 2003.

Dr. Barry McLellan, the former Deputy Chief Coroner, has taken over from Dr. Young as the province's new Chief Coroner.



Fire Marshal Bernard Moyle (right) and Assistant Deputy Fire Marshal Tony Mintoff present Dyane McCullough with her new certificate for the Public Fire and Life Safety Educators' course on June 15 at the Ontario Fire College.

(Photo courtesy of the OFC)

Course accredited

There's good news for everyone who successfully completed the Public Fire and Life Safety Educators' Program at the Ontario Fire College. The OFM recently had the course successfully accredited by Pro Board and IFSAC to NFPA 1035, Public Fire and Safety Educator I and II, 2000 Edition.

Over the next couple of months, the OFM will be re-issuing certificates with the IFSAC seal to all graduates of the full, nine-session course, along with application forms for the Pro Board certificate.

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.

Hand sanitizers a potential fire hazard

The OFM has been notified that students in some schools are mis-using alcohol-based hand sanitizers. In one incident, students placed a small quantity of an alcohol-based gel sanitizer on the floor, turned off the lights and then lit it on fire. It is not known whether the product was obtained through the school or was brought in by the students.

Most types of hand sanitizers in common use are gel or foam alcohol-based products. Both are easily ignited and will burn very rapidly until all of the flammable components are consumed.

The OFM is concerned with the potential serious consequences of this fire setting in the school environment. Although this activity

may not be wide-spread at this time, the OFM wishes to provide the fire service and the school boards with an early warning of this practice.

The Ministry of Health and Long-Term Care (MHLTC) recommends, "The best and simplest method of hand hygiene in schools is hand washing with soap and water, and concurrent delivery of a hand hygiene information program for students."

The MHLTC has also confirmed that there are several non-alcohol-based hand sanitizers available which would be suitable substitutes. School boards should consult the local health unit or infection control specialists to determine the product that is ap-

propriate in their particular circumstances.

However, where schools continue to provide alcohol-based hand sanitizers, the following precautions are recommended:

- dispensing should occur only under the direct supervision of staff;
- when not in use, the sanitizer product should be kept in a secure location; and
- avoid exposure to open flames during and immediately after application.

As these hand sanitizers are normally dispensed and used in very small quantities, they present minimal fire hazards under normal use.

This information was taken from OFM Communiqué No. 2004-11. Inquiries regarding alcohol-based hand sanitizers and fire hazards should be directed to the Applied Research Section of the OFM at 416-325-3100.

Help to assess local protection services coming

BY MARK DERRY

Fire Marshal Bernard Moyle outlined new initiatives and training programs soon available to assist fire departments and community officials assess their fire protection services at the Northeastern Fire Education Conference in North Bay from April 1-4.

Mr. Moyle said the municipal fire protection information survey process is ongoing in both organized and unincorporated areas. The survey ensures communities are providing public education and prevention programs that address their local risk assessments.

The Fire Marshal also said that a risk and resource rationalization process is currently being tested and will assist fire officials in assessing and optimizing their fire

department's emergency response capabilities.

These initiatives are meant to assist community preparedness through the three lines of defence: public education and prevention, fire safety standards and enforcement, and emergency response.

As part of the conference presentations, Bruce Gougeon, Operations Manager with the OFM Midhurst office, conducted a workshop for municipal officials to inform them about municipal and provincial requirements concerning fire protection services. This training session will be available over a two-day period at designated locations across the province throughout the year. A schedule will be available soon.

For more information, contact the OFM Midhurst office at 705-725-7258.



Deputy Fire Chief Cathy Jarrett and Fire Chief Brian Ardiel of the Wharnclyffe Fire Department received their Certificate of Compliance at the Northeastern Fire Education Conference in North Bay. Pictured with them is Fire Marshal Bernard Moyle.

(Photo courtesy of Mark Derry)

Creative ways to get the message out

BY LARRY COTTAM AND BOB STEVENSON,
CITY OF KENORA FIRE AND EMERGENCY
SERVICES

Coming up with new, creative ways to get messages out to their target audience is one of the hardest tasks facing public educators.

But that's exactly what firefighters Larry Cottam and Bob Stevenson of the City of Kenora Fire and Emergency Services did in January.

Using the biggest billboard every fire station has as their medium – the floor – the two firefighters started painting fire safety messages, like “When fire strikes-get out, stay out!”, “Wear the gear!”, “Put a lid on it!” and “Working smoke alarms save lives!”, throughout the station.

Most children learn best through

interactive activities. To this end, firefighters Stevenson and Cottam painted a home fire escape plan in front of their aerial. It is used as a game, complete with laminated pictures of smoke, flames and smoke alarms, for children on station tours.

Stevenson and Cottam place the smoke and flames in bedrooms, corridors and the kitchen. The children are then asked to place smoke alarms in correct locations, to find two ways out of each room, and to demonstrate how to crawl low under smoke.



Firefighter Larry Cottam shows off the innovative home fire escape plan he and Bob Stevenson painted on the floor of the Kenora fire station.

(Photo courtesy of the Kenora Fire and Emergency Services)

Bumper stickers to create awareness about sprinklers



The Ontario Home Fire Sprinkler Coalition has initiated a bumper sticker campaign to raise awareness of residential fire sprinklers. A bumper sticker with the message “Protect What You Value Most” soon will be available to all fire departments in Ontario.

The Coalition is encouraging fire departments to prominently display the bumper stickers on department fire trucks, fire chief's cars and other fire department vehicles.

“Many people are not aware that they can have fire sprinklers installed in their homes,” Coalition Co-Chair Al Speed wrote in a recent

letter to Ontario fire chiefs. “Let's at least inform them that it's an option.”

The Coalition also has information

sheets that can be provided to local fire departments for distribution to the public at local community events.

The Coalition is Ontario's representation on the Home Fire Sprinkler Coalition (HFSC) and is an ad-hoc committee of the Fire Marshal's Public Fire Safety Council. The HFSC was formed in 1996 and develops educational materials to inform the public about how home fire sprinklers work, to address some of the myths about home sprinklers, and to explain why they serve to be safe, smart and affordable fire protection. Members of the Ontario Coalition

include fire chiefs, OFM staff, fire service personnel and stakeholders.

For more information or to contact the Coalition, visit its Web site at www.homefiresprinkler.org.

Correction

The article “Learning from fire tragedies around the world,” which appeared in the March/April 2004 issue of the Messenger, was written by Michael Ng, OFM Fire Protection Engineer. We apologize to the author.

Teaching plans to return

The teaching plans regularly inserted into each issue of The Messenger will return with the next issue in September/October.

OMFPOA gets new President

Craig Cunningham, Captain with the Toronto Fire Services, was appointed the President of the Ontario Municipal Fire Prevention Officers Association (OMFPOA) on April 16, 2004. Cunningham takes over from outgoing President Jana Gillis.

Other new members on the OMFPOA Executive include Assistant Chief Tony Lippers, from the Chatham-Kent Fire Department, and Inspector Lee Tome, from the Windsor Fire & Rescue Services.

"There are a number of challenges facing the OMFPOA executive in the coming year," Cunningham said. "One of the most important will be keeping the fire service aware of the importance to prepare for the mandatory qualifications as set out in Subsection 2.16.4 of the Ontario Building Code. Anyone who has been appointed as a building official for the purposes of plan review and/or conducts site inspections under the building code will be required to be qualified by July 1, 2005 to continue to perform these duties."

Not all fire departments have fire prevention personnel assigned building inspection duties, Cunningham continued, but those that do should visit the Ministry of Municipal Affairs & Housing (MMAH) Web site (www.obc.mah.gov.on.ca) for full details.

Cunningham also said that, in partnership with the Ontario As-

In the top picture, Fire Marshal Bernard Moyle (right) and Deputy Fire Marshal Doug Crawford presented outgoing OMFPOA President Jana Gillis with a plaque commemorating her hard work as president at an OMFPOA awards ceremony on April 7. In the middle picture, Craig Cunningham (left) and Jana Gillis present Paul Olah of the Welland Fire Department with the Fire Chief of the Year Award, and at the bottom, Dave Flynn, Educational Co-ordinator at the Niagara Region Children's Safety Village, receives the Jim Copeland Award.

(Photos courtesy of the Fort Erie Fire Department)

sociation of Fire Chiefs and the OFM, the OMFPOA has been working hard petitioning the MMAH to have a category designated specifically for duties performed by fire prevention officers. "This reduces the number of categories – such as Complex Buildings, Large Buildings and Small Buildings – that fire prevention officers would have to be qualified for," Cunningham said.

This means there will be two exams fire prevention officers would have to write to qualify for the Fire Protection Category: the general legal and process exam and the fire protection exam, Cunningham continued. "The new courses will prepare people to navigate through the building code and are not technical in nature," Cunningham said.



New and revised TAPP-C manuals to be introduced at conference

The long-awaited, revised TAPP-C Fire Service Educator's Manual is presently being reviewed by TAPP-C fire service providers around the

province. Their input will be compiled and incorporated by mid-summer, with a target release of fall, 2004.

An introduction to the manual, as well as the TAPP-C Community Implementation and the Mental Health Assessment and Treatment manuals, will be part of the half-day TAPP-C workshop at the Public Fire and Life Safety Educator's conference, November 3-5, in Pembroke. For more information on the conference, see page 30.

New maintenance requirements for SCBA

Mine Safety Appliances Company (MSA) is informing all users of MSA self-contained breathing apparatus (SCBA) and other supplied-air respiratory products equipped with the Audi-Larm Audible Alarm of new maintenance requirements for all Audi-Larm Audible Alarms.

These maintenance changes affect all versions of SCBA, portable air-supply systems, and air-line cascade systems equipped with an Audi-Larm Audible Alarm. It is important that all users review this notice and make sure the new requirements are followed as indicated below.

New Audi-Larm Test

MSA is instituting a requirement to annually test all Audi-Larm Audible Alarms using a newly developed Audi-Larm Audible Alarm Tester. This new tester represents an improvement over current Audi-Larm testers in that it evaluates the alarm function using a continuous pressure bleed rate. This test method more closely resembles the operational characteristics of the alarm during actual use.

Audi-Larms used on all SCBA, portable air supply systems and air-line cascade systems must be tested annually using this new tester. No other alarm test device is acceptable. The test must be conducted by an MSA Certified Repair Technician and any Audi-Larm not meeting the specific performance requirements employed by this test must be either overhauled or replaced.

MSA recently completed a field evaluation of Audi-Larms used on Air Masks. The evaluation indicates that there is a general deficiency in performing proper preventative Audi-Larm maintenance. Based on these results, MSA determined that there is a need for an annual Audi-Larm test and that it include Audi-Larms

used on all MSA respiratory equipment. Although you may consider your current Audi-Larm maintenance to be adequate, it is important that you make sure all Audi-Larms are tested annually on this new tester. This new Audi-Larm test requirement is in addition to the basic functional tests currently required before and after each use, and monthly as specified in the Air Mask and other instructions.

MSA Authorized SCBA Repair Centres can perform the Audi-Larm test on Air Masks.

Users of PortAire Systems and air-line cascade systems equipped with Audi-Larms should contact MSA Customer Service at 1-877-MSA-3473 to make arrangements for their Audi-Larms to be tested. In the future, an adapter will be available to enable Authorized Repair Centres to also test portable air-supply and cascade type Audi-Larms.

Flow Test Frequency

The required flow test frequency for all Air Masks is changing to **every year** in accordance with the new NFPA 1852 requirement for an annual flow test. It is recommended that when the next flow test becomes due, you have the certified technician conduct both the flow test and the annual Audi-Larm test at the same time.

As a reminder, all SCBA, portable air-supply systems, and air-line cascade systems must be maintained in accordance with the applicable instructions. This equipment will perform as designed only if maintained according to the instructions provided. We urge you to keep your equipment in proper operating condition.

For more information, contact Steve Pellegrini at 1-800-672-4678 or 905-219-2124 or the MSA Toronto Repair/Service Centre at 905-602-0338.

Questions & Answers: Wildfires

- Q.1 What is considered to be the only natural cause of wildfires?
- Q.2 Fill in the blank: If you live in a forested area, _____ metres around your home should be free from any shrubs, trees, deadfall or woodpiles.
- Q.3 If you live in a forested area, what kind of trees should you remove within the first 30 metres surrounding your home?
- Q.4 True or False: Single pane glass provides sufficient moderate protection from fire.

Answers on page 37

SummerSmart campaign launched

A new campaign aimed at raising public awareness about outdoor safety and the safe use of barbecues and fuels was launched on May 19 by Monte Kwinter, Minister of Community Safety and Correctional Services, and Fire Marshal Bernard Moyle.

The campaign, called SummerSmart, provides a number of public education materials aimed at generating increased public awareness of safety issues to reduce the number of avoidable incidents each summer. The campaign is a collaboration between the Fire Marshal's Public Fire Safety Council, the Technical Standards & Safety Authority (TSSA), Toronto Fire Services, and a coalition of public and private sector partners.

SummerSmart provides safety materials focusing on:

- the safe handling of propane, gasoline, kerosene and other fuels commonly used outdoors;
- practicing proper procedures and

following the manufacturer's instructions when using gas barbecues and other fuel-burning appliances; and

- recognizing and preventing carbon monoxide hazards at home, around the cottage or at the campsite.

