

The **ONTARIO FIRE SERVICE** **MESSENGER**

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Police and Fire - Joint Emergency Response Exercise



Ontario Fire Service Messenger

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

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

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Saäd Rafi Deputy Minister of Public Safety and Policing Services



I'm very pleased to have this opportunity of introducing myself to the fire service community in Ontario. Even though I have been in the position of Deputy Minister since only February 3, 2003, I have come to appreciate the critically important role that the fire services play in maintaining public safety in our province.

The past few months have certainly been eventful for our ministry, nowhere more so than within the Public Safety Division, which includes the OFM. The division has been instrumental in carrying out consultations with stakeholders on issues surrounding border security and cross-border trade; it organized the international Great Lakes Security Conference; and it continued to roll out the Community Emergency Response Volunteer program. Through Emergency Management Ontario, the division also led the government's successful counterattack on the SARS outbreak, working closely with colleagues at the Ministry of Health and Long Term Care.

While all of these important initiatives have attracted well-deserved public attention, the equally important day-to-day work of the Ontario's fire services has continued, often out of the spotlight. Fire prevention and public education officers are helping families keep safe in their homes and ensuring property owners make sure their premises meet adequate fire protection standards; fire suppression services are saving lives and property; and the investigators from OFM are working hard to discover the cause of fires — a vital step in reducing the incidence of similar occurrences.

At the ministry, we are proud to support the fire service by working with stakeholders to develop new policy initiatives, review existing guidelines and analyze requests for resources. In recent years, the government has improved the Ontario fire service's ability to respond through improved training and equipment for chemical, biological, radiological and nuclear incidents, by helping to fund CBRN teams in Ottawa and Windsor and a heavy urban search and rescue unit in Toronto, by committing \$3 million to build a new fire hall, auditorium and resource centre at the Ontario Fire College and, most recently, by announcing plans for a five-year, \$40 million grant program for small and rural municipal fire services. At the same time, we are working hard to help resolve contentious issues (such as professional firefighters who also serve as volunteers) in a way that is acceptable to our stakeholders.

In closing, I want to repeat that I am pleased and proud to have been selected as the Deputy Minister of Public Safety and Security (Public Safety and Policing Services), and I look forward to working with Fire Marshal Bernard Moyle in the important work of supporting our fire services and making Ontario an even safer place for us all.

Ontario Fire Service Messenger

May – August 2003

www.gov.on.ca/ofm/messenger

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Insert: Pumper Operations Part 4 & 5

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Cover Story – Emergency Response

Members of specialized emergency response teams from the OPP and firefighters from Ottawa, Toronto and Windsor worked together in May as part of a joint exercise that was organized by the OFM.

Story on page 20



Fire safe cigarettes: What's Canada's take?



What does the term 'fire safe' cigarettes mean? What is the current situation in Canada, especially when compared to the United States? This article takes a broad

look at some of the facts.

Story on page 6

It's up to you to prevent fire in your home: Cambridge

On June 4, Cambridge Fire Department launched an incentive program 'It's Up to You' that plans on reducing residential fires by 10% per year over the next five years.

Fire Marshal Bernard Moyle attended the kick-off event.

Story on page 23.





Update ONTARIO

News from around the province

If you have an item you would like to see published in Update Ontario, please send it to The Editor, 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 rodney.porter@jus.gov.on.ca

Emergency readiness act proclaimed

The government improved Ontario's ability to prevent and react to large-scale emergencies with a proclamation on April 15, 2003 of Bill 148, the *Emergency Readiness Act, 2002*. "This legislation ensures that first responders and emergency workers are as prepared as possible to handle serious emergencies, and that the public is informed during crises," Minister of Public Safety and Security Bob Runciman said. The *Emergency Readiness Act* requires all municipalities and key provincial ministries be prepared for emergency situations. It was passed in the legislature and received Royal Assent last November. Municipalities are required to have emergency programs that include an emergency plan, training and exercises, and public education. It also renamed Emergency Measures Ontario as Emergency Management Ontario.

Web site to tackle home injury and death

The Federal Emergency Management Agency and the United States Fire Administration announced in May a web-based safety program focused on reducing the number of deaths and injuries in the home. *Household Hazardous Materials: A Guide for Citizens* introduces visitors to household hazardous materials and teaches them steps that can be taken to protect themselves, their families and their communities. The web site is <http://training.fema.gov/emiweb/IS>. Select 'Our Courses' and then select IS-55 from the list of courses.

St Catharines launches new web site

St. Catharines Fire Service launched a new web site at the end of May that promises to offer a wide range of information on a variety of fire prevention and life safety topics. The site includes a number of special sections including one just for kids where they may enter seasonal colouring contests, and even sign up to become a member of Sparky's Team. The site – which will be expanded to include more valuable information over the coming months – may be viewed at www.stcatharinesfire.ca.



Terrace Bay receives compliance certificate

On April 7, 2003 the Township of Terrace Bay and its fire department received a Compliance Certificate for meeting standards of deliverance for fire prevention in the community. This required Terrace Bay Fire Department to conduct a simplified risk assessment, home escape planning and smoke alarm programs, distribute public information and conduct inspections upon request or complaint. Back row (left to right): OFM Supervisor Hank Tiernan; Jeff Pope; Allen Papineau; Paul Tonin; Captain Mike Gould; Deputy Chief Dan Boucher; Captain Moe Stark; Fire Prevention Officer Ray Stachiw; Fire Chief Ken Benoit. Front row (left to right): acting Mayor Rita McBride; Councillor Peter Monks; Administrator Richard Beare; Councillors John St. Amand and Mary Clara Papineau.

Inquest jury: Watch unsafe smokers

A coroner's jury has called for personal supervision of all unsafe smokers in Ontario seniors homes, after examining the death of a 78-year-old man who burned to death in a wheelchair when a cigarette landed in his lap. The victim was known as a "dangerous smoker" and had set himself ablaze several times but was left unsupervised in a fifth-floor smoking room, which lacked windows and had no sprinklers. Recommendations included: smoking rooms in seniors homes have heat and/or smoke alarms, automatic sprinkler systems; be visible to staff; unsafe smokers be required to wear a smoking apron.

Highway Traffic Act amended

Bill 191, an amendment to the Highway Traffic Act, came into effect April 3, 2003 to protect police officers, firefighters and other emergency personnel whose vehicles are stopped on the shoulder of the roadway with red lights flashing.

Motorists must slow down and, where safe and possible, move to a lane not adjacent to the one in which the emergency vehicle is situated. First offenders will face a fine between \$400 and \$2,000. For second and subsequent convictions, the fine can range from \$1,000 to \$4,000, six months in jail or both.

Highway Traffic Act regulation 340/94, Drivers' Licences, was amended by O. Reg. 115/03 which allows firefighters to drive ambulances during an emergency situation. This change was made to assist first responders during the recent Severe Acute Respiratory Syndrome outbreak.

New Toronto Chief

William Stewart — a 31-year fire service veteran — was appointed Chief of Toronto Fire Services, on May 1, 2003. Look out for an interview with the Chief in an upcoming issue of the Messenger.



COMPLIANT: At the Northeastern Fire Education Conference in North Bay, fire departments were presented with their certificate of compliance. Pictured above, from left to right, are: Captain Norman Grossinger Sesekinika Fire Department, Fire Chief Raymond Champoux, Eldee; Fire Chief Henry Darling, Kenogami Fire Department; Deputy Fire Chief Ed Lapierre, Estaire/Wanup; Fire Marshal Bernard Moyle; Fire Chief Jim Boswell, Georgian Bay Township; Fire Chief Lloyd Packham Savard Township Fire Department; Fire Chief Laura Lee, Hawk Junction; Fire Chief Ken White Lorrain Valley Fire Department; and, Fire Chief Barry MacNeil, Jocko Point. Missing from the photo is Fire Chief Rick Philip, Kearney, Fire Chief Bill Cox, Powassan and the Fire Chief of Sesekinika.

Where's your Messenger?

Does your department miss out on the Messenger? We're updating the mailing list for fire departments in Ontario. So, if your department is not receiving a copy or you need additional copies, then email rodney.porter@jus.gov.on.ca or telephone 416-325-3120.

...but my department's never featured!

Then do something about it! Simply contact the Messenger using the method above with ideas, photos or stories that you think would be of interest to fire departments.

Questions & Answers

Subject: Juvenile Firesetting

Q.1 What percentage of fatal fires in Ontario are caused by children playing with ignition sources: a) 3%; b) 7%; c) 10%; or d) 14%?

Q.2 What percentage of juvenile firesetters are boys: a) 55%; b) 65%; c) 75%; or d) 85%?

Q.3 On average, a juvenile entered into the TAPP-C program has been involved in how many previous episodes of firesetting: a) 2; b) 6; c) 9; or d) 11?

Answers on page 29.

Heart attack still leading killer of U.S. firefighters

Heart attacks and motor-vehicle crashes cause more on-duty firefighter deaths in the United States than smoke, heat, flames or collapsing buildings, according to an analysis of firefighter deaths in 2002 by the NFPA.

A total of 97 firefighters died on the job in 2002, roughly the same number as in each of the previous nine years, excluding the 340 deaths at the World Trade Center in 2001.

In eight of the last 10 years, fewer than half those deaths occurred within the building or land area where the fire was burning.

The majority of firefighter deaths—51—occurred traveling to or from an emergency, during training activities, during non-emergency duties during non-fire emergencies.

On the fire ground and off, heart attacks are the leading killer of firefighters. In 2002, 37 on-duty firefighters died of heart attacks—13 on the fire ground, eight while traveling to or from a fire or other emergency, seven while engaged in normal administrative activities, six at non-fire emergencies, two during training activities, and one while cleaning up after a tornado.

In addition, two firefighters had strokes during training activities and one suffered an aneurysm at a medical call.

Motor vehicles were another major cause of death, claiming 29 lives. Twenty-two firefighters were killed in crashes and seven were struck by vehicles, all while on duty.

"What's most troubling is that most firefighters who died of heart failure suffered from known health problems," said NFPA president James Shannon.

"NFPA has long had in place a standard, which lists the medical conditions that should preclude someone from working as a firefighter. These recommended precautions should be more widely used."



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GET FUZZY This cartoon, which appeared in *The Toronto Star*, shows how fire protection and common public education program such as stop, drop and roll are becoming part of mainstream behaviour. At least it shows the messages faithfully preached by the fire service are getting through and being understood — hopefully!

New fire hall in Echo Bay

A new fire hall on Highway 17 East was opened in May in the Township of Macdonald Meredith and Aberdeen Additional Township.

The Echo Bay Volunteer Fire Department outgrew the space in its

former location behind the township offices.

After reviewing the pros and cons of expansion, it was decided that it would be more cost effective to build a new \$189,000 four-bay building.

Venturing into firefighting

Fire Venturers is a co-ed vocational Scouting Company for youths aged 14-17, which aims to encourage young people to consider a career in the fire service or other emergency services.

The first Toronto Fire Venturer Company was formed in September 2002 and is partnered with the Toronto Fire Services. The group is sponsored in part by the fire department Credit Union as well as the Toronto Professional Firefighters

Association, Local 3888.

Fire Venturers meet twice a month at the Toronto Fire Services Training Academy on Eastern Avenue in Toronto from 6.30pm to 9pm.

The program includes training in all aspects of fire technology, suppression, prevention and first aid, including CPR. There are currently nine young people and five advisors.

Recent activities have included self-contained breathing apparatus training, attending the recruit graduation at the Toronto Fire Academy where Venturers met Lincoln Alexander, honorary

Toronto Fire Chief and former Lieutenant Governor, earning community services hours at McDonald's McHappy Day, donned full turnout gear to run the training tower stairs, attempted search and rescue in a blacked out



Photo courtesy Toronto Fire Services.

VENTURERS: Left to right: Mike Lewis, Mike Fischer, Hon. Lincoln Alexander, Adam Marrocco, Jonathan Harris.

room and reviewed basic first aid skills. Future plans include a visit to the fire services communications centre and an opportunity to work the hose on a pumper truck.

Additional advisors are being sought, preferably with a background in firefighting, and more young people! For more information, contact Al Harris by email fireal5@rogers.com.

