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Maine Fire Marshal News, October 2012

Maine Office of State Fire Marshal

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Welcome to this issue of the Maine Fire Marshal News. Yes, we are publishing yet another late edition. Please take some time to read the newsletter and send us your own article for a future publication or comments in general. As always, we do appreciate the feedback on the newsletter many of you have sent over the years and look forward to hearing from you more in the future.

A MESSAGE FROM FIRE MARSHAL JOSEPH E. THOMAS

What does fire actually cost Maine taxpayers? Being able to answer that question through a methodical annual or biannual analysis is critical to the Fire Marshal’s Office, the Maine Fire Service and the public at large. It’s important to us because it would answer so many questions integral to our mission.

First and foremost, knowing this cost would shed light on what the future may hold for us and the fire service in Maine at large. To begin with, we should be able to compare the total cost borne by taxpayers to the total value of property and life saved. We also need to understand what type of incidents consumes most tax dollars, where do they occur and why? Subsequently, we can make a focused effort to lower the tax burden.

Knowing what to focus on is paramount, and it is going to vary from one community to the next based upon its demographic, social, economic, and housing characteristics. For us, these characteristics combined with what we see reported to us from Maine’s fire service, will tell us what and where to focus our fire prevention and inspection efforts. The same is true for the local fire department. What we see statewide is not automatically what every fire department in Maine sees.

We know that really bad fires or “catastrophic fires” as they’re often referred to, carry with them a severe impact on the economies of a community. One example that stands out is the Milo fire of 2008. The estimated property and contents losses were in the millions. The lost productivity and wages were never calculated nor were the costs...
associated with multiple fire departments sending firefighters and apparatus to the scene for an extended stay. Just last month, September 2012, Milo broke ground on a building that will replace half the commercial property that was lost in 2008. The opportunity cost in the form of diminished business and employment growth may never be reclaimed. For those who left because of the fire, the town lost revenue as it did from the businesses being closed. There are many more stories just like Milo and some are even worse because firefighters or civilians were either injured or killed.

We’re often asked how does fire and its associated cost, whatever amount it is, impact demographics and growth. This question requires considerable analysis, but let’s look at Milo again. When we think of Milo, we think of a small town in Maine’s least and most sparsely populated county, Piscataquis. Like most of rural Maine, a significant portion of the counties population is older and these people rely on the limited access they have to a service center. Absent a vibrant service center, the area becomes less likely to attract newer residents; which translates into fewer workers and fewer public and private sector services demand or supply in general. None of this is good for growth, but rather provides one bit of information as to why Piscataquis might be seeing the population decrease we see in Census data for the county.

There are many other questions that need to be asked about the cost or impact of fire in Maine. The State Fire Marshal’s Office will focus on one question at a time beginning with: what is the cost of fire to Maine tax payers?

Thank you all and have safe late autumn and early winter season.

Sincerely,

Joseph E. Thomas
Fire Marshal

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**2011 FIRE MARSHAL’S ANNUAL REPORT IS NOW AVAILABLE**

By Richard E. Taylor, Senior Research and Planning Analyst

The Fire Marshal’s Office has just released the 2011 Annual Report on fire in Maine. The report is quite in depth and covers everything from the Office’s operational activities to fire department reporting trends, in addition to the usual statistics on fires, general incident types and other special topics with detail. Two portions of the report may be of particular interest to you.

The first portion titled “Fire in Maine: 2007 – 2011” looks at the frequency of fires, fire deaths, injuries and property/contents loss over a five-year (and in some cases a longer) period of time. In addition to looking at these basic loss measures, we also compare our count & rate of fire deaths to what we see nationally.

As you can see, Maine often comes in below the national fire death rate. In the eight year span of time shown, Maine was below the national rate 50% of the time. Because 2010 was a record low year for Maine, I’m confident that the national data sets when released will reveal that Maine again has a lower rate. For those of you familiar with both national and Maine fire data you know that from the 60s through the mid 90s, Maine was virtually always above the national rate.
The other portion of the Annual Report of special interest deal with our office’s Plans Reviewers. It’s titled “Fire and Life Safety” which uses fires in two Maine towns, Milo and Camden as an example of why plans reviews are so critical to the protection of lives and property. The story, A Tale of Two Maine Towns, demonstrates how buildings built without a plans review and hence, devoid of fire protection and mitigation systems are so vulnerable to fire. Conversely, buildings built in accordance with a required plans review are not so vulnerable.