The materials include down-

loadable safety lesson plans for Ontario teachers available at a new Web site, www.safetyinfo.ca, and safety kits distributed to approximately 900 communities via fire departments. A follow-up fall program is scheduled and continued programs are planned for the future.

Taking the message to the street

Throughout the spring and summer, fire departments across the province set-up displays at local Canadian Tire outlets and other locations as part of the Spring-into-Summer and SummerSmart campaigns. On the right, Ajax firefighter Ken Sherman discusses fire safety with a group of customers at a Canadian Tire store in Ajax.



At the left, a mother introduces her baby to a truck from the Clarington Emergency and Fire Service. Below, on the left, members of the Dryden Fire Service show off their ladder truck at the local Canadian Tire store. On the right, Ben Lappen from the South Frontenac Township Fire Rescue holds a SummerSmart poster with Graham Brooks of Brooks IGA in Verona.



Fire Marshal Bernard Moyle launches the SummerSmart campaign in Toronto's Nathan Philips Square as Minister of Community Safety and Correctional Services, Monte Kwinter, and Terry Boyko of the Toronto Fire Service look on.

Vehicle crashes cause more firefighter deaths than fires

Firefighters are more likely to die traveling to or from a fire than fighting one, and motor vehicles pose a greater hazard than flames, according to new data from the National Fire Protection Association (NFPA). According to the NFPA, in the United States 105 firefighters died while on duty in 2003, up from 97 in 2002, primarily because of last year's bad wildland-fire season.

Last year, 37 firefighters died while responding to or returning from alarms, while 29 died on the "fire ground" - the land or building where a fire occurs. That was the lowest number of firefighter deaths on the fire ground since NFPA began collecting the data in 1977, and the first time fire-ground deaths accounted for less than 30% of the total.

The NFPA's annual study of on-duty firefighters' deaths also found that 33 firefighters died in crashes in 2003 - more than in any other year since 1977.

In the most catastrophic incident, eight firefighters returning from a wildland fire were killed when their van crossed the centre line while passing another vehicle and collided head-on with a tractor-trailer truck, bursting into flames. Alcohol was a factor in the crash.

Of the 37 firefighters who died traveling to or from an incident, 24 were involved in collisions or rollovers. Eight of those firefighters were not wearing seat belts and at least six were speeding.

For example, a firefighter driving to the fire station to respond to a flooding emergency hydroplaned and struck a signpost. He was driving too fast for the weather

conditions and was not wearing a seat belt. In another fatal incident, the driver of a tanker lost control on a downhill curve, was thrown from the truck, and died when the truck rolled over him. Brake failure was a likely factor in the crash, and there were no seat belts in the vehicle.

"These data tell us that many firefighters' deaths are preventable," said Rita F. Fahy, Manager of Fire Databases and Systems for NFPA. "We owe it to the people who bravely respond to emergencies to make sure they get there safely. That means proper training and equipment, and adhering to standards. Obeying traffic laws, using seat belts, driving sober and controlling speeds would also dramatically reduce this awful toll."

NFPA has developed two standards to help fire departments est-

ablish safe-driving programs: NFPA 1002, *Standard on Fire Apparatus Driver/Operator Professional Qualifications* and NFPA 1451, *Standard for a Fire Service Vehicle Operations Training Program*.

Stress and overexertion remained the leading cause of fatal injury in 2003, as they have been almost every year. Last year, 47 firefighters died from stress-induced heart attacks (including eight that occurred traveling to or from an incident). That's more than the 37 heart attack deaths in 2002 and almost 10% more than the average of the past 10 years. Eleven of the 47 heart attack victims in 2003 were known to have heart problems.

This article is reprinted from an NFPA media release dated June 9, 2004. It is available on the NFPA Web site at www.nfpa.org/PressRoom/NewsReleases/FFDeaths/ffdeaths.asp.

Nine-year-old gets award

In recognition of nine-year-old Teddy Pennell's quick action to alert his family to a fire in the house on February 16, the Perry Township Fire Department presented Teddy with a certificate of achievement and a plaque. The presentation took place on March 17 at the Emsdale Fire Station. Pictured with Teddy are Deputy Chief John Millar (left) and Fire Chief Doug Hughes.

The first one up that morning to notice the fire, Teddy alerted family members before the smoke alarm went off. He went to the centre of



the house and yelled for everyone to get out. Teddy's actions prevented what could have been a tragedy. All six members of the boy's family made it to safety and the fire was extinguished with minimal damage to the home.

IFSAC accredits six courses/programs

BY LESLIE KENNEDY,
OFM EDUCATIONAL
CONSULTANT

In March, Ken Briscoe, North Carolina Fire and Rescue Commission, Department of Insurance; Rich Hall, Manager of IFSAC; and Gary Oliver, Captain and Chief Instructor, Canadian Forces Fire Academy, conducted an International Fire Services Accreditation Congress (IFSAC) site-team visit at the OFC and the OFM offices in Toronto. They examined six courses/programs:

- Ontario Firefighter Certification Program;
- Company Officer Certification Program;
- OFM Fire Investigator Certification Program;
- Advanced Fire Cause Determination and Investigation course;
- Public Fire and Life Safety Educators' Certification Program; and
- OFM Hazardous Materials – Op-



Bob French (standing), Executive Co-ordinator/Chair of Certification and Accreditation Programs with the OFM, discusses OFM programs with (from left) Gary Oliver, Ken Briscoe and Rich Hall during the IFSAC visit to the OFM's Toronto office.

erations Level course.

Their visit included a comprehensive review of the OFM's authority and ability to deliver these courses/programs, related Ontario legislation, job standards, course/program documentation, policies and procedures, security of sensitive information and test materials, and record keeping.

Accreditation of the courses/programs was voted on and granted by the General Assembly at the IFSAC annual meeting in April.

Tillsonburg gets new Deputy Fire Chief

The Town of Tillsonburg has announced the appointment of Richard Hayes as the new Deputy Fire Chief.

Hayes is a 15-year veteran of the fire service, having obtained most

of his emergency experience and education in Portage La Prairie and Gladstone, Manitoba.

In 2001, Hayes moved to London, Ontario where he worked as a

See Town on page 34

Disposal of ionization alarms

BY ROBERT HARPUR,
OFM FIRE PROTECTION ENGINEER

Numerous smoke alarms have a label stating they should be returned to the manufacturer for disposal. However, many homeowners do not know who made their smoke alarm or do not know where to send it. Typically, they turn to the fire department for an answer. With the increasing emphasis on replacing smoke alarms after 10 years, fire departments can expect more inquiries of this nature.

Section 6 of the Nuclear Substances and Radiation Devices Regulations permits a person, without a licence, to dispose of smoke alarms containing a nuclear substance if it does not contain more than 185 kBq of americium 241. The becquerel (Bq) is the unit of radioactivity in the International System of Units and is equal to one disintegration or nuclear transformation per second. Because the becquerel is a very small unit, kilobecqueries (kBq), equal to 1,000 nuclear transformations per second, are often used to quantify a level of radiation.

Residential ionization smoke alarms typically contain up to 33 kBq of americium 241. This is comparable to the background radiation already present in many materials.

The Canadian Nuclear Safety Commission has confirmed that individual smoke alarms con-

See Disposal on page 29

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.

March 2004: 9 fatal fires resulting in 9 fire deaths

Age Group	Male	Female	Total
0-15	0	0	0
16-64	3	4	7
65 and over	1	1	2
Total	4	5	9

Fire Cause	Time of Day		
Accidental	1	0001-0800	3
Undetermined	1	0801-1600	1
Under Investigation	5	1601-1800	1
Incendiary	2	1801-0000	4

Locations of fatal fires: Amherstburg (1); Georgina (1); Hastings Highlands (1); Innisfil (1); Kawartha Lakes (1); Ottawa (2); Toronto (2).

April 2004: 11 fatal fires resulting in 11 fire deaths

Age Group	Male	Female	Total
0-15	0	1	1
16-64	4	0	4
65 and over	1	5	6
Total	5	6	11

Fire Cause	Time of Day		
Accidental	4	0001-0800	4
Undetermined	0	0801-1600	5
Under Investigation	5	1601-1800	0
Incendiary	2	1801-0000	2

Locations of fatal fires: Blind River (1); Brantford (1); London (1); Mississauga (1); Niagara Falls (1); Thunder Bay (1); Toronto (2); Welland (1); Windsor (2).

May 2004: 5 fatal fires resulting in 5 fire deaths

Age Group	Male	Female	Total
0-15	0	1	1
16-64	4	0	4
65 and over	0	0	0
Total	4	1	5

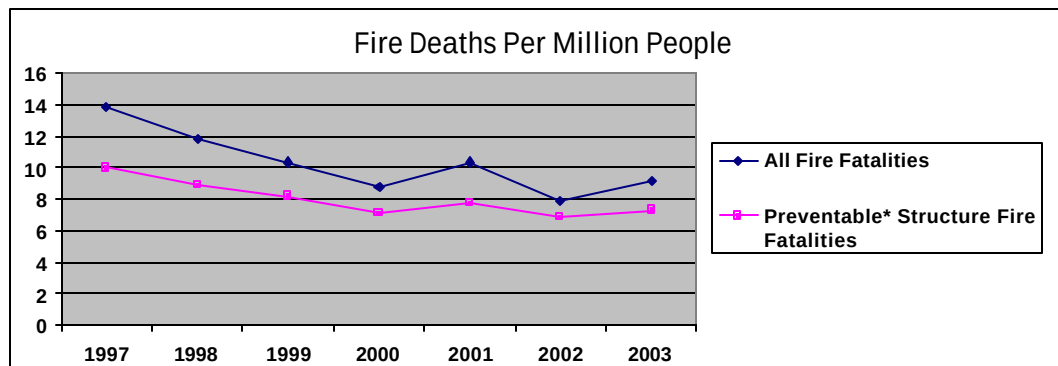
Fire Cause	Time of Day		
Accidental	1	0001-0800	2
Undetermined	0	0801-1600	2
Under Investigation	4	1601-1800	1
Incendiary	0	1801-0000	0

Locations of fatal fires: Addington Highlands (1); Kenora (1); Renfrew Township (1); Sault Ste. Marie (1); Smith-Ennismore-Lakefield (1).

Ontario's fire death rate tumbles

As the figures on the right indicate, Ontario's fire death rate dropped by 33% between 1997 and 2003, according to statistics released by the OFM. Over that period the number of deaths in all fatal fires (per one million people) declined from 13.8% to 9.2%. In preventable fires (fires that were not deliberately set), the death rate declined by 27%, from 10% to 7.3%.

The decline is attributed, in part, to successful fire prevention and protection programs across the province.



	1997	1998	1999	2000	2001	2002	2003	Change
All Fire Fatalities (actual number)	13.8% (155)	11.8% (135)	10.3% (119)	8.7% (102)	10.3% (122)	7.8% (94)	9.2% (113)	-33%
Preventable* Structure Fire Fatalities (actual number)	10% (112)	8.9% (101)	8.2% (94)	7.1% (83)	7.7% (92)	6.8% (82)	7.3% (90)	-27%
Provincial Population (millions)	11.2	11.4	11.5	11.7	11.9	12.1	12.3	

* Preventable: Fires that were not deliberately set.

Safer cigarettes one step closer

The federal government is one step closer to making cigarettes more fire-safe. On March 31, the government passed Bill C-260, which designates cigarettes as a dangerous product under the Hazardous Products Act. This designation is required before legislation forcing cigarette manufacturers to produce safer cigarettes can be passed.

With the bill passed, Health Canada is proposing regulations under the Tobacco Act that would require tobacco manufacturers to meet an ignition propensity standard for all cigarettes manufactured in Canada or imported for sale in Canada.

Ignition propensity is a measure of the ability of an ignition source, such as a cigarette, to ignite an object, such as a couch. Ignition propensity can be decreased by reducing the burn temperature of the cigarette or reducing the amount of fuel available to be burnt so that the cigarette extinguishes itself if left unused.

“Reduced ignition propensity does not mean fire-safe,” said a statement released by Health Canada. “It is impossible to make a burning object completely fire-safe. However, Health Canada feels these regulations will save lives by significantly reducing the number of fires started by cigarettes.”

Smokers’ materials are the leading cause of fire-related fatalities across the country. The Canadian Association of Fire Chiefs reported for the period 1995-1999 that at least 14,030 fires in Canada were started by smokers’ materials, which includes cigarettes, cigars and pipes. These fires killed 356 people, injured 1,615 and cost more than \$200 million in property damage. The victims of these fires are often among society’s most vulnerable, such as children, the elderly and the poor.

The standard proposed by Health Canada is the same used by the State of New York. On December 31, 2003, New York became the first

jurisdiction in the world to enact legislation mandating that the ignition propensity of cigarettes be reduced. By June 28, 2004 all cigarettes sold in New York had to have a standard of 25 per cent full length burns when tested on 10 layers of filter paper using ASTM method E2187-02b Standard Test Method for Measuring the Ignition Strength of Cigarettes.

In this test, a lit cigarette is placed on 10 layers of standard laboratory filter paper. The procedure is repeated 40 times and the per cent failures is calculated. Failure is defined as the cigarette burning its full length.