Napanee blazes trail in fire prevention

A new public education program designed to give Grade 7 and 8 students hands-on fire prevention training sparked the interest of Deputy Fire Marshal Doug Crawford during his visit to Napanee on May 14, 2003.

At the fire hall, Crawford witnessed the Greater Napanee Fire Department's 'Blaze Prevention Program'.

There were 384 students that participated in the program from the seven schools in the department's jurisdiction. Each of the students participated in four 30-minute workshops to help develop a set of fire prevention skills.

Public Educator Don Davey, one of the program's co-ordinators, said the department began planning this program last year. It focused its attention on the Grade 7 and 8 students because they are normally forgotten about.

Crawford agreed that the program met a specific need in the community.

"There are different strategies for different ages," said Crawford. "At this age, they can save themselves, and take actions themselves."

He added that students play an important role in fire prevention because they are great means to deliver fire safety messages to the rest of the household, such as parents and siblings.

The 'Blaze Prevention Program' consists of four workshops. The workshops are:

- **Kitchen Fire Safety:** Cook safely keeping pot handles turned in, not wearing loose clothing; try not to use table cloths if there are young children around; demonstrate how to put a pot fire out and get the students to participate; avoid burns and scalds.

- **Chemistry of Fire:** Explain how fire grows; and use the fire tetrahedron.

- **Fire Extinguisher Training:** Call the fire department first; explain how to use a fire extinguisher (PASS); involve the students by letting them practise using an extinguisher; and the importance of using the correct type of extinguisher.

- **How to Escape from a Smoke Filled Home:** Students go through a maze set-up that is filled with smoke from a

smoke generator.

A pre-course test is given to all students and teachers. The average mark was 58% and post-course tests will be administered after the presentation.

The escape and kitchen safety workshops were held in the fire department's training facility. This building was built by department firefighters three years ago to resemble a two-storey home with moveable doors, stairs and some walls.

Even before it was built Fire Chief Tom Kimmett envisioned community education as a use for the training

facility. "This basically was a training facility, but from the start I sold it to council as a double-purpose facility," he explained.

Chief Kimmett added that it is important for students who participate to learn how to deal with the darkness and the smoke that is a result from serious fire situation, adding that most fire casualties in the town were very close to getting out of the house.

Principal Jim Horan

said some of the students were initially scared in the dark house but gained confidence as they found their way out.

"But as one student said, it can save my life one day – what more do you want?" asked Chief Kimmett.

Councillor Gary Hodson, a former teacher, is also convinced that the workshops can have a positive impact on the students.

"Hands on learning is what the students remember, instead of having teachers drill it into them, it sticks with them longer," he said.

"And having knowledgeable people teaching it makes all the difference."



PUBLIC EDUCATION ADVOCATE: Deputy Fire Marshal Doug Crawford speaks with students in Napanee.



HANDS-ON: A student practises using an extinguisher.

For further information on the 'Blaze Prevention Program' contact Public Education Officer Don Davey, telephone 613-354-3415 or email ddavey@ihorizons.net.

Fire Safety Commission

Decisions

Decision No: 2001A006ñ135 The following is a synopsis of a recent Fire Safety Commission hearing. Additional information on the decision may be obtained from the Fire Safety Standards section of the OFM, telephone 416-325-3200.
Date: June 26, 2002

SUBJECT MATTER

An Order was issued on a farm property due to proposed open burning of piles of brush and tree limbs that could create a fire hazard to adjacent properties, building and roadways.

The Order required that burning be carried out only under the following conditions:

1. The fire is to be attended and supervised at all times.
2. All fires are to be completely extinguished at the end of each working/burning day.
3. Burning is not to take place when winds will cause smoke to be an annoyance to nearby property or roadways.
4. All fires must be kept to a maximum size of two metres x two metres x two metres in height.
5. Only the burning of brush and tree limbs is permitted.
6. Equipment capable of extinguishing the fire any time conditions warrant it, is to be on site at all times burning is carried out (i.e. portable fire extinguishers, garden hose, portable pump and hose, bobcat etc.)
7. The owner must contact the Ministry of Environment and comply with the Environment Protection Act.
8. Open air burning shall not be carried out on Smog Alert days as declared by the municipality.
9. No more than three piles at the current locations to be burned at a single time.
10. An area of three metres is to be cleared of all vegetation around the perimeter of each of the piles.

GENERAL DESCRIPTION OF PREMISES

The property is approximately four hectares (10 acres) in size and previously occupied as an orchard.

The trees have been cut down and the useable timber has been removed from the site. Tree stumps and brush remain on site. The property owner wishes to burn this waste material to prepare the land for farming operations.

Three piles have been prepared for burning. Piles dimensions were identified by the fire department as:

- Pile 1 is approx. 16.5 m x 9 m x 3 m high.
- Pile 2 is approx. 9 m x 13.7 m x 1.5 m high.
- Pile 3 is approx. 10 m x 9 m x 4.6 m high.

Pile 1 is separated from Pile 2 by approximately 232 metres. Pile 3 is separated from Pile 2 by approximately 30 metres. No pile is within 90 metres of any building. A line of trees is located approximately 122 metres south of Pile 3.

Fire hydrants are located adjacent to the north property line, which is at least 213 metres from the nearest pile. The fire department station is located approximately 3.2 kilometres away. The adjacent property to the southwest has a garden hose of sufficient length to reach the barn on that property. The tenant indicates that he has debris-moving equipment capable of limiting fire spread on site. There is no fire safety plan.

REASON FOR APPEAL

The owner appealed to the Commission on the grounds that farming operations are exempt from the provisions of the Fire Code and the *Fire Protection and Prevention Act*, and the local municipality has no jurisdiction to legislate by way of a by-law, where a farming operation is exempt from the Fire Code.

APPELLANT'S POSITION

The owner presented evidence that farm operations are exempt from the *Fire Protection and Prevention Act* and the Fire Code and therefore, the ten conditions as stated on the Order do not apply.

RESPONDENT'S POSITION

The respondent presented evidence that open air burning is governed by the Fire Code and *Fire Protection and Prevention Act*, and the conditions set out in the order are supported by the Fire Marshal's Communiqué dated December 17, 1996 on open air burning.

COMMISSION'S RULING

The Commission upheld the Order.

REASONS

The Tribunal accepts that section 21(1)(f) of the *Fire Protection and Prevention Act*, S.O. 1997 does apply.

Fire Code **Opinions**

The OFM provides clarifications and opinions on Ontario Fire Code matters to assist users in understanding the requirements and their intended use. The Chief Fire Official is not obligated to abide by these opinions. The Chief Fire Official of the municipality has the authority to enforce the Fire Code within the jurisdiction and should be contacted prior to implementing the provisions of these opinions.

Code reference:
Section 4.2
Alcohol Based
Hand Cleaners

Q. Alcohol-based hand cleansers (typically 70% alcohol by volume) in small containers are commonly used in various occupancies to address public health concerns. What provisions of the Fire Code apply to this product?

A. The product in question is marketed as a waterless antimicrobial hand cleanser and is generally found in containers that are less than a litre in size.

Two types of cleanser products have been identified; a gel-type and a foam-type. The gel-type product is a Class IB flammable liquid, but is classified as a pharmaceutical/consumer commodity. As a result of their small container size, Clause 4.2.1.1.(2)(d) of the Fire Code exempts this product from the application of Section 4.2, Container Storage and Handling. The foam-type

cleanser is classified as a Level 1 aerosol (NFPA-30B) and is not specifically addressed in the Fire Code.

These products are generally dispensed and used in very small quantities; thus the fire hazards they present are minimal. However, simple precautions can be taken to ensure safe use. These include avoiding exposure to open flames immediately after application and providing related warning signage or instruction to users. As well, dispensers should be kept at least three feet (0.9 metres) from any open flame or other ignition source.

Although not specifically covered by the Fire Code, excess stock of hand rinse not for immediate use should be located in a properly protected storage room.

TENT CITY: OFM staff helped to erect tents in May 2003 at Scarborough General and Etobicoke General hospitals in Toronto. The OFM was contacted by the Ministry of Health and Long Term Care to provide tents that could be used as Severe Acute Respiratory Syndrome (SARS) screening rooms for patients entering the hospital. The tents were acquired by the OFM as part of its equipment cache purchased as part of its emergency response strategy. In addition, to the tents, the OFM has distributed SARS information bulletins and posted information — including Standard Operating Guidelines from Toronto Fire Services — on its web site at www.gov.on.ca/ofm.



Stubbing out the problem

Smokers' materials are the number one cause of fatal fires in Ontario and throughout Canada. Between 1995 and 2002 there were 172 fire deaths Ontario attributed to smokers' materials. Many more fatal fires remain under investigation.

By definition, smokers' materials tend to be cigarettes. The problem is exemplified in a typical fatal fire: it occurs late at night as a result of a cigarette that is unintentionally discarded on bedding or on a piece of upholstered furniture in the living room. Often the smoker is intoxicated, falls asleep, or is otherwise distracted and leaves the cigarette unattended. The smouldering cigarette goes undetected for some time before the article bursts into flame. Victims, who may or may not include the smoker, are often asleep, impaired (drugs and/or alcohol), or in the case of children, too young to escape from the fire.

Canada's Proposal

A regulatory proposal in December stated that Health Canada is considering regulating the ignition propensity of cigarettes in Canada to reduce fatalities, injuries and property damage from fire started by cigarettes.

The proposal stated: "Fires started by smokers' materials tend to result in more property damage than other fires. From 1996 to 1999, the highest average property damage from all fires in Canada was \$3,937, while the estimated average property damage from fires caused by smokers' materials was \$15,910 more than four times higher."

The proposal affirmed that the most vulnerable members of society are at greater risk from cigarette-ignited fires. Two out of five victims of fires started by smokers' materials are not the smokers themselves but individuals who live in the same household and/or building. Those who perish are often young children or older persons who are less able to respond to and escape from the fire.

Individuals with lower incomes are also disproportionately impacted. An epidemiological investigation of the factors involved in fires in the houses of smokers in the United States found that 75% of the households that had experienced a cigarette fire had an

annual household income level of less than \$20,000 per year.

The OFM Response

The OFM took the opportunity to comment on the proposal with Fire Marshal Bernard Moyle throwing his full support behind the introduction of a fire safe cigarette "without delay".

"There is no doubt that the introduction of a reduced ignition propensity cigarette would rapidly result in a considerable reduction of overall fire losses in Ontario," he wrote.

One concern voiced by some opposing tobacco companies is that a fire safe cigarette may result in complacency and even encourage unsafe behaviour among smokers who may think they do not need to extinguish such a cigarette. However, the Fire Marshal countered: "It is doubtful that the introduction of fire safe cigarettes will encourage unsafe behaviour. On the contrary, the introduction of fire safe cigarettes may highlight the fire risk of cigarettes, thus increasing fire risk consciousness resulting in even fewer fire injuries and deaths."

But the Fire Marshal cautioned that any enhanced fire safety properties of cigarettes should not be used to promote tobacco products or be used in a marketing strategy.

Flammability Standards

Despite the introduction of flammability standards, cigarette fires still exact a significant toll on Canadians.

The Hazardous Products (Mattresses) Regulations were set in 1980 with the purpose of reducing the risk of mattress fires caused by smouldering cigarettes. Textile bedding products such as sheets, pillowcases, blankets, comforters and mattress pads are prohibited from being advertised, sold or imported into Canada unless they meet the flammability requirements specified in Item 13 of Part I of Schedule I to the *Hazardous Products Act*.

In 1987, the Canadian Council of Furniture Manufacturers, an association representing Canadian furniture manufacturers, implemented a voluntary program termed the Upholstered Furniture Action Council (UFAC) with the purpose of making upholstered furniture more resistant to ignition from smouldering cigarettes.

Though these approaches are generally considered to have been successful in reducing the number of fires started by cigarettes, statistics indicate that cigarettes continue to account for the largest portion of fatal fires.

Fire safe cigarettes

So why not solve the problem and make a fire safe cigarette, especially since the technology exists?

A major manufacturer released fire-safe cigarettes in the United States in 2000 and in New Zealand in April 2001. The U.S. National Institute of Standards and Technology found these cigarettes had a significantly reduced-ignition potential.