The story of the two towns also compares the real losses incurred in buildings absent required plans review as opposed to those reviewed. For instance, the real and potential cost of fighting fire, cost of lost wages and productivity, and the general impact of a fire in the two communities are compared and contrasted. It is needless to say, a compelling example of the value the work our Plans Reviewers has on Maine communities.

When you have a moment, be sure to go to the Maine State Fire Marshal’s web page and you’ll see the report posted on the front page under news and events (see the url below).

http://www.maine.gov/dps/fmo/index.htm

JOSEPH E. THOMAS SWORN IN AS 7th MAINE FIRE MARSHAL
By Richard E. Taylor, Senior Research and Planning Analyst

As many of you know or have guessed by now, Joe Thomas is the new State Fire Marshal. The last time this newsletter was published, he was Acting Fire Marshal.

Joe Thomas (seen at his confirmation hearing before the Legislature’s Criminal Justice & Public Safety Committee below) has served in an acting capacity for most of the year and is the former Portland Fire Chief. The law was changed earlier this year mandating Legislative confirmation for his appointment. That process was completed last month when the State Senate approved Thomas’ nomination. He is the 7th person to serve in the role Maine Fire Marshal since 1939 and succeeds John Dean who retired after serving 12 years in January 2012.

In addition to serving as the Fire Chief of Maine’s largest fire department; Fire Marshal Thomas has a considerable grasp of code application, public education and awareness programming; and a strong desire to see the Office use data to drive policy, rule, and legislative agendas. Prior to serving as Acting Fire Marshal he was the Assistant Fire Marshal and earlier worked in the Office as a Planning and Research Associate II. In this latter capacity, Joe rejuvenated Maine’s fire incident reporting system.
GIVE US OUR FIFTEEN MINUTES BACK!
By Mark J. Stevens, CPE, CFI II, Fire Protection Specialist

In May of this year, I had the opportunity to attend the Vision 20/20 Models in Fire Prevention Symposium where more than 150 experts in all areas of fire prevention convened to discuss solutions to the fire problem in the United States and Canada. The program was initiated by the Institution of Fire Engineers and the first symposium resulted in the publication of the report National Strategies for Fire Loss Prevention.

The loss of life from fire in the United States and Canada is a very complex problem that affects people in varying degrees from all sorts of ethnic, social, and economic backgrounds. So why was the primary focus on fire prevention? Why not discuss a more broad solution to the fire problem?

Deputy U.S. Fire Administrator Glenn Gaines I thought provided the best explanation to those questions when he spoke to the group on the importance of fire prevention. “Give us our fifteen minutes back” was the premise of Chief Gaines speech. Those of us in the fire service know that time is of critical importance when trying to save lives in a residential structure fire. Statistics show that around 80% of fire deaths occur in the place in residential occupancies. The fifteen minute time frame that Chief Gaines centered his discussion around was once a “rule of thumb” for survivability times for occupants in a typical residential structure fire.

Data from live fire tests NIST conducted during the 1970’s showed an average of eleven minutes of time from ignition in a residential structure fire until conditions had deteriorated to the point where escape was not possible. In light of outdated information, NIST conducted similar tests in 2006 showing that survivability times had been reduced to an average of three minutes! What happened to all the work that the fire service had done to promote the use of smoke detectors and increased public education efforts? Furnishings that sometimes contain as many BTU’s as a gallon of gasoline, lightweight construction, and the increased use of plastics that emit toxic gases all contribute to the reduced survival times.

Subtract time for the discovery of the fire and the occupants of a typical residential structure have very little time to escape through their own efforts. The chances of fire suppression crews arriving in time to help trapped occupants are minimal to say the least…can you imagine if we actually had fifteen minutes to act? That might increase the odds significantly….however three minutes does little good. Also consider that fire test data by NIST shows failure of lightweight construction components in as little as seven minutes from the time of ignition…not a comforting thought for occupants or firefighters.