Under Health Canada’s proposals, tobacco manufacturers would have the option to use the manufacturing process or technical design of their choosing to achieve the standard. Options available to manufacturers include:

1. Reducing tobacco density, thereby reducing the amount of available fuel.
2. Reducing paper porosity, which is related to a reduction in the availability of oxygen necessary to fuel the smouldering process.
3. Decreasing the circumference of cigarettes, which reduces the available tobacco, paper and the amount

See Ignition on page 12



Fire Marshal Bernard Moyle, left, presented Trevor Gibson, of Abitibi-Consolidated, with a Fire Marshal's Public Fire Safety Council award at the Fort Frances conference. The award recognized the company's financial support of district safety initiatives, including the Risk Watch program. Bev Gilbert (right), OFM Manager of Public Education and Media Relations, looks on.

(Photo courtesy of the Fort Frances Times)

Times are a-changin' in Fort Frances

Fort Frances hosted the “Times they are a-changin’, Injury Prevention Solutions” conference on April 29 and 30. Attendees heard presentations by Shaun Belding of Belding Skills in Ottawa on how to deliver effective presentations; by Dr. Val Mann from the Kenora Public Health Unit on the impact of unintentional injuries in northwestern Ontario; and Deanna Pacheco, Vice-Principal of the Riverview Public School in Dryden, on updates to the Risk Watch® curriculum.

The next Public Fire and Life Safety Educators’ conference, entitled “Naturally Wonderful”, will take place in Pembroke on November 3, 4 and 5. For more information, see page 30.

Ignition standard would be a first

continued from page 11

of contact between the cigarette and the material that could light on fire.

4. Removing or reducing burn additives that enhance the burn rate of cigarette paper.

5. Putting “speed bumps” on cigarettes. Reduced ignition propensity cigarettes currently available in the U.S. and New Zealand use a patented paper, which

has concentric bands of ultra-thin paper applied on top of traditional cigarette paper. The manufacturer claims that these bands or rings act as “speed bumps” to slow down the rate at which the cigarette burns as the lit end crosses over them.

If Health Canada’s proposed regulations become legislation, Canada would be the first country in the world to have a national cigarette ignition propensity standard. The proposed regulations have entered the first phase of public consultation.

For more information on reduced ignition propensity cigarettes, visit www.gosmokefree.ca.

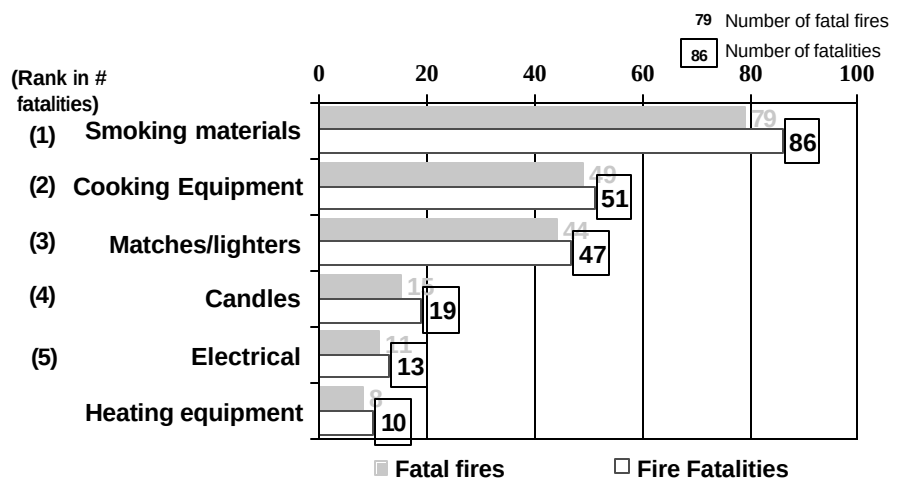
Excerpts of this article were taken from Health Canada’s Web sites at http://www.hc-sc.gc.ca/english/media/releases/2004/2004_19bk1.htm, and <http://www.hc-sc.gc.ca/hecs-sesc/tobacco/legislation/rip/04.html>.

Lit smokers’ materials cause of most fire deaths

According to the OFM’s statistical review of fire losses, the primary cause of fire deaths in Ontario is smokers’ materials. As the graph on the right shows, between 1998 and 2002, these materials caused 38% of preventable fatal home fires and 38% of fire fatalities. Often, victims of these fires are children and adults living with people who smoke.

Between 1995-1999, the majority of fire deaths in Ontario that involved cigarettes resulted from one of two common scenarios. As described below, often, these scenarios also involved alcohol use.

Preventable Fatal Home Fires in Ontario, 1998-2002 (totals) by Ignition source



Preventable home fires – fires in residential properties that have NOT been deliberately started

Scenario #1

Property Type:	Residential
Area of Fire Origin:	Living area
Ignition Source:	Lit smoking articles, matches or lighters
Object First Ignited:	Upholstered furniture (13%), other objects (8%)
Time of Occurrence:	Night
Victims:	Asleep or impaired adults, children living with adults

Scenario #2

Property Type:	Residential
Area of Fire Origin:	Sleeping area
Ignition Source:	Lit smoking articles, matches or lighters
Object First Ignited:	Bedding (5%), other objects (5%)
Time of Occurrence:	Night
Victims:	Asleep or impaired adults, children living with adults

More lighters to be child resistant

New rules will include utility lighters, but those costing more than \$2.50 are excluded

Health Canada has proposed new regulations that will require multi-purpose utility lighters, such as candle lighters, to be made child resistant.

Currently, the Hazardous Products Act requires that disposable lighters valued less than \$2.50 be child resistant, but excludes multi-purpose and novelty lighters.

"The proposed regulations focus on key performance issues of multi-purpose utility lighters," said Michael Gvildys, Product Safety Officer with Health Canada. In addition to making utility lighters child resistant, the proposed changes include reducing the after burn (the amount of time the lighter stays ignited after the trigger has been released) of utility lighters to a maximum of two seconds, and reducing the flame height of burning utility lighters to regulation standards, Gvildys said. Currently, regulations prescribe a maximum flame height of 150 millimetres for disposable lighters, but Health Canada's new proposals seek to lower that height to 120 mm.

The proposals would also require that multi-purpose lighters clearly display the name and address of the manufacturer if made in Canada, the name and address of the importer if made outside of Canada, and the following warning in both English and French: "KEEP OUT OF REACH OF CHILDREN/TENIR HORS DE LA PORTÉE DES

ENFANTS".

Current regulations require that this information be displayed on all disposable lighters. Those that do not display this information are illegal and should be reported to Health Canada.

However, Health Canada's proposed regulations do not address novelty lighters. Currently, there are no regulations in Canada to make lighters designed like toys and other gadgets child resistant, even though these lighters pose a greater danger to children because they are more readily drawn to them. Current U.S. regulations do require that novelty lighters be child resistant.

Nor do current or proposed regulations address luxury lighters – those that manufacturers sell for more than \$2.50 or that have an import duty of more than \$2.50. "It's believed that lighters costing more than \$2.50 are luxury items that people do not leave lying around the house," Gvildys said. It is assumed that kids have limited access to them and that the child resistant standard is not necessary.

"Since March, 2003, we've seized 250 lighters at retail outlets across the province," Gvildys said. "And just in the last few months we've seized two shipments at the border in Windsor – one shipment of 95,000 units and another of 13,000 units." These lighters did not have the bilingual warning and the manufacturers' information on them.

Gvildys said that most illegal lighters come through the U.S., where regulations concerning child resistance exist, but not concerning manufacturer information and warning labels.

Canada's regulations concerning child resistance are based on American regulations, which deem a lighter child resistant if 85% of a test group of children are unable to operate the lighter. Such a standard does not account for the other 15% who may be able to light the lighter.

"People need to remember that child resistant doesn't mean child proof," Gvildys said. "I'm not sure a child proof lighter is possible, but the original intent of the American standard was to reduce the number of fires started by kids, and it has achieved that goal."

Health Canada's proposals have reached the end of the first round of public consultation. Gvildys could not say when the proposals would become law.

To contact Health Canada to report illegal lighters, call 416-973-1748 or visit their Web site at www.hc-sc.gc.ca/english/iyh/products/lighters.html to find the Product Safety Office nearest you. To comment on Health Canada's proposed regulations, contact Douglas Jacques by phone at 613-946-9477 or by email at douglas_jacques@hc-sc.gc.ca.



Fire Marshal Bernard Moyle presented the keynote address at the Ontario Association of Fire Chiefs conference in Toronto on May 11.

Smoke alarms provide three minutes escape time

Study reveals that escape time is much less than previously thought

A new, comprehensive study of smoke alarms has revealed that the escape time provided by alarms in flaming scenarios is just three minutes, a dramatic drop from 17 minutes calculated in previous tests.

"It is ... clear that fire growth in the current tests is significantly faster than in the earlier tests," according to a report on the study's results, a vital fact for those communicating fire safety messages to the public.

The study measured the performance of both ionization and photoelectric types of smoke alarms and alarm installation arrange-

ments in two types of houses to determine the effectiveness and optimal placement of alarms. It found that smoke alarms of either type installed on every level of the home "generally provide the necessary escape time for different fire types and locations." But the public needs to realize that escape time is much less than previously thought.

The study also concluded that adding smoke alarms in bedrooms increased the escape time provided, especially for smoldering fires and for fires starting in a bedroom.

"Both common residential smoke alarm technologies (ionization and photoelectric) provided positive escape times in most fire scenarios," the report states, "with the ionization type reacting earlier to flaming fires and the photoelectric type reacting earlier to smoldering fires."

However, the amount of escape

time provided during the study was consistently less than that of previous tests. This is the result of a combination of factors, including faster fire development times for today's products that provide the main fuel sources for fires, such as upholstered furniture and mattresses; different criteria for time to untenable conditions within the home because of fire; and an improved understanding of the speed and range of threats to tenable conditions.

Activation times for other fire detection technologies were also collected. The study found that "CO alarms respond best to fires which produce considerable quantities of carbon monoxide during the combustion process, i.e. smoldering fire scenarios and the closed-door flaming mattress. Tell-tell sprinklers and heat alarms responded to the flaming fire scenarios as well as to the smoldering fire scenarios after transition to flaming combustion. Activation times of these devices support the current practice of use only in conjunction with smoke alarms."

The study also collected data on nuisance alarms in residential settings resulting from typical cooking activities, smoking or candle flames. This data reinforces current practices advising that, if possible, alarms not be installed close to cooking appliances. "Homeowners ... that frequently experience nuisance alarms would do well to maximize [the alarm's] distance from cooking appliances while keeping it in the area to be protected. It was observed that

See Study on page 18

Technical changes to Fire Code

On May 17, Walter Miller, Chair of the Fire Code Technical Committee for Parts 1, 2, 6-9, and Brian Maltby, Chair of the Committee for Parts 3-5, presented to Fire Marshal Bernard Moyle the Reports of the Technical Committees on the Objective Based Codes and the Technical Changes to the Fire Code.

Pictured, Mr. Miller prepares to



hand the report to Fire Marshal Moyle as Deputy Fire Marshal Doug Crawford looks on.

Female juvenile firesetters

Girls may be more likely to set fires in response to traumatic circumstances, under the influence of substances

BY BRIAN BEECH, PH.D., R.S.W., AND
SHERRI MACKAY, PH.D., C. PSYCH.

Approximately 10% of juvenile firesetters are girls. As TAPPC (a comprehensive program for at-risk children that combines fire safety education, risk assessment and treatment to those youth actively engaged in fire-related activities) spreads into more communities across the province and the country, more needs to be known about female juvenile firesetters. To this point, most fire-setting research has focused on the male majority.

To help fill this knowledge gap and offer some guidance to fire education and mental health providers in their complementary roles, we undertook an exploratory and comparative study of 208 girls and 1,074 boys aged 4 to 18 from across Ontario referred for mental health treatment and identified as having fireplay and/or firesetting in their histories. The results that follow suggest important differences and similarities between males and females with past fire involvement, and bear important implications for our work with girls who set fires.

The results can be divided into child and family characteristics derived from standardized intake questionnaires. In terms of child characteristics, girls tended to be older (average age of girls 12.75, boys 11.57) and mostly in their teens, compared with boys. Both groups reported equally high levels of difficulty in terms of acting-out or what are often referred to as externalizing behaviours, such as

oppositional and conduct difficulties.

In contrast, boys appeared to be struggling more with what are referred to as internalizing difficulties, such as mood and anxiety. Both groups reported that they were struggling almost equally with issues of low self-esteem and relational difficulties. The most dramatic difference, and one that bears particular relevance for those of us working directly with these youths, is that while a significant proportion of both groups reported physical abuse histories (38.3% of girls, 30.6% of boys), the girls reported histories of sexual abuse much more commonly than boys (28.9% of girls, 7.8% of boys). More parents of girls reported having concerns for the sexual behaviour of their daughters than their sons (36.6% for girls, 24% for boys). Furthermore, many more girls than boys reported illicit drug use, alcohol consumption and tobacco use.

In terms of family characteristics, boys and girls appeared to have more in common than previously thought. Most youths in both groups resided in two-parent, lower income households (average income \$20-25,000). Over 13% of the parents of both groups reported having criminal histories themselves. The overall quality of family relations was similarly poor for both groups. Mothers of girls and boys reported comparable difficulties with depression; however, more mothers of girls reported concerns with respect to their own drinking. Parents of both groups reported smoking, on average, 10

or more cigarettes a day.