This type of cigarette could offer an antidote to irresponsible behaviour — falling asleep with a lit cigarette, discarding it carelessly or leaving it unattended. Such a cigarette would be engineered with reduced propensity to start a fire. It might be designed to extinguish itself within minutes if a puff is not taken, or not to develop enough heat to ignite a flammable surface even if it falls and burns to ashes.

Characteristics that make cigarettes less fire-prone include: lower paper porosity; smaller circumference; shorter filter; reducing or eliminating paper burn additives; and lower tobacco density.

The technology to produce fire-safe cigarettes has been available for many years, but the industry appears reluctant to adopt it.

Cigarette companies

Many cigarette companies maintain smokers will not buy a product that goes out very quickly after a puff. However,

they cannot ignore the growing risk of product liability suits. For example, in 2000, a Toronto couple whose three-year-old daughter had died in a fire blamed on a smouldering cigarette filed a law suit against Canada's three major tobacco companies. They claimed that the companies knew how to make a fire-safe cigarette and failed to do so.

Mass-produced commercial cigarettes that self-extinguish are already on the market. The Merit brand from Philip Morris uses 'speed bumps' in the cigarette's paper which make it go out within minutes if a puff is not taken.

An Imperial Tobacco news release in February 2003 claimed several issues need to be resolved before a viable product can be safely put on the market. The Montreal-based company said in its brief that it shared Health Canada's concerns about fire safety but said the term 'fire safe' was erroneous and preferred to call them low ignition propensity (LIP) products.

Imperial Tobacco Canada maintained that "no cigarette or cigarette design has been identified that would reduce ignition propensity in a clear or predictable way under realistic conditions. To force a flawed product on the market now would create a false sense of security among consumers."

According to Imperial Tobacco, reducing the porosity of a cigarette's paper, such as making it thicker or allowing less air to pass through the paper, could increase some toxic elements inhaled by the smoker.

This was a concern voiced by a New Zealand House committee that modifications introduced in the name of fire safety may mean "greater exposure to inhaled toxicants released as a cigarette burns and as a consequence an increase in the number of lives lost as a result of tobacco use."

The company also maintained that changes that lower enjoyment of cigarettes by consumers while lowering ignition propensity could fuel the growing demand in Canada for smuggled or illegally manufactured cigarettes.

Private member's bill

The debate has also been fuelled by a private member's bill put forward last



SMOKING: *Smokers materials cause the majority of fatal fires in Ontario.*

year by Liberal MP John McKay, currently under committee study, that would require cigarettes to meet low ignition propensity (LIP) standards. Cigarettes left unattended caused at least 14,000 fires in Canada between 1995 and 1999, he argued.

Health Canada has not made any decisions about a timeline for regulations, and will await the recommendations of the committee now studying the topic. The new regulations could be more than two years away, if they are pursued at all.

A LIP cigarette sold in the United States as part of the Merit brand family has a 92% success rate in going out when left unattended. McKay believed that this is the model to be followed.

Francis Thompson of the Non-Smokers' Rights Society, said the tobacco industry always finds excuses to avoid safety and health measures. He said there's also a potential health benefit to the LIP smokes - if they go out frequently, people might not smoke as many.

The Government's Role

The push to regulate a product standard for fire-safe cigarettes is not new. The United States has actively addressed ignition propensity of cigarettes over the years with the American Congress first raising the issue in 1929.

In 1974, after a long hiatus, legislation mandating fire-safe cigarettes passed the Senate.

However, the legislation failed in the House of Representatives. Progress stalled again until a Technical Study Group released a report to Congress in 1987 affirming that it is technically and economically feasible to make a fire-safe cigarette. By 1993 a test method was developed as a means to implement a fire safety standard for cigarettes.

NFPA President Jim Shannon has been a strong advocate of fire safe cigarettes since his early days as a congressman. NFPA statistics show: in one year, smoking materials led to 900 fire deaths, 2,500 injuries and \$410 million in property damage.

A Fire Safe Cigarette Act was introduced in the United States in 1999. It required the establishment of a cigarette safety standard and directed the Consumer Product Safety Commission to implement this standard within 18 months of the date of enactment. That Act did not pass, but was re-introduced as the Fire Safe Cigarette Act of 2002.

In 2000, New York passed the first state law requiring fire-safe cigarettes, to take effect by July 1, 2003 unless federal legislation supersedes it. Massachusetts and several other states are considering similar laws.

Lower ignition propensity cigarettes are already on the market. Government action to regulate the ignition properties of all cigarettes means Canada may be seizing a prime opportunity to prevent fire deaths.

Finding your way: Emergency Communications

At 0230 hrs, fire control receives a call from a resident reporting a smell of smoke within her house. She is calling from a cellular telephone, so there is no 9-1-1 address location information available to the fire communicator.

The caller states she lives at 224 Parklawn and the communicator immediately dispatches fire apparatus to the location. As the first apparatus arrives, the initial report is that no one at this location requires, or called for, the fire department.

The above scenario is an example of an error risk that a fire department cannot afford. By assessing correct address locations, fire communicators will ensure the timely response by emergency personnel and eliminate potential liability issues.

Is this a concern for communicator training? You may not think so, but, the results of not assessing complete address details cannot be understated. When examining complaints of poor emergency response, errors in the collection of a complete address location can be a factor for many delays to emergency calls. As well, addressing issues such as duplicate street names with multiple suffixes, street spelling issues or identical street names in two



STUDYING: A communications student receives a 911 call.

different communities create challenges for the fire communicator. The fire communicator must ensure that there is no possibility of an address location error.

There are several elements that make up a complete address location and are essential for a successful response to the emergency call. A fire communicator that knows these elements can assess an accurate location and apply accuracy during the call receiving stage. Elements of a complete address location include:

- The city, town or municipality of the location;
- Street Number;

- Street name;
- Street suffix;
- Street direction (if any);
- House or apartment;
- Access codes or entrance or name of a building;
- Nearest major intersection;
- Recall telephone number(s);
- Landmarks (schools, parks or distinguishing identifiers);
- Other geographical information or directions.

These address elements will assist in the dispatching of fire apparatus. In Computer Aided Dispatch

(CAD) applications, each piece assists in the accuracy and timely retrieval of information and apparatus assignments. As well, responding fire crews will have sufficient information when locating the street on their maps and reduces address conflicts or confusion.

It cannot be overstated as to the importance of correct location details. **If you don't have an address, you can't send help.** When the phone rings or the radio call is made, fire communicators will continue to answer the call for help.

Article by Scott Robinson, Communications Operator, Vaughan Fire and Rescue Service

What's new from the Council?

The Fire Marshal's Public Fire Safety Council has produced a 20 page full colour catalogue illustrating the range of fire and life safety educational products offered. These products are available, for quick delivery, from The Council's Distribution Centre. To obtain your very own copy of this new catalogue please call toll-free 866-815-2820, or send a fax with your address to 613-498-0439.



value packed kit of fire prevention educational material including brochures, BBQ tags, promotional materials, stickers, posters, placemats and a video narrated by

William Shatner, to promote a new seasonal campaign called "Spring into Summer... Spring into Safety". Visit www.safecommunities.com to download the order form and help to keep everyone in your community safe this spring and summer.



This years Fire Prevention Week theme is 'When Fire Strikes: Get out! Stay out!' and the Council has assembled a kit of fire safety materials to ensure that your Fire Prevention Week is a great success. The kit includes a banner, brochures, posters, a full range of promotional items and

features a complete Fire Prevention DVD library. Visit www.safecommunities.com to download this new order form and help make October 5-11, 2003 your best Fire Prevention Week ever.



Safe baby program launched

Thunder Bay has launched a Safe Baby Program. The goal of the program is to deliver a smoke alarm and safety/education kit to the parents of every baby born in the District of Thunder Bay.

Thunder Bay Regional Hospital reported 78 pediatric trauma cases in 2000/01.

The Safe Baby coalition was formed to assist in pediatric trauma cases throughout the district. Coalition members include Canadian Red Cross, Thunder Bay Fire and Rescue Service, OPP, OFM, Health Unit and Superior North Emergency Medical Services.

Pictured left are Fire Inspector Tom Dawes, Thunder Bay Fire and Rescue Service with Lisa Lawrence and her newborn daughter Caitlin.

Lisa received the first of many Safe Baby kits that will be distributed to parents of newborn children from Upsala to Manitouwadge and North to Greenstone.

"We're so grateful to receive such useful items and information," Lisa said. "Being a new parent can be overwhelming at times. There are so many new things to consider and this kit brings safety issues to light in a way that makes it easy to create changes that we might not have considered at this stage."



SAFE BABY: Pictured are Fire Inspector Tom Dawes from Thunder Bay Fire and Rescue Service with Lisa Lawrence and newborn daughter Caitlin.

The kit comes in a canvas bag that contains a smoke alarm, water temperature card, electrical outlet covers and cabinet door locks as well as a variety of safety brochures and information for new parents.

It will be provided free of charge to new parents through city and district

hospitals, and community midwives.

Funding was provided by the Early Child Development Initiative and local sponsors that include Sportop, Canadian Tire (Arthur Street), Thunder Bay Hydro, Thunder Bay Safe Communities, WestJet and Thunder Bay Risk Watch Coalition.

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 2003: 13 fatal fires resulting in 15 fire deaths

Age Group	Male	Female	Total
0-15	1	0	1
16-64	7	4	11
65 and over	3	0	3
Total	11	4	15
Fire Cause	Time of Day		
Accidental	5	0001-0800	7
Undetermined	0	0800-1600	5
Under Investigation	7	1600-1800	1
Incendiary	1	1800-0001	0
Location(s) of fatal fires: Brighton (1), Chatham-Kent (1), Georgina (1), Huron East (1), Kenora (1), London (2), Toronto (1), Milton (1), Mississauga (1), Shoal Lake (1), St. Catharines (1), Kitchener (1).			

April 2003: 11 fatal fires resulting in 18 fire deaths

Age Group	Male	Female	Total
0-15	0	1	1
16-64	5	6	11
65 and over	1	5	6
Total	6	12	18
Fire Cause	Time of Day		
Accidental	3	0001-0800	3
Undetermined	0	0800-1600	4
Under Investigation	6	1600-1800	0
Incendiary	2	1800-0001	4
Location(s) of fatal fires: Haldimand (1), Fort Erie (1), Toronto (3), Ottawa (1), Severn (1), South Glengarry (1), West Nipissing (1), Whitby (1), Windsor (1).			

Volunteering to make a difference

Laura Lee from Hawk Junction, Lynn Mearow from Batchawana Bay and Janice Catling from Echo Bay share a common passion among most volunteer fire chiefs — a desire to serve their local community and a love of the fire service.

Lee has been with Hawk Junction Fire Department, located along the Algoma Central Railway between Sault Ste Marie and Hearst, for four years. She started as a fire prevention officer and has been chief for two years. The department has a staff of 12 volunteers.

Mearow has been a firefighter with Batchawana Bay, north of Sault Ste. Marie, for the past 12 years and chief since 1998 with 19 volunteers. Like a lot of small fire departments in rural Ontario, it is a family affair with members including her husband, all three daughters and two son-in-laws.

Both Lee and Mearow are chiefs of departments in unincorporated areas of Ontario covering vast areas of wilderness with small, often isolated, communities reliant on local industry such as paper mills, logging and commercial fishing.

Catling — who wanted to be a firefighter from the age of 12 — is chief of Echo Bay Fire Department, which serves the municipality of Macdonald, Meredith & Aberdeen Additional located on the shores of Lake George, 30 kilometres east of Sault Ste. Marie.

Catling, who was Echo Bay's first female firefighter, took over as chief of the 18-member volunteer department seven years ago. The Echo Bay department is moving into a new fire hall later this spring.

"There's around 1,400 people in my area and we also provide services for another neighbouring municipality," said Catling. "There's a lot of bush with a railroad running through the township."

For Mearow the geography of her area is a challenge she relishes. There is more than 500 square kilometres of bush, 125 kilometres of highway, a year-round population of 600 people and a provincial park.

For Lee the total population in her

Among the 375 delegates at the 5th annual Northeastern Fire Education Conference that took place from April 3-6 were three of the province's female fire chiefs.



FIRE CHIEFS: Pictured left to right are Lynne Mearow of Batchawana Bay, Janice Catling from Echo Bay and Laura Lee from Hawk Junction.

area is 400 people rising by an additional 50 people in the summer months. The number of calls the fire department receives is small and this in itself is problematic.

Community complacency

"The biggest problem is staff. There's a lot of complacency in the community. Just because we haven't experienced a mega fire doesn't mean there is no need for a fire department. The last structural fire in my area was 14 years ago and if there's no adrenaline then getting new blood into the department can be a challenge especially since no one enjoys practicing week after week and would like the opportunity to put their skills to use," said Lee.

The vast stretches of highway result in a lot of motor vehicle crashes and with extensive railway networks there are a high number of derailments.

"When I first joined the department 12 years ago, there was no training in place," said Catling. "Even this has changed now with a lot of training in place with members expected to turn

up. The volunteer fire department has become a lot more professional."

Lee agreed with this point remembering a lot of the initial organizational challenges she faced.

Despite the vast rural areas that each chief is responsible for and the hundreds of kilometers separating each of them, each chief is very aware of the challenges facing the fire departments in the outlying area. They are brought together through Mutual Aid meetings.

The meetings enable everyone to meet other departments within their zone and band together and help address concerns.

Progressing up the ladder

One difference between the rural volunteer departments of northeastern Ontario and the larger full-time department in southern Ontario is the speed of progression up the ladder of promotion.

"When you work in a volunteer department the work simply has to be done. The number of years alone doesn't count as experience since

some small rural departments will not get as many calls as a neighbouring community," said Mearow. "There is no fixed time frame when it comes to progression."

"When it comes to being a woman in the fire department, people have learned to accept me for who I am — a firefighter. I am respected for being the fire chief," added Mearow. "In a small community it is a responsible position and one that is a position requiring your attention 24 hours a day, seven days a week. There are no fixed hours."

As a volunteer fire chief, always on duty, it is a profession that can take over your whole life.

"I would just die if I missed a call," exclaimed Catling. "During the conference, I checked in every night to see what had happened during the day."

Around the corner

"Looking ahead, I have a lot of members who will soon be leaving as they have been part of the department for a long time, some for more than 25 years," said Mearow. "I don't want them to go as they carry a lot of experience and knowledge so I want to hang on to them for as long as possible. Starting from the beginning will be tough."

"Personnel is definitely a major concern for departments like ours," added Catling.

Happy families

All three women are mothers and, like fire chiefs everywhere, agreed that the fire service was like an extension of their families at home.

"It's all part of being a good fire chief," said Mearow. "The department is like your baby and if there is a problem you want to be the first to know and take care of it as soon as possible."

But, admitted Catling, living and breathing the fire service every waking moment can "place a lot of stress on everyday life".

"As a fire chief you have to watch everyone in your department, especially after a call when there may be a need to debrief. Sometimes all it takes is a call the next day to one of your department members to just check in," added Catling. "It's important to find a healthy balance between the two families — the fire department and your family at home."

Firefighters gather in North Bay

Firefighters in Northeast Ontario got the opportunity to network, listen to expert speakers from the fire service and peruse the latest fire service equipment at the fifth annual Fire Education Conference, held between April 3-6 in North Bay.

The Nipissing and East Parry Sound Mutual Aid Association organizes the annual conference. Committee members include firefighters and fire chiefs as well as OFC Principal Fred McLennan and OFM Fire Protection Adviser (FPA) Dyane McCullough who is Acting Supervisor for northeast Ontario.



Fire Marshal Bernard Moyle

OFM staff were available throughout the conference to offer support and advice.

"One of the great things about this conference is that we catch up on the latest news and developments in the fire service and share the information with the rest of our departments," said Hawk Junction Fire Chief Laura Lee.

Fire Marshal Bernard Moyle was the first keynote speaker at the conference. He spoke of the deaths of 99 people who died after a fire, caused by pyrotechnics, swept through a nightclub in Rhode Island. In contrast, the Fire Marshal said, 94 people died in Ontario fires in 2002, the lowest loss of life in the past eight years.

Moyle credited the province's tough fire protection and prevention legislation and the revised Ontario Fire Code.

"Ontario is the only jurisdiction in North America which, through its legislation, mandates fire protection, the only place in North America which says to its firefighters, career and volunteer, that public education and prevention are a priority," Moyle said. He drove home the importance of public education citing the fact that most fire fatalities occur when there's a five-minute response time or less.

"The people who can prevent those deaths are the people in the buildings who know what they're dealing with and, hopefully, they understand fire safety, and that's our educational challenge in the future," he said.

Additional speakers included Fire Chief John Buckman from Indiana, Past President of the International Association of Fire Chiefs; Fire Chief Dave Hodgins from London Fire Department, Doug Tenant from the Ontario Association of Fire Chiefs; and, Deputy Fire Marshal Doug Crawford.

RECOGNITION: Bill Bowman, former Supervisor, of Field Fire Protection Services for the OFM in Northern Ontario, helped organize the 2003 Northeastern Fire Education Conference. Fire Marshal Bernard Moyle presented him with a framed certificate in recognition for his commitment to the fire service that included 20 years with the OFM. He is pictured above with Fire Protection Adviser Dyane McCullough with Field Services, currently Acting Supervisor.



Climbing the Ladder: Education & Training

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

OFM educational programs and courses granted accreditation

The OFM has been granted accreditation for a number of programs and courses by both the International Fire Service Accreditation Congress (IFSAC) and the National Board on Fire Service Professional Qualifications (Pro Board.)

■ The *Ontario Firefighter Certification Program* was accredited by IFSAC in 1999 to NFPA 1001, Standard for Fire Fighter Professional Qualifications — Fire Fighter Level II. To qualify for a certificate of accreditation, candidates must demonstrate successful completion of an endorsed Hazardous Materials — Operations Level course.

■ The *Pre-Service Firefighter Education and Training Program* is now accredited by the Pro Board to NFPA 1001 — Fire Fighter Levels I and II. To qualify for a certificate of accreditation at the Fire Fighter Level II, candidates must demonstrate successful completion of an endorsed Hazardous Materials — Operations Level course.

■ The *OFM Advanced Fire Cause Determination and Investigation Course* is accredited by both IFSAC and the Pro Board to NFPA 1033: Standard for Professional Qualifications for Fire Investigator.



ACCREDITED: Fire Marshal Bernard Moyle and Bob French, OFM Executive Coordinator, Chair Certification/Accreditation Programs, proudly show off the OFM certificate of accreditation from the National Board on Fire Service Professional Qualifications.

Firefighter Certification Program		
To date	Departments	Firefighters Declared
May 12, 2003	183	14,561
Total Certified	893 Career Firefighters	314 Firefighters

Certification Program for Existing Fire Prevention Officers		
To Date	Departments	Fire Prevention Officers Declared
May 12, 2003	56	372
Total Certified	Six Fire Prevention Officers	

Company Officer Certification Program Launched

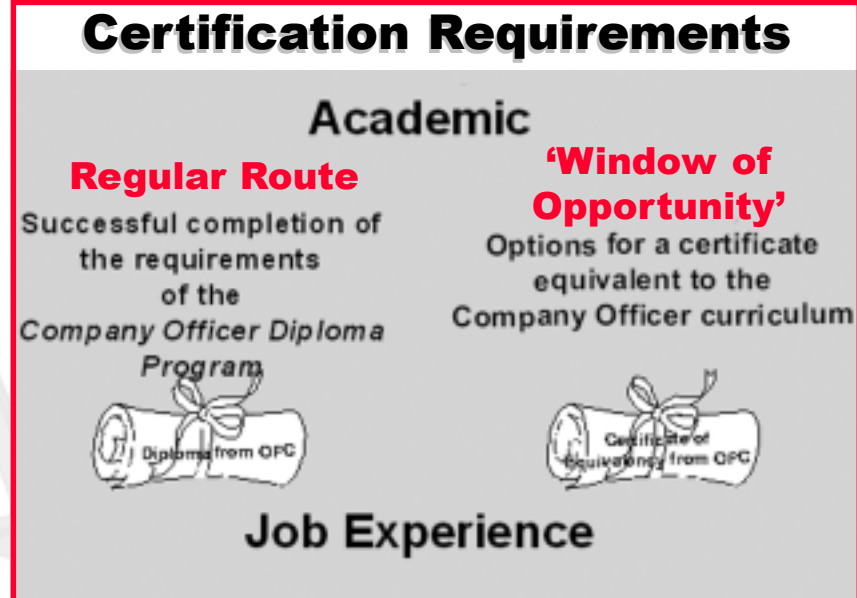
The *Ontario Company Officer Certification Program* was launched on May 6, 2003 at the 51st Annual Meeting, Educational Seminar and Trade Show of the Ontario Association of Fire Chiefs.

Certification is based on the candidate's ability to:

- Meet established educational/training qualifications
- Provide proof of current employment in a municipal fire department in Ontario
- Meet job experience requirements
- Demonstrate competencies to the standard

There are five critical elements to the *Company Officer Certification Program*.

- Certification is a voluntary process for individuals.
- Certification is based on the current Ontario Company Officer Standards.
- There is a three-year 'Window of Opportunity' (May 1, 2003 to May 1, 2006) for Company Officers employed in a municipal fire



department in Ontario as of April 30, 2003, when the certification program was launched. In the 'Window of Opportunity,' Company Officers are given credit for their academic achievements and years of experience. Alternate ways of completing the academic requirements are offered.

- Certification is term specific. Company Officer certification is valid for five years.

- There will be a renewal process after initial certification.

Information about the *Company Officer Certification Program* is available through local information sessions, a brochure and articles in the *Messenger*.

Additional information is available on the OFM web site at www.gov.on.ca/ofm or by contacting the OFM Certification Office at 416-325-3142.

Fire Prevention Week: Get out & stay out!

The message to drive home this year during Fire Prevention Week (FPW) is that when the smoke alarm goes off, leave right away using one of your two planned escape routes and never go back inside.

The theme for FPW during October 5–11 is 'When Fire Strikes: Get Out! Stay Out!' Partners in Ontario include Bell Canada, Kidde Safety, Enbridge Gas Distribution, Energizer Canada, Home Depot Canada and Underwriters Laboratories.

Fire Safety Day was June 27, 2003 and took place at the SkyDome.

Following last year's success as an online planning resource, NFPA is again providing free materials and activities to fire departments at www.firepreventionweek.org.



Photograph by Janet Clarry

SUPPORT: *Fire Prevention Week 2003 was officially announced in the province at the Ontario Association of Fire Chiefs' annual conference.*

"Fire Prevention Week 2003 is focusing on key fire protection

messages," OFM Manager of Public Education and Media Relations Bev Gilbert said.

"If fire strikes your home, get out as quickly as you can and call the fire department from a neighbour's home. And don't go back in to retrieve your valuables. Stay out! Leave the firefighting to the professionals."

FPW 2003 activities encourage families to make sure their smoke alarms work, to know what they sound like, to plan and practice a home escape plan, and to have a designated meeting place outside.

See page 10 for information on ordering *Fire Prevention Week kits* from the Fire Marshal's Public Fire Safety Council.

A DAY IN THE LIFE OF... OFM Engineer

Every Friday, OFM Fire Protection Engineer Susan Clarke takes her turn on “phone duty” answering calls from fire departments needing Fire Code interpretations or requesting an Order to Close, architects wanting to discuss a design issue on a building that requires OFM approval, or a homeowner on fire safety issues.

The Fire Safety Standards Section provides assistance to a wide range of people – other OFM staff, municipal fire departments, provincial agencies, the private sector, and the public.

Susan is the OFM lead for plan review of educational facilities in Ontario. This function is carried out for the Ministry of Education as a condition of funding. The focus of the plan review is on fire safety. This involves consulting with the Ministry of Education, school boards, designers and municipal enforcement officials on common issues, trends and design solutions like conflict between security measures and fire safety for after-hours activities.

In addition to plan review, Susan develops OFC opinions, provides background information and advice to the Fire Marshal on requests for building closures, sits on technical committees, develops documentation for appeals to Inspection Orders, and writes articles for publication. She has been involved in various stages of the Objective-Based codes development, reviews of technical standards, and assistance to fire inspectors on Immediate Threat to Life.