Taken as a whole, the findings from this sample suggest that while girls and boys who have engaged in firesetting behaviours appear to come from similarly troubled families, the prevalence of abuse and substance abuse appears greater among girls. These findings are consistent with previous research that suggests that some girls appear to set deliberate and targeted fires in response to traumatic circumstances, often under the influence of substances. Sadly, the research on adult female firesetters paints a rather bleak future for these girls, no doubt in part due to the implications of abuse in the context of troubled family situations.

The implications for fire education and prevention personnel are worth noting. While not all girls who set fires have been abused, awareness of and sensitivity to the possibility of abuse and other forms

See Substance on page 34

Minister addresses Council meeting



Minister of Community Safety and Correctional Services, Monte Kwinter, spoke to the Fire Marshal's Public Fire Safety Council meeting held on April 14. Above, Minister Kwinter and Fire Marshal Bernard Moyle listen to a question from the meeting floor.

Keeping the message on target

This is the first in a series of articles appearing in the next several issues. The series will provide information and useful techniques to help develop effective public education programs. The premise of the series is the understanding that different segments of the public require specialized public education programs that address issues specific to each segment. Different public education techniques specifically targeting those issues must be used. Each article will focus on a specific group, and will provide information on how best to raise public awareness about fire prevention and safety within it. This article is a general introduction to planning effective public education programs.

Public education is a central component of the fire service's fire prevention and protection activities. But too often, public education programs lack the focus and direction required to produce effective results.

Programs that positively affect the behaviour of their targeted audience require preliminary program planning – i.e. setting goals, projecting outcomes and planning activities – that will help focus efforts and resources where they are needed most.

“The key to a successful public education program is careful planning,” said Bev Gilbert, Manager, Public Education and Media Relations at the OFM. “It’s extremely important to determine the needs of the community and to learn about the audience. This planning will help ensure the program is practical and effective.”

Before launching into a fire prevention and protection program, the first step in such planning includes conducting an analysis of the fire profile in the targeted community.

Local and provincial fire statistics about fire deaths and injuries, and the causes of fires can help identify

particular trends and problems that require attention.

Setting Goals

Once trends and problem areas have been identified, clear program goals should be set to provide direction and focus for everything that follows. When setting a program's goals, there must be recognition of where you are now and where you want to be. The goals should be generally long term and broad in nature, and express what changes you want to see happen. Goals must be the result of an identified need and communicate desired change. When setting goals within a public education program, you are often concerned with creating behavioural and/or attitudinal change. For example, your goals may deal with raising awareness about home fire safety hazards, or developing and practicing home escape plans.

Projecting Outcomes

Once you have established your program's goals, it is important to identify your expected outcomes. Expected outcomes are shorter term than goals, are often more specific, have targeted timeframes

for completion, and are more easily measured. Over time, they will contribute to the realization of the program's goals, e.g. you might say that over the next 12 months, your expected outcome is that smoke alarms are installed and maintained in the homes of the older adults in your area.

Planning Activities

When you have identified your program's goals and expected outcomes, consider what initiatives or activities you will need to implement in order to achieve the desired changes.

Consider what financial, human and physical resources will be required to carry out this activity and ensure that you have acquired them before proceeding. Some possible activities may include:

- conducting home fire safety checks in areas and neighbourhoods where your targeted population lives;
- distributing fire safety materials and making presentations to groups within your targeted population;
- developing an effective media program and providing public service announcements to radio, television, newspapers and other publications;
- recruiting volunteers in the community to visit and share information with your targeted population.

Evaluating Your Program

The final step in the implementation of any good program is evaluation. An efficient method of evaluation will ensure that the program is as effective as possible,

See Planning on page 17

OFM News Update

Patricia Curl Becomes Computer Co-ordinator

Patricia joined the OFM's Data, Applications and Technical Support team on May 18. Welcome Patricia.

Robert French Retires

Bob joined the fire service in 1966 and worked as a firefighter, Captain of suppression, Fire Prevention Officer, Occupational Health and Safety Officer and Fire Inspector in Nursing Home Inspection Services. He came to the OFM in 1983 as a Fire Services Adviser for the Districts of Sudbury/Manitoulin and continued to serve in the roles of Supervisor Fire Advisory Services, Assistant Chief Fire Advisory Services, Regional Manager Field Services and Executive Co-ordinator/Chair Certification and Accreditation programs. While Bob doesn't officially retire until September, he will be leaving the OFM on June 25. Best wishes to Bob and his wife, Dyan.

Leslie Kennedy will be overseeing the certification and accreditation programs until there is a permanent appointment. She may be contacted through the Certification Office at 413-325-3142.

Barry Kendall Retires

Barry retired on March 31 after 32 years with the Ontario public sector. He worked seven years at the OFM as a librarian at the Toronto office. Congratulations and best wishes to Barry and his family.

Vincent Lu Becomes Program Specialist

Vincent joined the OFM's Field Fire Protection Services unit on June 1. Welcome Vincent.

Connie Nakay Becomes New HR Co-ordinator

Connie began May 17 as the HR Co-ordinator. Connie was previously with the Ontario Media Development Corporation. Welcome Connie.

Susan Shannon Becomes Fire Protection Specialist

Susan Shannon started on April 18 as a Fire Protection Specialist in Field Fire Protection Services. Susan was with the Township of Georgian Bay prior to joining the OFM. Welcome Susan.

Linda Williams Resigns

Fire Investigator Linda Williams has resigned from the OFM effective July 30. Thanks to Linda for her contributions to the OFM and best wishes in all her future endeavours.

Planning is key to effective public education

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and provide you with the information you will need to justify the time, staff and resources devoted to it.

Effective program evaluation can include keeping track of the activities involved. For example:

- How many people attended presentations?
- How many people were trained during any given program?
- How many times were public service announcements used by the media?
- How many smoke alarms were distributed to a specific population within the community?
- What new success stories have occurred?
- Are fire loss statistics changing for this specific group? (e.g. less fires, more working smoke alarms, fewer

burn injuries or deaths)

Once this information has been compiled, ask yourself the following questions:

- Has the anticipated change happened?
- Have the goals been met?
- Have the outcomes been realized?
- Has progress towards the goals or the outcomes occurred?

"Plan to evaluate your program right from the beginning," Gilbert said. "When evaluating, you have to collect information to determine if you have been successful - if your program actually worked. You can also use this information to modify or revise your program if necessary."

Know Your Audience

Finally, in order to be able to affect the attitudes of your target population, you need to have a good

understanding of who your audience is and which issues are affecting them. This will help you determine which messages will have the biggest impact on them and how best to deliver them. When planning an education program, it is important to meet with a focus group of representatives to find out about your group and ask for input. Explain your goals and listen carefully to what they tell you. Let the focus group review the materials you plan to use and ask for feedback. You could even recruit someone from your focus group to deliver your materials at community functions.

The information in this article is taken from a document called "Planning for Success", produced by the OFM as part of the Older & Wiser public education package.

Fire prevention started with Chief

The Cambridge Fire Department has become known for its strong public education and fire prevention programs. Chief Terry Allen has been the driving force.

It was June 1989, about one year after Terry Allen became Deputy Chief of the Cambridge Fire Department. He was waiting for the coroner to arrive at the scene of a fire in which three people had died when he received, what he calls, a wake-up call.

"That scene really hammered it home," Allen, now Chief in Cambridge, said in a recent interview. "Up until that point I always had an inkling that fire prevention through public education was the way of the future for the fire service, but when I saw that scene, I knew

it was time to get aggressive."

The fire had been caused when an adult who had been drinking started cooking oil on the stove. "That fire didn't need to occur," Allen said, "and those deaths should never have happened."

Since that time, the Cambridge Fire Department has become what Allen wanted at that fire scene - aggressive about fire prevention through public education. The department has developed a strong public education division respons-

See Programs on page 19

HELP YOUTH BE HEROES

A hero puts themselves on the line to save a life... even their own.

The SMARTRISK Heroes show helps youth learn how to be their own heroes by managing injury risks in their everyday lives through smart thinking. This innovative multimedia roadshow has been seen by almost a million students across Canada and around the globe.

Help the youth in your community become heroes.
Book the SMARTRISK Heroes show.

"The SMARTRISK Heroes show, featuring key messages on fire prevention, fire detection and escape, delivered by fire service professionals, is an excellent way to effectively reach and teach youth about fire safety. I would highly recommend this show to any community."

*Bev Gilbert, Manager,
Public Education and Media Relations,
Office of the Fire Marshal of Ontario*



Now Booking for 2004-2005

Contact Kyle Brooks at (416) 596-2703 or heroes@smatrisk.ca
www.smartrisk.ca

Study addresses concerns about alarms

continued from page 14

ionized alarms had a propensity to alarm when exposed to nuisance aerosols produced in the early stages of some cooking activities, prior to noticeable smoke production."

According to the report, the study, conducted by the National Institute of Standards and Technology in the U.S., the United States Fire Administration, the U.S. Product Safety Commission, Underwriters Laboratories, and other sponsors, was undertaken to address concerns in recent years about the effectiveness of smoke alarm technology, about the effects of the number and location of alarms in a home, and about how best to reduce nuisance alarms. Tests were conducted in actual homes with representative sizes and floor plans, using actual furnishings and household items for fire sources, and tested smoke alarms currently sold in retail stores. The study followed the test design used in a seminal set of tests on smoke alarms conducted in 1975-76 called the Indiana Dunes tests.

The full report about the study's findings and data collected during the study are available online at <http://smokealarm.nist.gov>.

Programs, business case must be based on statistics

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ible for a series of highly effective outreach programs that engage the various communities – from young to old – in Cambridge.

“We’re pretty progressive when it comes to public education,” Jon Rehill, Public Education Officer for Cambridge, said. “And without question, it’s because of Chief Allen’s strong vision and the importance he places on public education.”

Shortly after becoming a Captain in 1984, Allen sensed the importance of public education.

“I approached the Chief at the time about going into local schools and talking to kids about basic survival techniques,” Allen said. “There wasn’t a lot of public education happening at the time, but there was a program in North York that I was able to adapt here, and things started to go from there.”

The more work Allen did with area schools, the more interest other firefighters in his department showed in what he was doing. He soon had a team of six or seven firefighters who wanted to get involved and help deliver the school programs.

In 1992, Allen became Chief of the department and set the goal of having one full-time staff member working on public education. He seconded firefighter Bill Donahue for a three-month period and together they started making a business case for a full-time position.

“We had to show the City that there was a need for public education and that it could have a huge impact,” Allen said.

They slowly started implement-

ing programs and documenting their successes. By 1994, Allen had received funding for a full-time position.

“At the time, we had a response time of under five minutes,” Allen said, “and yet we were still seeing deaths due to fire. It was obvious that the only way to prevent deaths was through prevention and public education, so it wasn’t hard to make the case and get buy-in from other firefighters and the community.”

Allen said that once the culture for public education had been created, the key to successful programs was, and still is, to define fire



Chief Terry Allen

problems in the community based on area statistics. Once at-risk populations and issues are identified, public educators can develop targeted programs and track results. A solid business case can then be developed to take to the municipality for support.

“No matter how pessimistic a Chief or Council may be, if they are shown a strong business plan, it’s going to be very hard for them to ignore it,” Allen said.

“Councillors and the public are demanding that taxpayers’ money be used effectively,” Rehill said. “It’s mandatory that resources be allocated properly, and the only way to do that is to create programs that are based on facts and data.”

“Firefighters are in a unique position to deliver safety messages,” Allen continued, “because the public trusts us. They know we’ve been on the front lines - that we’re the experts - and it gives us credibility.”

Home inspection blitz ends with BBQ

On May 15, the Cambridge Fire Department held a blitz day in which firefighters knocked on doors in the community and distributed fire prevention materials.

“We looked at fire prevention data over the past five years,” Public Education Officer Jon Rehill said, “and found that cooking fires were the leading cause, especially in certain parts of the city. By mapping the locations of incidents, we were able to pinpoint high risk areas and focus a home inspection blitz.”

At the end of the blitz day, the fire department held a community barbecue to help foster



relations with the public and further spread their fire safety messages.

Pictured above, firefighters Jamie Rychard (on truck, behind kids) and Kelly Willemze (third from right), Cambridge Councillor Rick Cowsill (far left), and Mayor Doug Craig (second from right) show a Cambridge resident and kids a fire truck.

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, 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.

Emergency Preparedness:

Hazardous Materials Technician course

BY KAREN MORRIS,
OFM EDUCATION CONSULTANT, ACADEMIC
STANDARDS AND EVALUATION

In order to continue to meet the provincial Emergency Preparedness mandate, the OFM, in collaboration with the Ottawa Fire Department, recently delivered a *Hazardous Materials Technician* course to meet the NFPA Standard 472.

The pilot course was taught by two program specialists from the Ontario Fire College, assisted by five members of the Ottawa CBRN (Chemical, Biological, Radiological or Nuclear) team.

In order to qualify to attend the course, all participants must have previously been trained to the NFPA 472 Operations level in Hazardous Materials.

Learners developed knowledge, skills and abilities to respond to various hazardous materials incidents.