While some of the work is reactive, such as developing a Communiqué on assembly occupancies after the recent nightclub fires in the United States, other projects are longer term, such as the recently published guideline OFM-TG-01-2003 “Group Homes”.

Resolutions

Susan prepares documentation for appeals to Inspection Orders by conducting inspections and researching the concerns.

“I was involved in several orders requiring additional protection for the means of egress. These buildings were built long before the OBC came into effect, and are not regulated by Retrofit, Part 9 of the Fire Code,” explains Susan. “The role of the OFM staff is to review all the information



ON CALL: Susan Clarke is a fire protection engineer with the OFM.

relevant to the appeal and assist the Fire Marshal (or delegate) to form an impartial decision.”

The OFM is involved in requests from fire departments for Orders to Close a building since this requires approval directly from the Fire Marshal. The timeline is usually very short since this involves situations with serious fire safety concerns. Staff from other sections may be involved in verifying the facts, and conducting an inspection. All possible solutions to remove or reduce the threat are reviewed with the fire department. If the occupants are still considered to be in danger, the Fire Marshal approves the closure.

“We work with the fire department and the owner to find a solution that removes the immediate risk without having to close the building whenever possible – closure of a building is taken very seriously and must be validated by OFM staff as a necessary next step.”

Most days are well organized – like on Fridays when Susan has “phone duty” she likes to do plan review. It is easier to pick up again after a call. But some days are hectic.

Here is one day that stands out for Susan:

“I had been acting Section Manager all week and so in addition to my usual work, I was covering for my manager.”

08.00 I check my email and voicemail, returning a call to a fire protection consultant hired to resolve a design issue in a high school.

08.15 A colleague is away on holidays and has asked me to follow through on an Inspection Order review. I call the fire inspector and advise that the Inspection Order could be better handled as a Notice of Violation.

09.30 I log out a roll of drawings.

10.45 A call from another fire inspector on water supply for a nursing home in a rural area. Ministry of Environment has ordered the owner to empty the pond and reline it. The inspector is concerned about fire protection in the interim. I get additional background information, then call the inspector back. We work out coverage while the pond is empty.

11.30 A fax from a consultant I am dealing with on a school proposal, notifies me that he is pursuing

different options in response to my comments.

12.00 I to eat at my desk while I finish the plan review I am working on.

13.00 I review the agenda for a 1:30 Executive Committee meeting.

13.30–14.45 In the meeting, I listen to the status reports for other sections. I give highlights for the week including an Immediate Threat to Life, and committee work on the World Youth Day joint guideline.

14.50–17.00 A call from the OFM Midhurst Office Supervisor about a possible Order to Close. A fire department has inspected a residential camp scheduled to receive up to 100 children on the weekend. There are concerns that the dormitory residence lacks adequate fire protection features.

I ask questions about the fire department, the building and its use and what needs to be rectified. We try to determine if the hazard can be managed. As acting Section Manager, my role is to assist the fire department and advise the Fire Marshal on the recommended course of action.

I call OFM's Field Operations Manager, to arrange an inspection of the premises. He asks if it can be delayed until the following day because of staff availability. As the building will not be occupied until Friday evening, our timeline is flexible. I contact the Deputy Fire Marshal to advise him of the situation, and get consent to delay the inspection.

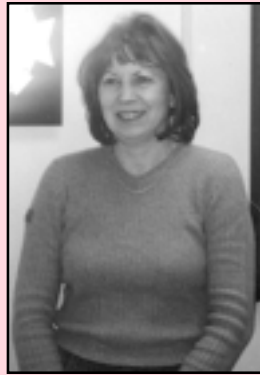
I call the Operations Manager back and give him the go ahead on the inspection. He has contacted the local fire chief, brought him up to date, and advised him to be available. We discuss contacting the building owner through the fire department to prepare him for a possible closure, subject to inspection the next day. He might want to consider cancelling the weekend event.

One major concern is managing the children if they arrive while the building is being closed. There isn't anything more that can be done until the inspection on Thursday. We say our goodbyes.

Before leaving for the day, I review the OFM guideline "Orders, Orders to Close and Immediate Threat to Life", and review similar files for format in preparation for the possible closure.

OFM News Update

OFM support staff member Jane Wazinski, right, has been the United Way Team Captain for three years at the Thunder Bay office.



Jane Wazinski

On behalf of the office, Jane was pleased to accept the Platinum Award from Greg Pilot, President of the United Way, at an achievement dinner on February 6. The award was presented in recognition of the high level of support by employees.

The Thunder Bay office has also received the Employee Merit Award for the past three years. This award is given for having achieved a 20% increase in contributions from the previous year.

Heather Thelwell began on March 17 at the OFC as a library technician. Prior to joining the OFM, she had her own information

management company. Heather's position allows the Resource Center to have extended hours. The new hours are: Mondays and Wednesdays 7:30 a.m. to 8:00 pm; Tuesdays and Thursdays from 7:30 am to 7:00 pm; and on Friday from 7:30 to 3:00 p.m.

Theresa Frank assumed her new role as the Administrative Officer on May 12, 2003.

Due to a boundary realignment, Fire Protection Advisers **Don Egan** and **Dan Koroscil** were assigned in March to Southern Region. **Egan** is the FPA for Haliburton County and Muskoka District and **Koroscil** is the FPA for Renfrew County.

Ted Wieclawek assumed the responsibilities of Operations Manager on June 2 for Southern Region, taking over from **Bruce Gougeon**.

Gougeon left Field Fire Protection Services to undertake a new assignment, reporting directly to Policy Committee, which will see him administer the \$40 million Fire Service Grant; continue his role in the Firefighter Memorial Project; develop a training program for new fire chiefs; and develop a training program for municipal officials.



OFM ACTIVITIES:

Deputy Minister Rafi visited the OFM Toronto office in May and met with senior managers (pictured above). At the Council meeting in April OFM staff Beth Tate

and Bruce Scott received 'you make a difference certificate' for helping raise money for the Council with a staff ski day in February.



Which Came First?

On Saturday, April 29, 2003 the Ministry of Natural Resources forest firefighting crew from the Kenora Forest Fire Management Centre arrived at the community of Shoal Lake in response to a report of a wildfire and a structural fire burning. Unfortunately the structural fire resulted in the loss of human life - two residents of the home died and the structure was destroyed.

The Ministry of Natural Resources (MNR) routinely responds to fires within municipalities and in First Nations communities with a clear mandate to fight only wildland fires, not structural fires. Once on the scene, the FireRanger Crew puts its training and equipment to use, focusing on keeping a forest fire from threatening structural values, **or** to prevent a fire from spreading from the structure to the surrounding bush.

Wildland fire investigation

In the case of the Shoal Lake fire, there was an interesting addition to the wildland fire duties when the MNR was asked to assist in another area of expertise – wildland fire investigation.

Members of the OPP and the OFM put a request into the Kenora Fire Management Headquarters for an investigation team to help in determining which came first, the house fire or the bush fire.

It is common practice in the spring, for residents to burn off dead grass and other woody debris to clean up their property and encourage new growth. Based on witness accounts, it was believed that just such a fire had burned slowly up the hill to the house starting it on fire.

To accurately determine the cause, it was also necessary to rule out the possibility that burning debris from a fire originating in the structure had ignited the



FIRE SCENE SURVEILLANCE: MNR and OFM investigators sift through indicators to jointly determine the cause of the fire

surrounding grass.

The MNR is recognized as the lead agency in the suppression and investigation of wildland fires, whereas the OFM specializes in the investigation of all fires (both preventable and deliberate) involving structures, vehicles, industrial establishments etc. In this case, it was a chance for both ministries to combine their efforts to solve the riddle.

While the OPP and OFM interviewed witnesses and combed through the remains of the house, three investigators from the MNR tackled the surrounding bush.

In any investigation, it is important to avoid pre-judgment, and allow the facts to determine the outcome. To this end, only basic information regarding the fire was obtained, and then matched up to weather data from the day of the occurrence.

Burn patterns

A careful 'walk around' of the general area surrounding the house revealed burn pattern indicators, which showed fire

moving away from the house on three sides, but towards it on the forth.

The radiant heat given off by the burning structure could explain the fire spreading away from the house. It could not however, explain a fire spreading uphill, against the wind, towards the building.

The answer to this question was found at the bottom of the hill approximately 32 kilometres (20 miles) east of the house.

Burn pattern indicators were found showing fire moving out in all directions from an area on the lakeshore beside a walking trail.

These indicators were consistent with the spread patterns produced as a fire moves out, away from a source of ignition. Since this was the only area which displayed these point-source indicators, the investigators agreed that the bush fire had started at the bottom of the hill, and then back-burned up to the house.

More questions

With the area of origin determined, it now remained to find out: did the

forest fire start the house fire, or did the burning structure start the forest fire?

Burned tarpaper type material from the house was found throughout the down-wind area, but had already been ruled out as a source of ignition.

The light flaky material was lying on burned grass stems that supported it and held it up off of the ground. Had this material been burning when it landed, there would have been multiple points of ignition throughout the down-wind area instead of only the one found.

Also, the grass stems underneath it would have been burned right down to ground level, rather than as they were, supporting the burned flakes 3-6 centimetres (1-2 inches) off the ground.

Ignition source

Careful examination of the area of origin failed to locate an exact ignition source i.e. cigarette butt, spent match etc, but it did confirm that fire had originated in the grass at the bottom of the hill, and 'backed' into the wind, uphill to ignite one corner of the house.

The area of origin was confirmed by the OPP and OFM investigators through information gathered and witness statements.

The field portion investigation was concluded in a timely manner by utilizing the strengths of the three agencies: MNR, OPP and OFM.

From an MNR point of view, it was gratifying to be able to assist, and also to receive the professional accolades and recognition from the other investigators. Both the OPP and OFM investigators were impressed with the capabilities and professionalism displayed by the MNR staff, and from our side, it was a chance to use our skills to help out in a different type of investigation.

Article by John Gibson, MNR Fire Management Technician.

Fighting wildland fires

The Ministry of Natural Resources (MNR), in partnership with the OFM and the Ontario Association of Fire Chiefs (O AFC), has developed a 'Strategy and Tactics Workshop'.

The *Strategy & Tactics Workshop* is intended to provide participants with the necessary training required to undertake the duties and responsibilities of the incident commander and to carry out these duties safely and effectively.

This training session is geared towards fire chiefs and deputy fire chiefs and any other members of the department that may be involved with leading and directing other firefighters on brush and grass fires.

The course is approximately 16 hours in length and is normally delivered over a weekend. After attending this training, firefighters will have a basic understanding of the following:

- Firefighter safety in wildland fire operations;
- Forest fire weather and principles of forest fire behaviour;
- Forest fire assessment;
- Forest fire suppression strategies and tactics;
- Aircraft operations on wildland fires;
- Interagency fire response.

Since the introduction of the workshops in 1997, approximately 20 sessions have been held across the province.

The MNR, in conjunction with the O AFC has also made the S-103 forest firefighter training available to fire departments. At the end of training, firefighters will have the basic skills and knowledge to attack grass or brush fires within their area of responsibility. Through practical exercises, firefighters will learn:

- Personal safety on the fireline;
- Fire behaviour;
- Construct fireline with hand tools;
- The power pump;
- Hose lay and hose retrieval;
- Nozzle operation/water application;
- Mop-up fire;



WILDFIRES: An MNR member of staff involved with leading and instructs volunteer firefighter in the use of a directing other firefighters on back pack pump and in burn out operations.

- Fireline patrol and observation;
- Helicopter operations safety;
- Fixed winged aircraft safety, water bombing and drop zone;
- Chainsaw safety operations;
- Radio operation.

In addition to the training initiatives, a Memorandum of Understanding for the sharing of resources such as pumps, tools, hoses and mobile firefighting apparatus has been established to supplement the MNR's protection efforts.

As a result of this agreement, the OFM supplies specialized equipment not normally available to the MNR. This equipment is invaluable for protecting large cottage subdivisions and communities. In 1999, the equipment was deployed to Beardmore and assisted in the protection of this community from an approaching wildfire.

The MNR, OFM and O AFC, continue to proactively work together in suppressing wildland fires through existing northern fire department and municipal agreements.

The training, equipment and agreement initiatives have lead to more effective and efficient response to wildland fires.

Article by Sherry Gascon, MNR Mutual services Specialist.

A joint emergency response exercise

The OFM organized a four-day emergency preparedness training exercise during May at the Ontario Fire College in Gravenhurst.

The OPP and Emergency Management Ontario (EMO) have developed Provincial Emergency Response Teams (PERT) as components of the provincial response strategy to significant chemical, biological, radiological and nuclear (CBRN) emergencies.

The OFM has arranged for a fire service CBRN response capability through fire departments in Ottawa, Toronto and Windsor.

These departments will respond with a team of personnel trained to the NFPA 472 technician level, or higher, to assist if a major CBRN emergency is declared by a local municipal council.

The OFM is also working towards an expanded capability by developing partnerships with a number of communities that will be able to provide NFPA 472 operations level response to support the three cities.

On May 12, 2003, the OFM organized a four day emergency preparedness training and evaluation exercise.

This provided an opportunity for three provincial CBRN teams and the OPP PERT to demonstrate a unified interagency response to a simulated large-scale complex emergency. EMO attended the final exercise as observers.

Intensive training

Forty participants met at the Ontario Fire College (OFC), for an intensive training course led by Greg Way, an OFM Program Specialist with the Emergency Management and Response team. The course was designed to integrate previous lessons learned as well as prepare and practise response to major CBRN incidents.

A major focus of the week was on the fire and police interagency interaction, taking into consideration the role of the OPP at any terrorist event.

This was the first time that the OPP have been part of the inter-agency CBRN training and their presence was welcomed. It also highlighted security and preservation of criminal evidence issues. Participants in the course and the live training exercises recognized the benefit of the joint training.

Another focus of the training was



DRILL: Members of the OPP Provincial Emergency Response Team worked with Ottawa, Toronto and Windsor firefighters during a chemical, biohazard, radiological and nuclear emergency response exercise put together by the OFM's Emergency Management Response unit.

implementing a common incident management system (IMS) and associated accountability system as well as common communication and decontamination systems that will be followed by all multi-agency CBRN teams. Expectations for using these systems are contained in *CBRN Response Team Standardized Operating Guideline* designed specifically for use by the teams.

Participants spent time familiarizing themselves and using newly acquired equipment and sharing information about approaches to previous CBRN incidents.

Simulated CBRN exercise

As part of the simulated exercise, the CBRN teams were summoned after a small fire department, trained to NFPA 472 awareness level arrived at the scene and assumed command at a government building, where security had reported a small explosion in the mailroom.

As initial police resources arrived on scene, intelligence was provided that there was a local group known to experiment with a specific nerve agent.

There was every indication that a nerve gas had been released and people were getting sick. Local police recognized the gravity of the situation and called for the OPP PERT team to respond to the scene.

The local fire department quickly exhausted the mutual aid system and determined that it could not safely respond and called for additional help through the local mutual aid system.

The mutual aid fire co-ordinator, determined that the regional capability was overwhelmed and advised the fire chief to arrange — through the head-of-council — the declaration of a local municipal emergency.

The fire co-ordinator called the Provincial Operations Centre (POC), requesting assistance.

The POC arranged for the response of a team trained to NFPA 472 Operations Level to the scene.

Simultaneously the OFM emergency support team was dispatched with additional specialized equipment necessary to augment the capabilities of the fire department, the NFPA 472 Operations Level team and the OPP PERT team.

Equipment provided by the OFM included a mobile air supply and self-contained breathing apparatus, radio communications equipment, chemical response suits, decontamination equipment and monitoring equipment.

The fire co-ordinator subsequently realized that an even higher level of response was necessary and again contacted the POC requesting to have an NFPA 472 technician level team dispatched to the scene.

Prepared!

There are some resources fire departments hope they'll never deploy.

This is how emergency personnel view all the precautionary measures that now exist in Ontario following the September 11, 2001 terrorist attack in the United States. However, these resources need to be available should such an event reoccur.

One direct result is the newly created Emergency Management and Response (EMR) unit within the OFM. Barry McKinnon is Chief of EMR. The three EMR program specialists are: Greg Way, Andy Glynn and Larry Crang.

Provincial support

The OFM has established memorandums of understanding with Ottawa, Windsor and Toronto Fire Services for high-level response to CBRN incidents. These teams can respond with staff trained to NFPA 472 Technician Level, or higher.

The OFM is also establishing agreements with additional teams around the province that will be able to respond with NFPA 472 Operations Level staff.

The primary role of the EMR unit is to support the development of partnerships with provincial fire departments that have achieved the necessary levels of competence required of responders to hazardous materials and CBRN (chemical, biological, radioactive, and nuclear) incidents. Support from the EMR Unit comes in the form of training, facilitating the development of common standard operating guidelines, transporting required support equipment to the emergency scene and providing liaison between local fire departments and responding teams. These services are provided in part by EMR program specialists.

"The goal is that wherever there is a major incident in Ontario the facilities – like the decontamination set up – are the same," said McKinnon. "The EMR team can also



EMR TEAM: EMR Chief Barry McKinnon and Program Specialists Greg Way, Larry Crang and Andy Glynn.

bring additional emergency equipment as part of the support."

Equipment includes: a mobile air supply for emergency personnel, chemical suits, breathing apparatus, additional monitoring equipment, sufficient portable radios to allow the various response agencies to communicate on a common radio frequency, decontamination equipment, and a common fire ground accountability system. A major addition is a mobile satellite feed that can communicate live from the incident scene.

Practice Session

The joint CBRN training and evaluation event in Gravenhurst in May saw the EMR unit test the support system that is being established to see if it worked and if the correct infrastructure was in place.

The EMR unit treated the exercise like the real thing. McKinnon would normally be supporting other senior government agency officials offsite, while the program specialists would play a supportive role at the emergency scene.

"I cannot get involved or interfere with this test. Making sure the agreements and understandings between agencies are in place is my job," said McKinnon.

Larry Crang managed logistical support; Andy Glynn looked after technical services; and, Greg Way took charge of the field exercise.

This was the first time the OPP Provincial Emergency Response Team (PERT) had worked with the fire departments from Toronto, Windsor and Ottawa.

The joint provincial CBRN exercise will be an annual event. Localized training will be provided to fire departments throughout the year by OFM staff with support from level three trained fire department personnel. The training levels are:

Level One: This is awareness training that every fire department in Ontario needs.

Level Two: At this level, fire departments can establish the safe working perimeter where there are hazardous products involved and they can provide appropriate decontamination to personnel that respond into the hot zone to mitigate the situation.

Level Three: There are three teams at this level in Ottawa, Windsor and Toronto. They are trained to work in the 'hot zone'.

"I honestly hope the real thing never happens but if it does then at least we'll be able to minimize any loss of life or property," said McKinnon.

Due to the magnitude of the incident, it was determined that two of the three CBRN fire service teams, trained to the NFPA 472 Technician Level, would be dispatched.

The OPP PERT then responded. Through combined efforts they mitigated the situation by locating and confirming the agent, securing the premises, rescuing and decon-

taminating casualties and followed-up by collecting evidence and information from the victims.

(See **Response** on page 23)

AWARDS RECOGNIZE OUTSTANDING CONTRIBUTIONS TO FIRE SAFETY

Thirteen individuals and organizations, including six children, received Fire Safety Awards from the Fire Marshal's Public Fire Safety Council. 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."

The awards first started in 1988 and this year were presented at a luncheon ceremony at the Fairmont Royal York Hotel in Toronto on June 18, 2003. They were presented by the Fire Marshal and Saäd Rafi, Deputy Minister of Public Safety and Policing Services.

Action Awards: *For children aged 16 or under.*

Payman Barazandeh, age 10, from Mississauga saw smoke in the hallway outside his apartment on Christmas Day 2002. Payman made sure his young sister returned to their apartment, ran down the hallway to pull the fire alarm and then went back to the apartment so he and his family could safely evacuate the building. His quick and courageous actions helped prevent serious damage to the building and occupants.

Vincent Charlebois, age 11, from Ajax was out for an walk with his mother in October 2002 when they heard a smoke alarm. While passersby ignored the alarm, Vincent insisted that his reluctant mom call the fire department, saying, "The firefighters won't be mad" if it's a false alarm. The fire department arrived to find the home filling up with smoke and an unconscious man overcome by carbon monoxide. Vincent's persistence may well have saved a life.

Adam Cochran, age 13, from Waterloo, woke up early on March 2002 to the smell of smoke and a small fire in his bedroom caused by the mechanical failure of an electric fan. Adam remembered his fire safety lessons and crawled to the door, checked for heat before opening it, then alerted his parents who gathered their other two sons and quickly exited the house. The family escaped unharmed.

Alicia Harvie, from Welland, was six years old in December 2001, when a fire raged through her family's home. While her mother pondered what to do, Alicia calmly stepped forward and took charge. She pushed a dresser to the window in the ground floor bedroom and climbed up onto it using a chair. She opened the window and then punched a hole in the screen before helping her young sister out. Her mom pushed Alicia out to safety before being rescued. Alicia's quick thinking probably saved her life and the lives of her family.

Scorpio King, age 12, from Belleville, was delivering



MAKING A DIFFERENCE: Deputy Fire Marshal Doug Crawford and Fire Marshal Bernard Moyle with the six children who received Fire Safety Awards.

newspapers one afternoon in March 2003 when he noticed something strange at a subscribers home. When he looked through a window, Scorpio saw the home was filling with smoke and sparks were coming out of the top of the stove. He promptly called the fire department from a neighbouring home. Because of his swift action, Scorpio saved the home from potential disaster.

Rudy Unni, age 7, from Burlington, learned his family had bought a fire extinguisher that was still in its box in the closet. Although his mother wanted to wait until her husband got home from a business trip to show her how it worked, Rudy insisted that she learn how to use it and read her the instructions. Two days later a pot of oil caught fire in the kitchen and his mom extinguished it and credited her son's insistence for knowing what to do.

Advocate Awards: *For individuals.*

Robert Bulloch is the owner/operator of a McDonalds restaurant in Huntsville. His latest venture raised \$67,000 for *Risk Watch*®, an injury prevention program for children.

Kevin Frankish, co-host of City TV's Breakfast Television, is a fire safety advocate for the city and the province. Kevin volunteers as a member of the Fire Chief's Community Advisory Committee and advised on a number of media and communications issues. He also

helps deliver life-saving messages during Fire Prevention Week and the holiday season.

Kim Rennie and Gloria Cook are parent members of the Keswick School Council. They are passionate believers in *Risk Watch*®, an injury prevention program for children. However, since the school is French-speaking and *Risk Watch* is currently available only in English, they volunteered their time to prepare and teach the lessons to grade one classes during the lunch break.

Partner Awards: These award go to organizations.

CH Television, headquartered in Hamilton, developed and broadcast an impressive series of segments related to fire safety during the holiday season. In addition, CH Television provides consistent coverage of emergency responses and community safety initiatives, which are brought to their attention by the fire departments in the Golden Horseshoe and Greater Toronto Areas.

KICX 104.1 FM, in Midland, is a tireless promoter of fire safety all year round, at no cost to local fire departments. In December 2002, four local fire chiefs were invited to broadcast important holiday fire safety messages. The KICX FM community cruiser is often out on location with the area's fire safety house to help promote fire safety.

MORE FM 105.5 in Huntsville provided on-air support for the fundraising efforts of the Muskoka Injury Prevention Coalition. Through the generous support of MORE FM and other community partners, the coalition raised thousands of dollars for the *Risk Watch* injury prevention program for children. Over the years, MORE FM has been a strong supporter of the fire department.

The Wellington Advertiser is a free weekly newspaper in Wellington County, with a circulation of 35,000. During Fire Prevention Week, the newspaper provides two full pages of coverage at no cost. The newspaper also runs seasonal public service announcements and provides free coverage of fire department events and initiatives. For the past five years, the Wellington Advertiser has donated the proceeds



SPONSORS: The Fire Safety Awards were sponsored this year by Kidde Safety who were acknowledged at a recent Council meeting. Pictured left to right are: OFM Public Education & Media Relations Manager Bev Gilbert, Fire Marshal Bernard Moyle, Angus Fire Technical Sales Manager Derek Roy, Pyrene Corp. President Jim Rotz and Council Co-Chair Rich Morris.

from their annual hockey pool to support fire prevention and public education programs.