The course covered operations performed by a team of emergency response personnel to gather and analyze situational, product and container information to control the release of a hazardous material, effect rescue, recovery, decontamination of victims and assist with scene restoration and decontamination of property.

The course involved classroom theory and hands-on practical exercises in the use of air monitors, radiation detectors, a Level A protective suit, decontamination equipment and other specialized equipment.

A major component of the classroom content related to the recognition of various hazards by the type of container/tank, symbols, hazardous materials classes, and using materials from technical information centres, Hazmat data bases, material safety data sheets (MSDS) and reference manuals. The intense two-week course ended

with an “emergency spill scenario” that tested the knowledge and skills acquired throughout the course.

Hazardous Materials Technician Course

Firefighters from Windsor, Toronto and Ottawa who successfully achieve the Technician Level may be eligible to become members of the CBRN Provincial Response (or Level 3) Teams. These teams would respond to a hazardous materials or terrorist emergency that was declared to be beyond the scope of a local response and thus designated a provincial emergency.

Another course currently being offered by the OFM to meet the Emergency Preparedness mandate is the *Multi-agency Senior Officer/Manager* course that is being offered in eight communities across the province in 2004.

This course prepares the decision-makers from the various emergency response agencies (such as OPP, municipal police, ambulance, hospital, public health, fire, Emergency Management Ontario and Environment Canada) to plan jointly for a complex or major emergency in their community.

For more information on the Emergency Preparedness Project and related courses, contact Rose Barg at the OFM, Academic Standards and Evaluation Unit, at 416-325-3100.

Simulation prepares response teams for 'dirty bombs'

BY KAREN MORRIS,
OFM EDUCATION CONSULTANT, ACADEMIC STANDARDS AND
EVALUATION

The OFM, the Ontario Provincial Police (OPP) and Emergency Management Ontario (EMO) have developed integrated Provincial Emergency Response Teams as components of the overall Provincial Response Strategy. These teams are prepared to respond to significant chemical, biological, radiological and nuclear (CBRN) emergencies. The Provincial CBRN Response (or Level 3) Teams, who are trained to the NFPA 472 Technician Level, come from Toronto, Windsor and Ottawa Fire Services. These teams are prepared to respond to terrorist or hazardous materials incidents throughout the province to assist municipalities in the event that a major CBRN emergency is declared in their community by the municipal council.

In addition, the OFM has developed partnerships with a number of communities across the province that can now provide NFPA 472 Operations Level (or Level 2) response to support the Level 3 Teams. These Level 2 teams include Thunder Bay, Sault Ste. Marie, North Bay, Peterborough and Cornwall.

The OFM organized a four-day emergency preparedness training and evaluation exercise at the Ontario Fire College in May 2004. This provided an opportunity for three Provincial CBRN Response Teams, the OPP Provincial Emergency Response Team (PERT) and Muskoka EMS to demonstrate a unified interagency response to a simulated large-scale complex emergency in Ontario. EMO staff and

representatives of the Level 2 Operations Teams attended the final exercise as observers.

Intensive training

During the week of May 10, 2004, 50 participants met at the Ontario Fire College (OFC), for an intensive training course led by Larry Crang, an OFM Program Specialist, assisted by Doug Silver (Toronto), Mike Mio (Windsor) and Greg Golds (Ottawa). The course was designed to integrate previous lessons learned as well as prepare and practice response to major CBRN incidents.

A major focus of the week was on the response to a

See First on page 22

Fire services certification update

(Statistics as of June 2, 2004)

Firefighter Certification Program

	Departments	Firefighters
Enrolled	188	15,062
	Career Firefighters	Firefighters
Total Certified	968	446

Fire Prevention Officer Certification Program

	Departments	Fire Prevention Officers
Enrolled	74	442
Total Certified		37

Company Officer Certification Program

	Departments	Company Officers
Enrolled	37	733



Firefighters practice decontamination methods at the CBRN training on May 12.

(Photo courtesy of Karen Morris)

First responders participate in CBRN training at College

continued from page 21

“dirty bomb” and the resulting radiation contamination, taking into consideration the role of the OPP at any terrorist or bomb incident. Participants benefited from hands-on practice with various types of radiation detectors. As well, participants received training on radiation hazards from a private sector radiation specialist and an expert from the Canadian Nuclear Safety Commission.

Another major focus of the training included the implementation of a common mass decontamination procedure that will be followed by all multi-agency CBRN teams across the province. Collaborative communications procedures and a common accountability system were also a focus of the exercise. The expectations for using these systems are contained in *CBRN Response Team Standardized Operating Guidelines* designed specifically for use by the teams.

Simulated CBRN exercise

As part of the simulated major exercise, the Provincial CBRN Response Teams were summoned to stand by after a threat had been made against a prominent foreign dignitary who was attending a meeting at a Muskoka resort. This approach enabled the teams to assemble on site, review equipment, assign roles and make plans prior to the initiation of an actual incident.

Following an explosion that was determined to be a bomb, the teams were activated. As the incident involved an internationally protected person, it fell under the Security Offences Act legislation; the Response Teams were immediately authorized to respond.

The initial OPP PERT on the scene had received intelligence reports that a local group, known to be experimenting with radio-active materials, had made threats. Radiation detectors confirmed the presence of radiation on the ambulatory victims. During the exercise, participants were fortunate to have students from the *Pre-service Firefighter Education and Training* program at Georgian College to act as victims.

The Incident Commander was in contact with the mutual aid system fire co-ordinator who, after determining that the regional capability was overwhelmed, called the Provincial Operations Centre (POC), requesting assistance. A radiation specialist, research specialists and additional decontamination resources were accessed through the POC. Equipment provided by the OFM included a mobile air supply and self-contained breathing apparatus, common radio communications equipment, chemical response suits, as well as decontamination and monitoring equipment.

Through the combined efforts of the Provincial CBRN Response Teams, the OPP PERT Team, and local EMS, the situation was controlled. This included confirming the radioactivity, securing the premises, and rescuing and decontaminating casualties. This was followed by triaging and treating the victims and the collection of evidence, as well as information

from the victims.

Incident management

The exercise gave team members an opportunity to practice the implementation of a common Incident Management System (IMS) and Accountability System during a simulated emergency that involved an act of terrorism. They practiced a seamless multi-agency response to a major incident that included scene security and control, detection of radioactive hazards,



The simulation included decontaminating victims exposed to radioactive materials.

(Photo courtesy of Karen Morris)

rescue and decontamination procedures, mitigation, as well as the use of specialized radiation monitoring equipment.

Evaluation

The final day involved a comprehensive debriefing and evaluation of the exercise led by Doug Silver from the Toronto CBRN Team. Participants also completed a final written test to measure the effectiveness of the training achievement. Participants provided their own evaluations of the incident indicating what went well and what could be improved. Finally, independent evaluators provided observations and recommendations for future training. Evaluation results will assist in planning for the next training initiative for these teams.

Hybrid vehicles present challenges at crash scenes

BY MICHAEL NG,
OFM FIRE PROTECTION ENGINEER

In 2001, car manufacturers began selling gasoline/electric hybrid cars in North America. They are powered by a smaller-than-normal gasoline internal combustion engine combined with an electric motor energized by a rechargeable high voltage battery pack. These vehicles are characterized by their superior fuel efficiency and reduced exhaust emissions. As a result of rising gasoline prices and environmental concerns, their popularity has steadily climbed. Currently, there are three models available in the Canadian market: the Honda Insight, Honda Civic Hybrid and Toyota Prius.

Gasoline/electric hybrid vehicles can present a danger to fire service personnel during fire or crash rescue operations due to the electrical hazards associated with their high voltage system. The nickel metal halide (NiMH) battery pack used in the Honda Insight and Civic Hybrid store 144 V while the Toyota Prius battery pack stores 274 V. Future models are expected to be equipped with even higher voltage battery packs. The pack is situated behind the rear seat of the car and connected to the electric motor located at the front of the car by bright orange cables that run beneath the chassis. The cables are protected in a plastic shield that is bolted to the undercarriage. Similar to a conventional car, a separate 12 V auxiliary battery used for powering auxiliary electrical devices can also be found either under the hood or rear trunk.

The fire services are encouraged to develop their own standard operating procedures for rescue operations involving hybrid vehicles. It is important that the appropriate emergency response guides for each hybrid model be consulted when developing them. The guides also should be readily available at a crash scene. The following are precautions that may be considered for incorporation into the procedures:

Identification

Hybrid models can have distinct physical features or simply resemble a conventional car. The Honda Insight is a two-passenger car with a characteristic aerodynamic contoured body and distinct rear fender skirts, whereas the Toyota Prius and Honda Civic Hybrid resemble conventional compact four-door sedans. Emergency response personnel need to be able to identify a hybrid model based on exterior and interior features so that they can take the necessary precautions during rescue operations.

Some visual cues include engraved logo/model name on the exterior and in the engine compartment, and orange coloured, high voltage power cables visible in the engine compartment and beneath the chassis. Care should be taken in identifying the orange cables if the bottom of the vehicle has been undercoated. The first six alphanumeric characters of the Vehicle Identification Numbers (VIN) located on the front windshield can also be used to identify the model.



2004 Honda Insight.

(Photo source: www.new-cars.com)

Vehicle Stabilization

Hybrid vehicles are designed with a fuel saving feature that shuts off the engine when it is stopped in traffic. When the accelerator or clutch is depressed, the engine restarts and the car will move forward. This is

important information for emergency responders to be aware of because a silent car at the scene of a crash does not necessarily mean a safe car.

Stabilizing the car by chocking or blocking the wheels will ensure that it does not lurch forward if it suddenly “wakes up”. If possible, engage the parking brake and shift the gear selector to the “park” position to ensure further stability.

Eliminate Current Flow

To reduce the risk of shock, it is important to eliminate the current flow in the high voltage cables prior to engaging in any rescue operations. The cables should

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never be touched or cut, as they may potentially be “hot”.

The simplest way of doing this is by turning off the ignition key, which cuts off the electricity to the engine and motor. The indicator light on the dashboard should switch off to confirm this action. It is recommended that the keys be removed from the car to ensure that it cannot be inadvertently started. The Toyota Prius Emergency Response Guide warns that power is maintained in the high voltage electrical system for five minutes after disabling the vehicle.

In the event that the rescuer cannot access the ignition key, removing the main fuse (from the two Hondas) or IGCT relay (from the Toyota) located in the engine compartment and disconnecting the 12 V battery is the next option for disabling current flow through the cables.

If neither of these options is viable, the battery pack will need to be switched off. The vehicle's Emergency Response Guide should be consulted for specific instructions on how to perform this. Alternatively, a technician that is qualified to deal with battery recovery should be requested through the vehicle's dealer.



2004 Toyota Prius.

(Photo source: www.new-cars.com)

Fire Suppression

In the event the vehicle is involved in a fire, Honda and Toyota claim that there are no unusual hazards associated with their gas/electric hybrid models and recommend that standard extinguishing procedures be followed. Water has been proven to be a suitable extinguishing agent.

The number of hybrid vehicles on the road will continue to climb in the years to come. Statistics indicate that sales have risen at an average annual rate of almost 90% since 2000. As well, Honda, Toyota, Lexus, Ford, Daimler-Chrysler and General Motors will be introducing 10 new gasoline/electric hybrid models including sedans, pickup trucks, and SUV's between late 2004 to 2008.

Further down the road, we can look forward to some new hybrid power source technologies. Toyota has

developed a Fuel Cell Hybrid Vehicle (FCHV) in the form of an SUV prototype that is currently being road tested in Japan and California. The main difference between FCHV technology and the gasoline-electric hybrid is the use of a fuel cell in place of the gasoline engine. The fuel cell generates electric power from a



2004 Honda Civic Hybrid.

(Photo source: www.new-cars.com)

chemical reaction between hydrogen and oxygen in air. Toyota does not expect this model will achieve any market significance until at least 2010. However, when the time comes, this technology will be of significance to the fire services because of the car's hydrogen storage system, which is comprised of four high-pressure tanks situated underneath the car. It is anticipated that hydrogen gas' flammable properties will pose additional risks to responders during vehicle rescue operations.

References:

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Case Study:

Approval for Authorization to Close

Recently, the OFM assisted a fire department in closing a multi-tenanted facility due to fire hazards and the associated risk to life. The following case study is based on this incident. Periodically, The Messenger publishes case studies for educational purposes.

BY KIM BAILEY,
OFM FIRE PROTECTION ENGINEER

Description of Property

The 12,000m² building has one and two storey sections of combustible and non-combustible construction. Occupancy is by multiple tenants for various industrial, commercial, residential and assembly functions.

Tenant operations on the first floor included a trailer fabrication shop, wood working shops, an auto recycling shop, a lumber sawmill, a retail store, retail storage and a fibreglass hut manufacturer. The second storey included a residential unit with two residents, assembly occupancy (a pottery classroom for up to 25 students), an art studio and a large vacant classroom. The sole owner of the art studio occasionally stayed overnight on the premises. The fire department estimated that the maximum building occupant

load ranged up to 80 people.

Fire separations were provided between the multiple tenants on the first floor of the building. Floor separations between the first and second floors were either damaged, inadequately rated and/or lacked continuity. The pottery classroom was open to the wood working shop on the floor below. The fire separations between the second floor residential unit and the adjacent storage room and pottery classroom were also deemed inadequate. The entrance door to the residential unit was a hollow-core wood type with no self-closing device.

Large quantities of combustible material, including waste, were scattered throughout the building and there was a general lack of housekeeping. The fuel load included quantities of sawdust piles, scrap wood, logs, lumber, hanging plastic tarps, scrap cardboard boxes, plastic wrap, wooden pallets, containers of waste oil, gas-

oline and paint, wood furniture and rubber bicycle tires.

The building lacked a fire alarm system and the sprinkler system was partially dismantled and inoperative. Fire extinguishers were only provided in portions of the building. Access for firefighting vehicles to the building was adequate and fire hydrants were located in close proximity to the building.

Electricity had been disconnected to the building and some of the businesses continued to operate using temporary generators.

Primary Concerns

The fire department was very concerned that a fire could spread rapidly throughout the building due to the combustible loading and lack of adequate fire separations. In addition, several areas in the building had inadequate means of egress. Deficiencies included an obstructed exterior exit door, lack of exit signs, inadequate emergency lighting in exit stairwells, inadequate fire separation of public corridors serving the pottery class and art studio, and accumulations of combustible storage in the stairwell serving the residential unit.

Potential ignition sources present within the building consisted of:

- kerosene lamps used for lighting in the residential unit;
- a portable propane barbecue used for cooking inside the residence (due to the lack of electricity);
- hot works (welding and cutting) being performed in areas that exposed significant combustibles and within two metres of the spray paint booth;
- ceiling-mounted natural gas-fired heaters in one of the wood working shops and the pottery classroom;
- arcing in the temporary wiring that connected the portable generator to the main panel; and
- sparks from the various motors in the machinery and equipment located in the industrial occupancies.

Actions

Day 1: The Fire Chief contacted the Fire Safety Standards Section of

See Approval on page 28

Fire plans need to be modified for bi-fuel emergency generators

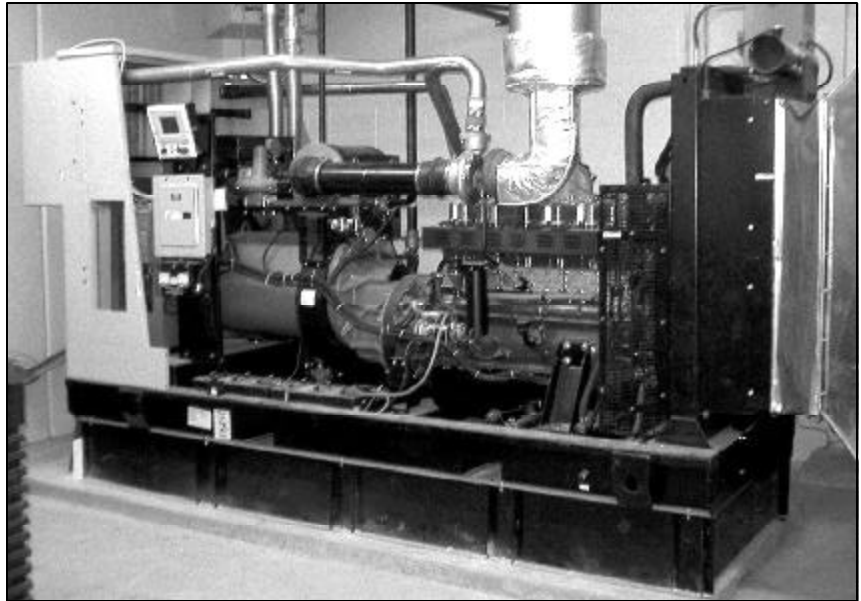
BY ROBERT HARPUR,
OFM FIRE PROTECTION ENGINEER

The power outage in August 2003 made us all aware of how dependant we are on electrical power. Since then, many building and plant owners have looked for ways to reduce the impact of any future major power interruptions.

There is also a growing realization that Ontario's ability to produce power is being strained during times of peak usage. The Electricity Conservation and Supply Task Force delivered their report to the Minister of Energy in January 2004. One of their recommendations is that "rate structures, market mechanisms and building codes and standards should be put in place to encourage and facilitate the use of emergency and stand-by generation as grid support during periods of high peak demand."

Using generators to augment the power supplied by the electrical utility is known as peak shaving. Many buildings and plants already have emergency generators that could be converted to supply power for peak shaving purposes with less delay and expense than installing new generators.

Most emergency generators are diesel powered. One problem in using these generators for peak shaving purposes is the fuel supply. Both the Building Code and Fire Code reference CSA C282 *Emergency Electrical Power Supply for Buildings*, which requires that there be a minimum two hour on-site fuel supply always available for emergency use. If the diesel fuel supply were used to run the generator for peak shaving purposes, the fuel



Bi-fuel generators are becoming increasingly popular. Fire services need to consider how their increased use affects their fire plans.

(Photo courtesy of Enbridge Gas Distribution)

supply would soon be depleted.

Bi-fuel systems have been developed to overcome this problem. A bi-fuel system is one that simultaneously burns multiple fuels, commonly diesel fuel and natural gas. The percentage of each type of fuel in the mixture can vary, but a mixture of 10% diesel fuel and 90% natural gas is typical. By continuing to burn some diesel fuel in the mixture it is possible to take advantage of the compression ignition system, which is a feature of diesel engines. If 100% natural gas was used, the engine would need to be equipped with a spark ignition system. Converting the engine to run on bi-fuel does not prevent it from running on 100% diesel fuel if the natural gas supply is disrupted.

The Building Code and the Fire Code, either directly or indirectly, reference CSA C282 *Emergency*

Electrical Power Supply for Buildings and CSA Z32.4 *Essential Electrical Systems for Hospitals*. Neither of these standards contains any requirements that would specifically prohibit the use of bi-fuel systems or using emergency generators for peak shaving purposes. The current requirement to maintain at least a two-hour supply of fuel on-site would still apply.

CSA Z32.4 has now been amalgamated with Z32.2 *Electrical Safety in Patient Care Areas* to create a new standard CSA Z32-99 *Electrical Safety and Essential Electrical Systems in Health Care Facilities*.

Clause 6.3.3.2. of this standard states specifically that the use of emergency generators for peak shaving purposes is acceptable provided that:

a. they conform to all applicable

See Firefighters on page 27

Clarington celebrates fire safety house

The Clarington Emergency and Fire Services celebrated the first anniversary of its new fire safety house donated by the Bowmanville Rotary Club and individual funders on July 1.

The new fire safety house is named the George Vice Fire Safety House, after one of its principal funders. George Vice was the driving force behind the new fire house and secured the Rotary Club's involvement. Vice



The Clarington Emergency Fire Services celebrated the first anniversary of its fire safety house on July 1.
(Photo courtesy of the Clarington Emergency Fire Services)

also donated a significant amount of his own money to buy the fire house.

For his dedication and commitment to fire safety, Vice received a Fire Safety Advocate Award given by the Fire Marshal's Public Fire Safety Council on June 17.

The new fire house features a heated door, an electric fireplace, bench seating and wheelchair accessibility. The versatile teaching tool will be used at county fairs, schools and homes for the elderly, among other venues.

This is Clarington's second fire safety house. The first one was built over 10 years ago and had worn out because of tremendous use: it educated thousands of children and parents in fire safety throughout the Durham Region, located just east of Toronto.

Because of the success of the first fire safety house, the Bowmanville Rotary Club requested that it be donated to the Municipality of Port Hope to be refurbished for use there.

Firefighters must be aware of secondary sources of power

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regulatory requirements, specifically Section 84 of the Canadian Electrical Code, Part 1, and

b. all non-essential loads are instantaneously dropped at the loss of utility power.

The normal arrangement of emergency generator and transfer switch ensures that power is supplied by either the generator or the electrical utility but never both at the same time. Section 84 of the Ontario Electrical Safety Code, *Interconnection of Electric Power Production Sources*, contains requirements for situations where there is more than one electrical supply at the same time. Any use of emergency generators for peak shaving use would require a different transfer switch arrangement to ensure that the emergency generator could not back feed through

the lines coming from the electrical utility.

Although this is an electrical safety issue and comes under the jurisdiction of the Electrical Safety Authority, it could also impact the fire service. If firefighters shut off the main power while fighting a fire they need to know that all power sources to non-emergency circuits have been shut off. At the very least, they would need to know there could be another secondary source of power.

All generators require a Certificate of Approval. The Ministry of Environment (MOE) uses a different point of impingement limit for nitrogen oxides if a generator is used only for emergency use. If building owners are going to use their emergency generators for peak shaving purposes, they will have to re-apply to the MOE for a new Certificate of Approval.

There is some concern that using the emergency generator for peak shaving purposes would cause additional wear and premature failure resulting in the generator not being available for emergency purposes during a complete power outage. However, if an owner can use the emergency generator to contribute to their profit rather than just being an overhead, it is more likely they will properly maintain the generator.

There is no regulatory prohibition against using bi-fuel for emergency generators or using the generators for peak shaving purposes. At some locations there may be some practical difficulties in meeting the requirements that would make the use of the emergency generator for peak shaving purposes economically unfeasible but this is a decision for the owner to make. The fire department needs to be aware of locations that are using their emergency generator for peak shaving so they can make appropriate modifications to their pre-fire plans.

Approval for closure

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the OFM to discuss concerns and possible measures that may be taken to address the serious conditions. The fire department indicated that the possible closure of the building was discussed with the owner and it was unlikely that the owner would be able to effect closure. A fire protection engineer and fire protection advisor from the OFM were sent out to the site to conduct an independent evaluation.

In the interim, the Fire Chief took action under Section 15 of the FPPA to deal with immediate threat to life concerns by installing a smoke alarm in the residential unit and posting a fire suppression team to remain on-site in order to provide prompt emergency response in the event of fire.

Day 2: The OFM representatives conducted an inspection and relayed the information to OFM headquarters for review by the Fire Marshal. The Deputy Chief, Chief Fire Prevention Officer and the Chief Building Official provided additional details relating to the building. The Electrical Safety Authority (ESA) also conducted an electrical inspection and confirmed that power would not be restored to the building until multiple deficiencies were rectified.

Under the circumstances, the Fire Chief concluded that requesting an authorization for the fire department to close and secure the building would be the best course of action to ensure life safety on the site and reduce the risk of fire. Authority to request approval from the Fire Marshal to cause a property to be closed by the fire department is contained in Ss. 21.(2)(b) of the FPPA. The OFM discussed this process with the fire department,

including the need to secure the building and facilitate tenant access to obtain their belongings once closure of the building is implemented. It was determined by the fire department that additional time was needed to assemble the necessary resources for closure and to develop the inspection order that would be issued to the owner at the time of closure.

That evening, additional temporary measures were implemented under Section 15 of the FPPA to move the occupants of the residence to an alternate accommodation and remove the 23 persons using the classroom space. The fire watch was maintained by the fire department.

Day 3: The fire department reviewed procedures with the OFM for serving the inspection order on the owner, with copies to all tenants. The inspection order addressed only those fire safety deficiencies that required remedying prior to re-occupancy of the building. The inspection order included the following items:

- electrical repairs must be made satisfactory to ESA;
- fire separations must be provided between the residential occupancy and other occupancies;
- exits and access to exits must be provided for the residential occupancy;
- fire separations must be provided between the assembly occupancies and other occupancies, as well as exits and access to exits for the assembly occupancies;
- the industrial occupancies be provided with dust removal systems and explosion protection

compliant with Section 5.12 of the Ontario Fire Code, and ventilation equipment and fire suppression system for the paint spraying operation;

- restricting the second floor from being used for any occupancy until fire separations, exits or access to exits are provided in compliance with the Ontario Building Code; and

- all construction and material alterations required by the Inspection Order are carried out under a building permit in compliance with the Ontario Building Code.

The Fire Marshal provided a written authorization for the Fire Chief to take action to immediately close and secure the building. The authorization contained additional conditions for closure.

The fire department initiated closure of the building and secured it against unauthorized entry. The owner was issued the inspection order outlining work that had to be undertaken prior to re-occupancy of the building along with the rights of appeal. The fire department obtained a list of tenants from the owner to implement procedures for access by the tenants to the building to obtain their personal possessions and materials.

Under the FPPA, the owner may appeal the inspection order, however there are no provisions to appeal the closure of the building by the fire department under an authorization from the Fire Marshal.

Inquiries about the potential closure of a building should be directed to the Fire Safety Standards Section at the OFM at 416-325-3100.

Quick Facts About Closures

- Closure of a building under Subsection 21(2) of the FPPA requires prior approval from the Fire Marshal.
- Closure of a building may be achieved in one of two ways: by ordering the owner to close the premises, or directly by the fire department with authorization from the Fire Marshal.
- Where the closure involves a residential use, the municipality must satisfy the Fire Marshal that alternative accommodations are arranged for all residents before approval will be granted.
- For additional information on closure of a building, please refer to OFM guideline TG-02-2003 *Orders, Orders to Close and Immediate Threat to Life*.

Five youths receive Fire Safety Awards

Fifteen individuals and organizations, including five youths, received Fire Safety Awards from the Fire Marshal's Public Fire Safety Council at a ceremony on June 17. The annual awards recognize outstanding contributions to fire protection and prevention in Ontario.