Response *(Continued from page 21)*

The exercise gave team members an opportunity to implement a common IMS and Accountability System during a simulated terrorist emergency.

The teams practised a seamless response to a major incident involving local, regional and provincial agencies that included scene security and control, rescue and decontamination procedures, mitigation, and the use of specialized air monitoring equipment.

Evaluation

The final day involved a comprehensive debriefing and evaluation of the exercise, as well as a 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.

The exercise was deemed a success and the three CBRN teams felt that they integrated well with the OPP and benefited from working together. They all appreciated the opportunity to share team protocols and previous experiences that will benefit each other in future responses.

The information collected in the evaluation phase will assist in the enhancement of the *Standardized Operating Guidelines*.

It is planned that the next exercise will include EMS and healthcare community facilities to effectively test the final steps of triage, transportation and treatment of victims.

Article prepared by OFM Academic Standards & Evaluation staff Karen Morris, Rose Barg and EMR Program Specialist Greg Way.

Cambridge innovations

Fire Marshal Bernard Moyle gave a helping hand at the launch of the public education program 'It's Up to You' in Cambridge on June 4. The program puts the fire department into the community, talking to people and getting the message across that fire safety is everyone's business. Later he toured the \$15 million Waterloo Regional Emergency Services Training Centre.



TOP TRAINING: Pictured (left to right) are Fire Marshal Bernard Moyle, Waterloo University Assistant Professor Beth Weckman, Karen Booth-Moyle, Facility Manager Rick Hummel, OFM Public Education & Media Relations Manager Bev Gilbert and Cambridge Fire Chief Terry Allen visit Waterloo Regional Emergency Services Training Centre.

InDetail:

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

The objectives of **InDetail** are to:

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

Topics will be selected based on various factors, including, requests for information/clarification from the fire service, OFM staff perception of fire service needs, new developments in the fire safety and fire protection fields, new OFC and OBC requirements, current OFM research, and OFM evaluation of products.

We hope to take what are sometimes fairly complex technical issues and present them in an easy to read and interesting format that will benefit the fire service. Your input is welcomed, and encouraged. Please direct your comments to the Editor.

The formula for fire safety in the lab

In this article, Michael Histed from the University of Ottawa shares his experience in addressing fire safety challenges facing its research laboratories.

Fire safety professionals and researchers alike have long identified the need to take a closer look at how laboratories in general view fire safety issues.

The introduction of Part 4 of the Ontario Fire Code has helped bring some of these issues into focus.

Organizations such as universities, hospitals and other research-based facilities have made great strides over the last 10-15 years in improving the safety of research laboratories. However, the demands and complexity of modern research activities have increased dramatically, coupled in some cases with diminishing resources.

Many universities, as well as many other publicly and privately run institutions, have the added challenge of coping with buildings of varying ages and conditions that may not meet current fire safety standards.

What has been done and what still remains as challenges that will affect fire safety in research laboratories?

Before discussing some of the programs currently being implemented in research facilities, it is important to first understand the nature of the challenges facing everyone trying to put into place fire safety measures in a dynamic work environment.

THE CHALLENGES:

The challenges facing research laboratories will depend, to a certain extent, on the type of organization within individual universities. There is a broad cross-section that may impact upon the university fire safety

managers to some level.

The human factor: No matter what policies, procedures, guidelines or physical measures have been implemented, they will only work if the organization has buy-in from the staff, and students using the facility. Otherwise, even the most sophisticated of systems will run into difficulties.

Universities, perhaps, have the biggest challenge due to the high turnover of workers in most research lab environments, particularly within the graduate student population.

Unlike staff in an industrial facility, these students will stay with a university for between two to five years before leaving. To ensure consistency, this requires constant training and reinforcement of policies and procedures.

Attitudes are another human element that have to be taken into account to fully understand the challenges faced. Implementing fire safety measures may be perceived as unnecessary and a roadblock to progress.

"I have worked with this product for last 20 years, what's the problem?" "Its only two litres!" "So, I have my flammable liquids stored in a corrosive cabinet, what's the difference?"

These types of statements may be common. Nevertheless, it is important to be able to deal with these sorts of comments and provide assurances that the fire safety precautions are in place for student and staff protection. An important message to convey is that the **safety measures act as a benefit to**

research, not an impediment!

The balance between the research and regulatory environment:

Interpreting federal, provincial and municipal acts, regulations and codes, many of which are often based on industrial environments, becomes a significant challenge to implement in a research lab, particularly where the activities remain microscale, relative to a manufacturing facility for example.

Volumes of flammable liquids may range from millilitres to several litres. Although the quantities vary greatly between research labs and industrial facilities, the impact of a fire can be equally as devastating whether started from a four-litre bottle of solvent or 5,000 litre tank of product.

The Chemical Soup: Unlike many industrial facilities, research labs possess thousands of different types of chemicals, including acids, bases, toxics, and, of course, flammable and combustible substances.

Flammable and combustible materials are the most common substances that are handled, stored and disposed of in a research lab, simply because they have the greatest variety of uses. For example:

- Acetone can be used as a degreasing agent, a reaction mixture solvent, a glass cleaner and a drying agent.
- Ethanol can be used as a reaction mixture solvent as well as a solvent to sterilize surfaces in labs using infectious agents.
- Many solvents are relatively non-

reactive, thus are used to host other reactions.

From a risk management perspective, other families of chemicals can pose an equal or even greater risk of potential ignition, than the solvent group, even though their quantities may be considerably smaller. This may include solids that can be ignited on contact with air or water. These materials must usually be handled with extreme care and occasionally require specialized equipment for storage and handling, such as glove boxes with an inert gas.

New and Old Buildings:

When talking of the challenges related to buildings, this usually refers to older buildings that were either:

- Originally designed as a dry facility and never intended to host labs, but due to space pressures have been retrofitted into a lab; or

- Designed in the 1950s as a state-of-the-art research facility, but in a time when standards regarding ventilation, building codes, flammable liquids storage were very different from today.

This is of course not always the case, though many building owners are still faced with daunting decisions whether to retrofit, update or rebuild. These decisions may still apply to a newer building when faced with implementing a prescriptive code that has no provision for older buildings.

Addressing the Challenges

Given the numerous challenges faced within research labs, what measures can be put into place to meet regulatory requirements, as well as provide a healthy, low risk-working environment?

Below is a list of some key strategies that has helped the University of Ottawa to move towards and provide a fire safe research lab:

- Effective policies, procedures and guidelines is the cornerstone of any lab fire safety program, however, just having something on paper does not constitute an effective program. The University of Ottawa Lab Safety Procedures is just one element of university's fire safety program. This must be complemented with training, continual positive reinforcement, and enforcement.

- The training program should cover all the key elements involved in lab safety, including personal protective



FUME HOOD: A University of Ottawa researcher dispenses flammable liquids safely in a fume hood.

equipment, storage practices, hazard awareness, use of equipment (i.e. fume hoods), fire safety and practice using a fire extinguisher. Training must be provided continuously, and reinforced either through inspections or refresher sessions.

- It may seem obvious, but the proper storage and handling of your flammable liquids is an important element in maintaining a fire safe lab. The Ontario Fire Code and the Ontario Industrial Establishments Regulation provide quite clear instructions on the subject.

- Mixed storage is a common mistake often made because individuals fail to understand the need not to store incompatible products such as flammables and acids in the same cabinet. The issue of compatibilities needs to be constantly reinforced.

- Solvents will often be left out on the lab bench at the end of the day because people were too busy to return to storage. Although it may not be the initial cause of ignition, the presence of unprotected flammable liquids can act as an accelerant. Housekeeping is paramount to the success of any fire safety or health and safety plan.

- Regulatory compliance is the goal of any safety professional, however, it is critical to sit down with the researchers to discuss the implications and how it will affect them.

- Little may be done about old

buildings, perhaps due to lack of resources or the need for more space, but modifying work practices can help compensate. For example, labs using millilitres of solvent could demonstrate that the vapour generated is insufficient to create a fire hazard.

Another possibility is restricting the use of flammable liquids to one or two labs. This could limit the cost to retrofit. These types of options will require negotiations with local fire departments for a variance.

- Ventilation is an important element of minimizing flammable liquid vapour accumulation in a lab, usually achieved via fume hoods or flexible ventilation arms. Often designers forget that universities come under the Ontario

Industrial Establishments Regulation. Choose the ventilation that

complies with what is required by the relevant regulations as well as ones that best meet the facility requirements.

These are a few strategies that are employed at University of Ottawa to improve fire safety in research labs.

What does the future hold?

Codes and Standards change as new knowledge becomes available. The OFM is currently consulting on modifying the Fire Code to make it more performance based and thereby facilitate more flexibility for achieving compliance.

Therefore it is important to stay abreast of these changes to make optimum use of these changes to address the current and future challenges facing research laboratories. It is also important to provide input so that regulatory agencies understand the unique nature of research type environments and its challenges. Research is the foundation of progress, therefore let us not burn but build research Laboratories!

Michael Histed is the Director of Environmental Health and Safety Service at the University of Ottawa. His office is responsible for health and safety, environmental management, emergency management, radiation/bio safety and implementation of Part 4 Fire Code, lab safety. For information, telephone 613-562-5273 or email mhisted@uottawa.ca.

The Fire Marshal's Public Fire Safety Council and St. Catharines Fire Service present the
11th Annual Fire & Life Safety Educators' Conference

Learn it through the grapevine

Quality Parkway Convention Centre, St. Catharines Ontario

19, 20 & 21 November 2003

Highlights Include:

- Pre-Conference Seminar on TAPP-C
- Statistical Update on Fires in Ontario
- Prevention 1st — Strategic Planning for the Future
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- Banquet entertainment includes the SMARTRISK Heroes Program
- Proving Your Program Works

Speakers Include:

- Sharon Gamache, Executive Director of the Center for High-Risk Outreach, NFPA
- Alan Speed, former fire chief, Toronto Fire Services
- Fire Marshal Bernard Moyle
- Terry Allen Ontario Association of Fire Chiefs
- Shaun Belding, Belding Skills Inc.
- Dr. Robert Conn, SMARTRISK

Conference cost is only **\$175.00**. This includes all seminars and workshops as well as breakfast, lunch and the banquet dinner on November 20 and breakfast on November 21. Limited accommodation is available at the Quality Hotel Parkway Convention Centre on Ontario Street is **\$79** per night plus applicable taxes: For reservations, telephone **1-877-688-2324**, extension 2 and mention the Public Education Conference.

Name: _____ Title: _____

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On Wednesday, November 19 from 13:00 — 16:00, there will be an additional free workshop featuring the TAPP-C program in Ontario. Tick one box to indicate if you will be attending: Yes, I will attend. ☐ No, I will not. ☐



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Arson blamed for Woodbine fire

Arson was to blame for the blaze that killed 34 horses at Woodbine Racetrack last August, the OFM announced at a news conference in May.

"We've done several tests and examined the site and with all of those details we've arrived at the fact that it was arson," Bill Hiscott OFM Acting Supervisor for Fire Investigations and Evaluations, said.

No charges have been laid, but the police investigation is ongoing.

The blaze tore through the popular west-end racetrack last

August when an H-shaped barn containing tinder-dry hay went up in smoke. More than 62 firefighters and 20 pieces of fire apparatus were estimated to be on the fire scene. The barn housed 120 horses and total damage was estimated at about \$4.5 million.

Hiscott also made 21 recommendations to prevent such deadly fires from happening again at other racetracks in the province. Foremost among his recommendations is that horse stables be equipped with sprinklers. The recommendations are

summarised below.

Hiscott will meet with the Ontario Racing Commission to try to persuade them to have all racetracks voluntarily adopt his recommendations.

Hugh Mitchell, senior vice-president of racing at Woodbine, said since the blaze, the racetrack has hired a fire safety officer and started spending some \$12 million on fire safety: \$7 million to install sprinkler systems and the rest will be spent on upgrading electrical wiring, installing fireproof walls and strobe-light alarms.

The following is a summary from the recommendations to help reduce the likelihood and impact of another fire occurrence in the racehorse stables at Woodbine Racetrack. Many parallel the provisions identified in "Guidelines for Fire Safety in Facilities Housing Racehorses at Racetracks" published by the OFM in 1993.