"All of the award recipients have displayed extraordinary commitment and dedication to keeping their communities safe from fire," said Fire Marshal Bernard Moyle. "Needless deaths, injuries and property damage have undoubtedly been avoided because of the efforts of these individuals and organizations."

Action Awards were given to children aged 16 or under who took appropriate action to prevent or minimize a potentially hostile fire situation. Action Award recipients included: Shannon Clarke, age 10, from Whitby; Danielle Denison, age 9, from Waterloo; Jamie Pursell, age 16, from Sarnia; Cody Videto, age 10, from Petawawa; and Kenisha Williams, age 11, from Whitby.

Advocate Awards were given to individuals who have provided time, expertise or resources to promote fire safety in the community. Award winners were: Tom and Janet McEwan from Cambridge and George Vice from Newcastle.

Partner Awards go to organizations that have

partnered with fire departments to provide fire safety support in the community. Award winners included: Council Awareness Players from Toronto; Durham Radio Inc. from Oshawa; John Deere Welland Works from Welland; The New RO from Pembroke; Newstalk 610 CKTB Radio from St. Catharines; the Toronto District School Board; The Tribune newspaper in Welland; and VR Newsin Barrie.

Fire Marshal Bernard Moyle also handed out two Awards for Excellence in Fire Safety, presented to individuals or groups who have demonstrated true leadership in the promotion of fire safety in Ontario, championing the causes of fire prevention and education in many ways.

This year's recipients were Bill Donahue from the Cambridge Fire Department and Dr. Sherri MacKay from the Centre for Addiction and Mental Health. Fire Marshal Moyle also presented Fred Leber and Jonathan

Rubes from the Leber/Rubes Inc. engineering firm with an award for providing expertise and leadership to the Fire Marshal's Public Fire Safety Council.

This year, the Fire Safety Awards were sponsored by Pyrene Corporation, manufacturer of fire safety, suppression and detection products marketed by Kidde Residential, Pyrene Industrial and Angus Fire.



Fire Safety Award recipients include (from left) Danielle Denison from Waterloo, Kenisha Williams from Whitby, Shannon Clarke from Whitby, Cody Videto from Petawawa and Jamie Pursell from Sarnia. Pictured with the recipients are Fire Marshal Bernard Moyle and Carol Heller from Pyrene Corporation, sponsors of the awards.

Disposal of smoke alarms

continued from page 9

taining americum 241 may be disposed of in the garbage. If the smoke alarm contains radium or if there are large numbers to be disposed of (they suggest more than 10 units), then they should be

shipped to the Low Level Radioactive Waste Management Office for disposal. The contact number is 613-998-6748.

This policy is consistent with the policies for disposal of smoke alarms in the United States, Australia and New Zealand.

Certification renewal

The OFM/Ontario Association of Fire Chiefs partners have approved the Company Officer certification renewal process.

After being launched at the OAFCC conference in May, it is now available on the OFM Web site.

The Fire Marshal's Public Fire Safety Council
and the Renfrew County Mutual Aid Fire Service Association present the

12th Annual Fire and Life Safety Educators' Conference

Naturally Wonderful

November 3, 4 and 5, 2004

Best Western Pembroke Inn & Conference Centre, Pembroke, Ontario

Highlights Include:

- Pre-conference Seminar on TAPP-C
- The Pitfalls of Scaring or Shocking Children
- Working with the Media
- Delivering Great Presentations
- Benchmarking - Measuring Success
- The Effects of Lifestyle Factors on Fires
- Woodstove Installation, Inspection and Maintenance
- The NewRO Partnership with Renfrew County

Speakers Include:

- Dr. Sherri MacKay, Centre for Addiction and Mental Health
- Dr. Diane Warling, Toronto Rehabilitation Institute
- Fire Marshal Bernard Moyle
- Chief Terry Allen, Cambridge Fire Department
- Mike Chafer, The NewRO
- Daphny Gebhart, Star 96 FM

The conference cost is \$175.00. This includes all seminars and workshops, as well as breakfast, lunch, banquet dinner on November 4 and breakfast on November 5. Limited accommodation is available at the Best Western Pembroke Inn & Conference Centre and costs \$95 per night plus applicable taxes. For reservations, call 1-800-567-2378 and mention the Public Education Conference.

Name: _____ Title: _____

Organization: _____

Address: _____

Phone: _____ Fax: _____

On November 3, from 1300-1600, there will be a free workshop featuring the TAPP-C program in Ontario. Tick one of the following boxes to indicate if you will be attending: ☐ Yes, I will attend ☐ No, I won't attend



Make cheques payable to: Renfrew County Mutual Aid Fire Service Association
5947-B Opeongo Rd., RR 4
Eganville, ON K0J 1T0
For more information, call 613-754-5221



Performance Measurement and Benchmarking Project making progress

BY CAROL-LYNN CHAMBERS,
OFM OPERATIONS MANAGER

The Ontario Fire Service Performance Measurement and Benchmarking System (PMBS) is the product of a unique, collaborative partnership between the OFM and representatives from over 30 municipal fire departments across Ontario. Together, they have worked over the past two years to research and develop a performance measurement system to help fire service leaders explore and report on results, benchmark with peers and share best practices. The

project is continuing to make excellent progress.

The preliminary system was piloted by a group of 23 fire departments - large and small - from across the province in February/March 2004. The pilot was a tremendous success - participants provided thoughtful and constructive feedback that the working group will be using over the next few months to refine and enhance this powerful tool. With that in mind, the OFM is looking forward to being able to make this system available to all fire departments in the fall.

"The OFM is committed to fulfilling its responsibility to provide advice and assistance to municipalities," said Fire Marshal Bernard Moyle. "The PMBS is one tool to help in this regard. It is a key component of the broader Shaping Fire Safe Communities initiative, designed to help optimize public fire safety in all

Ontario communities."

Delegates at the Ontario Association of Fire Chiefs conference in Toronto on May 11, 2004 heard more about www.ofspmb.ca, the new Internet-based application that is currently under development, from the project's fire service working group.

The three working group team leaders are Dave Carruthers (Clearview Township Fire Department), Debbie Higgins (Toronto Fire Services), and Richard Boyes (Sarnia Fire Rescue Service).

An informational CD was distributed to all fire departments on June 1 to introduce some of the features of the upcoming www.ofspmb.ca application. Fire service leaders are encouraged to take the opportunity to view this presentation and feedback is welcomed. Further updates and information on how to access and use the new system will be made available as the system reaches the final development stages later in the year.

For more information about the Ontario Fire Service Performance Measurement and Benchmarking Project, or to get involved, contact the OFM at 416-325-3100 or visit the Web site at www.ofm.gov.on.ca.



From the left, Deputy Fire Marshal Doug Crawford, Dave Carruthers, Debbie Higgins and Richard Boyes provided an update of the PMBS at the Ontario Association of Fire Chiefs conference on May 11.

Certificates presented

On March 31, at the Ontario Fire College Fire Marshal Bernard Moyle and Cambridge Chief Terry Allen (on behalf of the Ontario Association of Fire Chiefs) presented certificates of appreciation to PSSB, Certification

Council and Endorsement Review Board (ERB) committee members for their work. Pictured with Mr. Moyle and Mr. Allen is Nicole Hannon, from the Ajax Fire And Emergency Services and ERB Co-Chair.



InDetail: Fire safety in nuclear plants

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; and**
- **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.

BY JOSH KALLUNGAL,
OFM FIRE PROTECTION ENGINEER

In Ontario, three nuclear generating stations have the capability of generating approximately 40% (13,300 MW) of electrical power generation capacity in the province. These plants generate power with minimal pollution when compared to fossil fuelled plants.

The Canadian Nuclear Safety Commission (CNSC), previously the Atomic Energy Control Board, has jurisdiction over all safety issues related to the licensing and operation of nuclear-fuelled power plants located in Canada. OFM staff have provided technical assistance to CNSC regarding fire protection at nuclear plants since 1997.

History

Canada's nuclear program evolved from a joint development with the USA and Britain in the early 1940s. Atomic Energy Canada Limited (AECL), together with other partners in the industry, developed the CANDU nuclear reactor in the early 1950s using natural uranium fuel and heavy water (as moderating fluid), as distinct from reactors in use in the USA that use enriched uranium and light water. The first demonstration power reactor started operation in 1962. Construction of the first large-scale power station, Pickering A, began in the late 1960s and first power was generated in 1971. Today, there are five operating nuclear power generating stations in Canada. No nuclear plants have been constructed in Canada since the Darlington plant (which started producing power in 1989), located east of Toronto.

Compliance with existing national building and fire codes was

not a priority when existing nuclear plants were constructed, though limited efforts were made to incorporate some of the fire protection and safety concepts embodied in the national codes. In the early CANDU plants, the provincial building codes were treated as one of the many inputs to design. Because there was no authority enforcing the building code, such requirements were considered at the discretion of designers. Plant designers incorporated features to ensure fires or other common-cause events resulted in low impacts on nuclear safety; the concern for nuclear safety had over-shadowed the need to address occupant life safety.

The Canadian Standards Association (CSA) published its first standard N-293 "Fire Protection for CANDU Nuclear Power Plants" in 1987 to provide general fire protection guidelines for CANDU nuclear plants. All CANDU nuclear plants operating at the time had already been designed using available in-house guidelines and standards before the first edition of CSA N-293 standard was published. The CSA N-293 standard was revised in 1995 to incorporate lessons learned from international incidents such as Chernobyl and several major turbine fires.

As a result of the report on Independent Integrated Performance Assessment of Ontario Hydro nuclear plants in 1997, the select committee of the Ontario Cabinet made several recommendations to address deficiencies in fire safety at nuclear plants. OFM staff have worked with CNSC and Ontario Power Generation to address and resolve those recommendations. Significant progress in enhancing

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Unique features pose challenges

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fire safety at Ontario nuclear power plants has been achieved over the past seven years.

Improvements in fire protection include control of transient combustibles, significant increases in Emergency Response Teams, enhancements in detection and automatic suppression and upgrading of breaches in fire separation. In addition, a Fire Hazard Analysis has been conducted in critical areas of the plant to identify impacts from potential scenarios such as a fire exposing control cables or operators.

Also, there have been significant enhancements in the availability of in-house fire protection expertise at CNSC. In 1997, CNSC relied entirely on external consultants. However, as of 2004, two fire protection engineers, one of whom is at the director level, provide in-house expertise in their enforcement functions.

Fire protection and nuclear safety concepts

CANDU nuclear power plants are designed to achieve safe shut down in the event of fires and employ the defence-in-depth concept.

The fire protection design basis of defence-in-depth entails a judicious balance between the following three features:

- preventing fire from starting;
- detecting and quickly extinguishing fires that do occur; and
- for fires that are not quickly extinguished, limiting the spread of fires and their effects, thus minimizing the impact on personnel, structures and equipment.

In order to safeguard against any nuclear release, the design ensures safe shut down, which entails the following five features:

- **Reactor shutdown:** At least one reactor shutdown system is available to shut down the reactor and maintain its shutdown indefinitely.
- **Decay and heat removal:** At least one train of systems and equipment

is available for removing decay heat following a reactor shutdown so that no significant fuel damage will occur.

- **Monitoring of plant parameters:** Sufficient instrumentation is available to monitor critical plant parameters to assess the state of the plant and respond as needed.

- **Barriers to fission product release:** All systems containing moderator or fission products maintain their pressure boundary integrity to limit release of fission products from exceeding regulatory levels.

- **Maintaining support functions:** At least one train of systems and equipment necessary to supply electric power, cooling water and compressed air to support safety functions is available to perform its intended function.

Unique features

Unique features of CANDU reactors pose various fire protection challenges. The CANDU nuclear generating stations are housed in very large structures with few fire separations between production

plant areas. Other challenges include: radiation hazards that may preclude firefighters' entry to some plant areas; some key operating personnel must stay in the plant even during a fire; because of stringent quality and safety requirements placed in the design and operation of these plants, fire protection must integrate with overlapping requirements, which presents challenging fire protection issues.

Current status

The International Atomic Energy

Agency is in the process of revising its safety guide for design of nuclear power plants for protection against internal fires and explosions. The National Fire Protection Association has made significant modifications incorporating performance provisions to their standard NFPA-805 (2001 edition) "Fire Protection for Light Water Reactor Electric Generating Plants". Since several aspects of the CANDU nuclear plant design are different from the US light water nuclear plants and other international designs, the current CSA N-293 (1995) standard needed to be updated to reflect international development efforts in fire protection as it relates to CANDU nuclear plant design and operation.

Updating work of the CSA N-293



The Darlington nuclear plant (above), located east of Toronto, was the last nuclear plant built in Canada. It started producing power in 1989.

(Photo courtesy of Ontario Power Generation)

(1995) standard started in January 2002. The technical committee membership was expanded to 23 voting members to include major stakeholders in the field of fire safety and protection. The revised standard is expected to address both new and existing plants, and set the minimum fire protection performance levels to achieve safe shutdown and provide fire safety for the occupants. Guidelines to minimize the potential for prolonged power interruption will also be developed for consideration in the design of new plants and upgrading of existing plants.



Deputy Minister visits College

Michael Fenn, Deputy Minister of Community Safety, visited the Ontario Fire College (OFC) on April 15. His visit included attending the fire cause determination class and the company officer incident management class, and a tour of the facilities. Pictured (left to right) are Fire Marshal Bernard Moyle; Fred McLennan, Principal, OFC; Mr. Fenn; and Doug Outtrim, OFC instructor.

Town gets new Deputy Chief

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training instructor with London's fire department, along with Tillsonburg Fire Chief Bob Parsons.

Chief Parsons lauds Hayes' "myriad of experience and qualifications," and said he will be of great assistance to help the town's fire department move forward with enhanced service and programs.

According to Parsons, Hayes' duties will include firefighter training, development and safety. He is certified in confined space rescue and technical rope rescue.

In addition, he has developed training programs for hazardous material response which has become the basis of training programs at the Ontario Fire College. Hayes is also a Level 2 paramedic and a Level 3 Fire Service Instructor, the highest level recognized.

This article originally appeared in The Tillsonburg News, Online Edition, available at www.tillsonburgnews.com.

Substance abuse greater among girls who set fires

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of trauma is clearly warranted, and may influence decisions such as the gender of the fire prevention officer for female referrals. Similarly, the prevalence of smoking and substance use among female firesetters is worth consideration in all encounters, particularly in terms of evaluating the youth's appreciation for, and retention of, educational material.

Involvement of all family members in the home visit and subsequent educational sessions is relevant for male and female referrals, given the need for group problem-solving and co-operation in ensuring the family's safety.

Lastly, inasmuch as the TAPP-C model advocates co-ordinated efforts between fire and mental health services, families typically tend to feel more comfortable approaching fire services for assistance. Given the serious difficulties experienced by the children and families in this study, fire service personnel are encouraged to do all that they can to support families to follow-up with clinical services. In

those rare situations in which fire service personnel remain concerned for the safety of children under 16 and whose parents are unwilling or unable to follow-up with clinical support, fire service personnel are obliged to consult with and, when directed, report families to local Children's Aid Societies to ensure appropriate follow-up.

Brian Beech has been involved with the TAPP-C program for the past nine years and has worked with many firesetting youth and their families as a social worker with Kinark Child and Family Services in Newmarket, Ontario. For further information about this study, please contact him at 905-898-4572 ex. 311 or brian.beech@kinark.on.ca.

Sherri MacKay was instrumental in the inception and development of the TAPP-C program at the Centre for Addiction and Mental Health in Toronto, where she remains the program director, conducting assessments and research, refining the program and conducting TAPP-C training in Ontario and across North America. She can be reached at 416-979-4653 or sherri_mackay@camh.net.

'My experience learning and teaching about fire'

The following article was written by 10-year-old Varun Jacob John, who recently completed a school project (including a PowerPoint presentation, a display board and a video) on fire and fire safety. The purpose of the article is to show how an individual's interest in a topic can develop into the motivation for further learning and for teaching others. Such a process has the potential to be a powerful public education technique.

BY VARUN JACOB JOHN

My first interest in fire came when I arrived at my present school, Henderson Avenue Public School, and found out that it was destroyed by fire in the summer of 1998. Then, in the summer of 2003, I was making an omelet when a cloth nearby caught on fire. I also have a family friend who works with the OFM. With all that, I decided to do my independent study school project on fire.

I collected information from books at the public library, the OFM library, and the Internet. I also interviewed Captain Ken Robertson of Markham Fire Station No. 92 for information on operations.

For my project, I presented my report with PowerPoint presentation slides and a science board. I had my class hold a formal debate on a hypothetical new fire law, held a mock fire investigation, a word search and a written test for the class. I also had David Blizzard, the Public Education Officer from the

Markham Fire Department, come to our class and talk about fire safety, the fire department and firefighters.

My whole study was based on one basic message for children. Based on statistics on Ontario fires for the past 13 years, most fires occurred in residential properties. So it is necessary to focus on residential areas to save lives and reduce the total number of fires in Ontario. We, as the residents of Ontario, should be the ones preventing fire in our homes. I told my class we should learn what to do when we are young, so that it becomes second nature to do things without risk of fire and prevent fire.

I benefited greatly by learning about fire, how I can prevent fire, and if a fire happens, what to do and how not to get hurt.

Project exemplifies peer training

Peer training, in which people receive information or training from others in their peer group, is considered one of the best methods of public education because peers speak the same language and know the issues important to their audience. They can identify issues that someone outside the peer group may not be able to, and they know how best to communicate messages to their audience. As such, they can deliver messages most effectively.

Varun Jacob John's experience represents an ideal peer training scenario: what starts out as an individual's personal interest in a topic turns into a program of information and materials that can be used to educate large numbers of people. The more Varun learned about fire and fire prevention, the

more he "just wanted people to know that they can do something to prevent residential fires."

"This is precisely the kind of experience we try to encourage through the Risk Watch® program," said Bev Gilbert, Manager of Public Education and Media Relations at the OFM. "Risk Watch attempts to build children's interest in safety issues so that they take its lessons and share them with friends and with family members."

If a program gets to the point where kids start teaching each other, it has become a success. "We



Ten-year-old Varun Jacob John presented his project to the Fire Marshal and OFM staff on May 17.

know that a program that encourages kids to teach each other is working because it has captured kids' interest, and they find it important enough to spread among their friends," Gilbert continued.

Trench rescue course offered

The Municipal Health and Safety Association of Ontario has developed a one-day trench rescue awareness course intended for fire-fighters and other emergency response personnel, in preparation for responding to trench cave-ins and accidents. Participants learn about the hazards associated with trenching and the protective measures and equipment required prior to entering a trench for a rescue.

The course covers:

- provisions in Ontario Regulation 213/91, Construction Projects, relating to trenching and excavations;
- pertinent provisions in the Occupational Health and Safety Act;
- relevant Ontario Fire Service Section 21 Advisory Committee Guidance Notes;
- identification of local resources for emergency assistance;
- specialized trench rescue equipment: basic information and demonstrations;
- wale systems for intersecting trenches;
- traffic control and crowd control;

- shoring methods, trench boxes, and other safety procedures;
- personal protective equipment;
- types of soil, and effects of moisture content, vibration and surcharge;
- types of hazards;
- firefighter/rescuer safety; and
- hazards from underground or overhead utilities.

Classroom activities include discussing specialized trench rescue equipment and rescue equipment usually available from fire departments, doing case studies in small groups, and writing a short test at the end of the course. Each participant will also develop a simple operational guideline for trench and cave-in rescue for his or her own fire department. A visit to a trenching site may be arranged if weather and availability permits.

Fire departments interested in hosting this course should contact John Parish, Municipal Health and Safety Association of Ontario, by telephone at 613-659-3962 or by e-mail at jparish@mhsao.com.

45 years of service

Allan McBay, from the Brant Fire Department, received his 45-Year Long Service Bar at the Woodstock Investiture on April 22. Pictured with Mr. McBay are Fire Marshal Bernard Moyle; Mrs. McBay;



and Paul Leslie, OFM Manager of Monitoring and Evaluation.



Linda Martin, of V.I.P. Photo Memorials, says she started out wanting to honour her father's war service.

Service offers unique memorial

Typically, The Messenger does not print articles promoting private initiatives. However, the following venture provides a unique service that fire personnel may not be aware of, yet may be interested in.

Two years ago, Linda Martin stood next to her late father's cemetery plot wondering how she could commemorate his years of service as a World War II veteran.

"Dad was always so proud of his years of service," Martin recalled. "It's one of the things he wanted to be remembered for most."

She took her father's service medals and a photo she had of him in uniform and mounted them on a monument. "The picture and medals beside each other began to tell a story, while portraying honour and respect to my father's service," Martin said.

Pleased with the memorial she had created, Martin began offering the monument service to others in her home community, North Bay. After meeting with members of the North Bay Fire Department, she realized that many firefighters and departments might be interested in commemorating their members' service.

She started her company, called V.I.P. Photo Memorials, and now provides this service to fire departments and families of firefighters. Using a photo, service medals and a fire department's crest, she will produce monuments for \$59. For more information, contact Linda Martin by telephone at 705-476-5523 or by email at vippphotos@sympatico.ca.

Fire Service Calendar 2004

July 30-August 2	Fire Fighters Association of Ontario Annual Convention	Blyth, Ontario
September 12	Firefighters' Memorial Service	Parliament Hill, Ottawa
September 26-29	Canadian Association of Fire Chiefs' Annual Training and Education Symposium	St. John's, Newfoundland
October 3	Firefighter's Memorial Day	
October 3-9	Fire Prevention Week	
October 24-28	Ontario Professional Fire Fighters Association's 2004 Fall Educational Seminar	Niagara Falls
November 3-5	Fire and Life Safety Educators' Conference, "Naturally Wonderful"	Pembroke

Firefighting a family business

continued from back page

1991, Leona has responded to all calls, and today she's the Captain of the department's medical team.

In January 2003 a new generation of Henhoeffers began volunteering for the fire department. Wayne and Leona's son, Chris, and Mark's daughter, Shirley, became new recruits at the same time.

"Firefighting is just something I grew up with; something that I learned was valuable," Chris said. When Wayne and Leona brought an application package home for another son, it was Chris who wanted to join. "I just thought it would be great to do

something for the community. Besides, with everyone so busy this is the only way I can spend time with my parents," Chris chuckled.

In fact, Leona said that the family doesn't respond to the same calls very often. "It was tough when the kids were younger," Leona said, "to have company over or have any family get-togethers. It never failed: whenever we had something happening, there would be a call and one of us would have to leave."

For Shirley, firefighting was a natural fit with her career as an OPP officer. "My interest peaked after helping the fire department at a few calls while I was at work," Shirley said. "It's a nice fit with what I do in my job."

"I guess we all just want to give something back," Wayne said. "Our community has given us a lot over the years. If everybody did just a little bit, they'd find just how much we'd all get back."

Risk Watch® update

At the time of printing, the OFM expected to receive the final "Canadian-ized" English version of Risk Watch by mid-July. It was then to be sent for translation into French. Stay tuned for more information.

Congratulations to Bill Donahue

Congratulations to Bill Donahue for his retirement after 31 years with the Cambridge Fire Department, most recently as Captain and Public Education Officer. Best wishes to Bill and his family!

Answers: Wildfires

From page 6

A.1 Lightning. Nearly 60% of Ontario's wildfires are caused by lightning strikes.

A.2 10 metres.

A.3 Evergreens. Tress such as spruce and pine are much more combustible than deciduous trees.

A.4 False. Single pane glass provides virtually no protection. Double or thermal pane glass provides moderate protection. Tempered glass has good resistance to damage by fire.

A family of firefighters

For the Henhoeffers, firefighting in North Dumfries Township is all about family.

Five family members spanning two generations are volunteer firefighters with the North Dumfries Township Fire Department in Ayr, a town located just south of Kitchener, Ontario.

But it is more than the immediate family that ties the Henhoeffers households to firefighting in their town. It's the larger family that is the community itself.

"All the [firefighters] are great," said Leona Henhoeffers, who started volunteering with the North Dumfries Township Fire Department in 1983, four years after her husband, Wayne, started. "Any time of the day you can go down to the station for a coffee and a chat with some of the guys. It's like home; we're all one big family."

It's that sense of camaraderie that has led to Wayne's 25 years of service, and has spread to his brother Mark, wife Leona and son Chris, and to Mark's daughter Shirley. Together, they make up almost 20% of the North Dumfries Township department's personnel.

The entire family was on-hand as Wayne received his 25-Year Long Service Medal at the Woodstock Investiture on April 22. Not bad, Wayne said before receiving his medal, for a guy who had no intention of becoming a firefighter.

"The thought of being a firefighter never crossed my mind," Wayne said, "until I entered the hardware store in town that day."

That day was in 1979. At the time, Wally Yuzwa, a volunteer

firefighter who worked in the hardware store, noticed the young, strapping Henhoeffers in the store and asked him if he'd ever thought of joining the department.

"I was working nights at the time for Grand River Transit," Wayne said. "Wally seemed to think I had a lot of time on my hands during the day and told me that the department needed volunteers."

"Wally got me interested, so I thought, 'Why not try it out?'"

A short time later, Wayne and some other firefighters were

connecting the department's Jaws of Life to an electric PTO generator under one of the trucks. Needing some electrical expertise, Wayne called his brother Mark, who works as an electrician. Mark not only helped with the Jaws of Life that day, but stuck around for the next 20-plus years.

"We live in a small town," Mark said, "and small towns are all about community involvement. There are all kinds of ways people can get involved, and as far as I'm concerned, this is the best way."

After a few years of Wayne's experiences on the force, his wife Leona, a nurse by profession, became concerned about the lack of medical ex-

perience among the department's firefighters and their ability to respond to medical calls. "I was concerned about how the guys would respond to heart attacks and other medical emergencies," Leona said.

Offering her expertise, Leona joined the department in 1983 and immediately started responding to medical calls. Since



Two generations of the Henhoeffers family are firefighters. Pictured above, at the recent Woodstock Investiture, are (left to right) Fire Marshal Bernard Moyle, Chris Henhoeffers, Leona Henhoeffers, Mark Henhoeffers, Shirley Henhoeffers, Wayne Henhoeffers and Paul Leslie, OFM Manager of Monitoring and Evaluation.

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