Considerations include: The highly combustible nature of the building and its contents; difficult to control activities and monitor people's behaviour in this environment; significant compartmentalization of the building; large number of animals.

1. To control the spread of fire and smoke, the stables should be sprinklered. In the event of a fire, this will control the fire for a period of time, providing the opportunity to manage the occurrence and making it less dangerous for the occupants of the building and emergency responders.

2. Until such time as the buildings are sprinklered, no combustibles including straw, hay or wood shavings to be stored in the "shedrow" or barn. At the time of the fire the supply was in access of the "One day" requirements.

3. Storage bins used for the hay, straw and wood shavings should be positioned as described in the Guideline and have at least one roof vent to ventilate them during hot weather.

4. Install a standpipe system and hoses in each barn to assist in suppression activities to control a fire.

5. Repair or upgrade the hydrant

system and water supply in the area of the "backstretch" as soon as possible to meet the water pressure requirements.

6. Auditable alarms should be added to the strobe light system in each barn to warn of an emergency situation.

7. All garbage/trash containers used in the barn must be constructed of non-combustible material with self-closing lids.

8. There should be **"No Smoking Within 25 Feet of this Barn"** signs posted at every exterior entrance to the barn. There should be "No SMOKING" within 25 feet of any barn or storage container holding combustible products.

9. Establish additional designated smoking areas with proper receptacles for the disposal of smoker's materials.

10. All electrical devices being used within the barn comply with the Ontario Hydro Electrical Code and all appliances are "outdoor" type and C.S.A. listed.

11. Install additional G.F.I. plugs in the "shedrows" so that there is one plug for every two stalls to eliminate the use of extension cords.

12. There should be a fire safety plan developed for the "backstretch" facility outlining the items contained in the Guideline.

13. Signs should be posted within the barn in the area of the pull stations and fire extinguishers advising **"What to do in Case of a Fire"**.

14. Annual fire training, on procedure and use of fire extinguishers

and other suppression equipment, is given to all staff licensed by the Ontario Racing Commission working in the "backstretch".

15. There should be an evacuation plan developed for the safe removal of the racehorses and training of all staff licensed by the Ontario Racing Commission in the area of the "Backstretch". The staff should be instructed and practice the plan.

16. The Fire Prevention Officer establish a security inspection sticker program for all electrical items to be used in the barn.

17. Security officers and/or fire prevention staff should patrol the barns located in the "Backstretch" on a regular basis and enforce all of the hazards.

18. Increased security patrol in the area of the "backstretch" during off hours when the staff is off site.

19. In situations where the barn is constructed of a combination of combustible and non-combustible materials lighting rods should be installed to protect the building in the event of a lighting strike.

20. Install fire breaks separating the tack rooms, offices and sleeping quarters within the barn to control the spread of fire by breaking the barn into three compartments. Alternatively the building could have a sprinkler system.

21. Installation of a beam type smoke detection to be tied into the alarm notification system to identify fire conditions in the area of the stalls and roof area in barns that are unattended for periods of time.

Remembering When in Peel

The Adult Injury Prevention Network (AIPN) — a member of the Peel Coalition for Injury Prevention — is a multi-sectoral, multi-disciplinary committee dedicated to raising awareness of predictable and preventable injuries among older adults in the Region of Peel, Ontario's second largest municipality.

We recognize that no single agency can be responsible for reaching every older adult; therefore, the Network boasts a membership of 18 agencies whose representatives bring a wealth of expertise and energy to the common goal of reducing injuries.

Considering that older adults over the age of 65 are twice more likely to be injured or perish in a fire than any other age group, and falls are the leading cause of fatal injuries among senior Canadians, we focused our attention to the NFPA's "Remembering When" program, which addresses both of these issues in a fun and interactive way.

In 2001, the AIPN applied for funding from Veterans Affairs Canada — Falls Prevention Initiative, Health Canada to deliver the "Remembering When" program events in the Region of Peel.

In 2002, we received notice that we had been awarded funding over a three-year period.

In addition to the fire and fall presentations, the events include a pedestrian safety segment, senior wellness displays, fitness demonstrations, lunch, entertainment and prizes.



SAFE DRESSER: Caledon Chief Fire Prevention Officer Mark Wallace demonstrates fire safety tips.

Recently the events have included a well-received video presentation that was produced by the AIPN to assist in the delivery of the program. To date, over 2000 seniors in the Region of Peel have been reached through the Remembering When events.

Evaluation contributes to the continuous improvement of this program through surveys completed at the events by seniors, veterans and participating agencies, as well as focus groups that are held after each event

to assess the impact of the program in reducing a fire, fall or a pedestrian related injury.

Our latest event was held in the Town of Caledon and our newly appointed Chief Fire Prevention Officer, Mark Wallace demonstrated one of the fire key messages in a fun and interactive way: what not to wear while cooking.

As previously mentioned, our Network was fortunate enough to produce a video called 'The Antics of Harold & Stanley: A Lesson in Fire & Falls Prevention'. If you would like a copy of the video or join us at one of the up coming events, contact the fire service's public education department at the City or Mississauga, the City of Brampton or the Town of Caledon.

With approximately 959,000 residents in Peel, the older population make up 15% and it is estimated to double in 10 years. Therefore, it is imperative that our community take action to reduce injuries.

Article by Public Education Officer Gillian Boyd, Caledon Fire Service. For additional information, telephone 905-584-2272. or email gboyd@town.caledon.on.ca.

Marshal: What does the word mean?

One 'l' is all it takes when writing the word Marshal. All too often, the Office of the Fire Marshal appears in print as Marshall (with two ls).

The Merriam-Webster's Collegiate Dictionary includes 'marshall' as second choice but this variation is more commonly used as a person's name, either first or last. Nor is the use of two 'ls' the American version — the U.S. Marshals only has one 'l'.

The word *Marshal* comes from the Old High German word *marahscalh*, which literally means "horse-servant".

Dating back to the 13th century, a marshal was a high-ranking official that was usually in charge of the cavalry in a household of a prince or noble. This expanded to being in command of military forces.

The hard-riding marshals of the Wild West in pursuit of criminals re-emphasize the relationship of the word *marshal* with horses.

The Fire Marshal might not have a horse but he does command a force of men and women dedicated to making Ontario a place safe from fire.



MARSHAL: Bernard Moyle at the Northeastern Fire Education Conference.

Fire Service Calendar 2003

June 22-24	13th World Conference on Disaster Management	Toronto, Ontario
June 28 - July 4	The Council of Canadian Fire Marshal's and Fire Commissioners Annual Conference	Quebec
July 22-24	NFPA Americas' Fire Expo	Miami, U.S.
August 2-5	Fire Fighters Association of Ontario: Annual Convention	Tottenham, Ontario
September 12	Fire Marshal's Public Fire Safety Council	Gravenhurst, Ontario
September 18-21	FireCon: Northern Ontario Fire/Rescue Conference	Thunder Bay, Ontario
September 21-25	Canadian Association of Fire Chiefs: Fire Rescue Canada	Mississauga/Toronto Ontario
Sept. 30 - Oct. 4	2003 World Extrication Challenge	Ottawa, Ontario
October 5	Firefighter Memorial Service	Gravenhurst Ontario
October 5-11	Fire Prevention Week 'When Fire Strikes: Get out! Stay out!'	North America
November 19-21	11th Annual Fire & Life Safety Public Educators' Conference	St. Catharines, Ontario

Administering the Ontario Building Code

Fire chiefs and their staff who are appointed by municipalities to undertake plans review or inspections under Section 3.2 of the Building Code Act to actively administer the fire and life safety requirements of the Ontario Building Code need to prepare for regulatory reform.

In June 2002, legislation to improve public safety, streamline construction approvals and strengthen accountability in the building industry was passed by the Ontario Legislature.

It is called an Act to Improve Public Safety and to Increase Efficiency in Building Code Enforcement.

The requirements of the Act are expected to be implemented 18 months to two years from the date regulations are in place.

Representatives from the OFM, Ontario Association of Fire Chiefs

and Ontario Municipal Fire Prevention Officers' Association met with the Ministry of Municipal Affairs and Housing, and a result of the input, a new qualification class 'fire protection' was developed.

The new category is for individuals appointed under a municipal bylaw who enforce the fire protection components of the Building Code. It includes fire protection, fire detection and fire suppression issues associated with all buildings and occupancies.

If you are not registered with the Ministry of Municipal Affairs and Housing (MMAH), through the successful completion of provincial qualifications, you will no longer be permitted by law to continue with your appointed functions from the date the regulations are implemented.

Building and fire codes provide

protection, not only for the occupants of a building, but also for fire fighters.

Many building elements must have fire resistance ratings appropriate for the protection of fire fighters, whether they are performing rescue operations or protecting the building.

The fire service needs to address what protections they need and expect from the codes.

The OFM, OAFC, OMFPOA and MMAH continue—through their partnership—to offer OBC courses.

The next course offered at the Ontario Fire College is February 9 - 13, 2004, OBC Part 3, Large Buildings, Health and Safety Requirements.

For more information or to hold Ontario Building Code courses, contact OMFPOA President Jana Gillis, telephone 905-684-4311,

QUESTIONS & ANSWERS

Subject: Juvenile Firesetting

A.1 The answer is 10%. Fireplay accounts for one third of fire deaths of children under the age of 5.

A.2 According to research conducted by the TAPP-C

Program at the Centre for Addiction and Mental Health, approximately 85% of identified juvenile firesetters are boys.

Although fireplay among girls is uncommon, the fires set by girls tend to be more malicious and targeted.

A.3 The average number of previous firesetting episodes by children in the TAPP-C program at the Centre for Addiction and Mental Health is 11. Approximately 35% of these children were under the age of 5 when they set their first fire.

MESSENGER

Profile:

Stamp of approval

Canada Post met a burning need when it honoured volunteer firefighters with a stamp launched in Hanover, Ontario.

In rural Canada, neighbours help one another and look out for each other. In more than 3,500 communities across the country, your neighbours may one day be called upon to risk their lives to save yours.

They are the volunteer firefighters, more than 120,000 men and women who answer the call day or night with dedication.

Canada Post recognized the efforts of these selfless individuals with a commemorative stamp in their honour.

A total of four million of the 48 cents stamp went on sale at all post offices on May 30th.

Eighty-five per cent of the firefighters in Canada are volunteers and they protect 80% of the communities in this country. Of the 4,000 fire departments across Canada, about 3,500 are staffed by volunteers.

Mike Walsh, President of the Canadian Volunteer Fire Services Association (CVSA) notes that, "volunteer firefighters are the first line defenders against many community dangers. They answer the call every day, literally putting their lives on the line for the people of their community."

The Honourable Steven Mahoney, Secretary of State

(selected Crown Corporations including Canada Post), praised the efforts of the volunteers: "Volunteer firefighters

are trusted members of many Canadian communities. Service to a volunteer unit often means countless hours away from family as they perform their duties. The commitment shown by these men and women to the protection of their neighbours, their community and their country is unparalleled."

The stamp pictures three images that reflect the urgency of the situation volunteer firefighters encounter when responding to a call, with a central image of a firefighter carrying a child to safety.

The stamp was designed by Francois Dallaire of Montreal whose previous stamp credits include Canadian Scouting (1983), Stanley Cup (1993), Industrial

Design (1997), the 1995 Christmas set and Imperial Penny Postage (1998).

Photography of the firefighter is by Guy Lavigueur, also of Montreal, whose work appears on four of the five 2003 university stamps. Background photos are by / from Jacques Paul and Le Courier de Saint-Hyacinthe.

Stamps and Official First Day covers will be available at participating post offices, or by mail order from the National Philatelic Centre. From Canada and the USA call toll-free: 1-800-565-4362.

Stamp information may also be found in the Newsroom section of Canada Post's Web site. Follow the links off the homepage at www.canadapost.ca.



ONTARIO LAUNCH: The unveiling of the commemorative postage stamp honouring Canada's volunteer firefighters took place during the opening ceremonies for the ROYAL *2003* ROYALE The Royal Philatelic Society of Canada's 75th annual convention in Hanover, Ontario on May 30, 2003.