If the fire service cannot protect those who we have worked so hard to protect, what can we do? This is why fire prevention is at the forefront of national efforts such as the Vision 20/20 initiative and where we must increase focus as fire service professionals. With residential structure fires trending towards reduced survival times, and lightweight construction contributing to reduced structural integrity; we owe it to the public and the fire service to increase our prevention efforts. It is a fact that the days of the “fifteen minute advisory” are truly in the past.

For more information please visit: www.strategicfire.org
MEFIRS – Maine Fire Incident Reporting System

Current Statistics 2012*       Final Statistics for 2011
Total Calls:                    27,062          80,465
Fire Calls:                     1,377           3,250**
Rescue Calls:                   18,094          53,346
All others:                     7,591           23,869
Fire Departments Reporting    122             176
Total Fire Dollar Loss          $9,538,948     $30,543,899
Civilian Fire Related Injuries  23              54
Fire Service Fire Related Injuries  11            27
Civilian Fire Related Deaths    8***           23***
Fire Service Fire Related Deaths 0***              0***

* The Fire Marshal’s Office will have all data for 2012 in by June-July of 2013.
** Represents single incidents only.
*** Based on SFMO Investigations.

Notes: In checking validation errors recently I discovered a common problem. We often want to check the Local Forms Used box in the Basic Module, Sections F – J tab, Resources section. If you check that box you must complete the Apparatus module (see example below). Failing to do so will bring up a validation error. Also, remember that when you use code 93, Cancelled on Route, in the Actions Taken section as you see below, you must use a code 611 as the incident type. This is a good intent call cancelled on route.

Always remember to check the validity of your data and make corrections as needed prior to submitting the data! If you’re not sure how to check for validity give me a call at the number below.

For more information on MEFIRS contact us at 626-3873. Thank you.

“Fight Fire with Facts”
I have been closely following the on-going conflict over which smoke alarm technology is right for our homes. My introduction to the issue was during what I’ll call a 45 mile telephone call with Chief Joseph “Jay” Fleming of the Boston Fire Department. He described his concerns during a phone conversation I had with him as I left the National Fire Academy and headed south to my office just outside Washington, DC. Chief Fleming has sincerely presented concerns about ionization technology for many years now and his assertion has been that ionization smoke alarms fail to do the job.

Chief Fleming was correct that ionization smoke alarms were slower than photoelectric alarms in detecting the very large smoke particles common with smoky, smoldering fires. Scientific investigations of hundreds of lab-controlled fires have shown us this. But we missed the opportunity that may have shown even greater results in home fire safety if we accepted that both types of smoke alarms could make our homes safer.

Since I first talked to Chief Fleming, which I estimate was around 2005, I have myself been trying to figure out the answer to this dilemma – what smoke alarm should the fire service recommend to the residents of my community? After eight years of escalating focus on the question I have an answer that I am comfortable with. The best way to alert you and your family when there is a fire in your home is to have two working smoke alarms, one ionization and one photoelectric on each level of your home and outside every sleeping area. It took eight nervous years to figure that out. In the meantime I think we learned a lot about why one type of smoke alarm of either technology would not be enough. Here’s what I think about this whole issue.

We know that fire is a bad actor and we have been working hard for decades to eliminate it as a risk. Many organizations have worked hard to further understand and describe fire’s impact on society unfortunately conclusions don’t come as easy findings. Often it takes years of accumulated experience and data before you can actually see it all fit together and I feel this is the case with smoke alarm technology and home fires. There are still many facets of fire that we do not understand and so we need to keep studying how it affects our safety. In the meantime we need to take what we do know and keep pushing for more and better technology and procedures to improve home safety. We have had some success in reducing the risk of home fires. We have more than cut in half the number of American fire deaths experienced around the time smoke alarms began to emerge as a feasible technology. The National Institute for Standards and Technology (NIST) has been a leader in scientific research on fire. In their April 2012 report Reducing the Risk of Fire in Buildings and Communities: A Strategic Roadmap to Guide and Prioritize Research some of the best fire scientists of our time reflected on how far we have come and what we need to do in the future. One sobering statistic they reported is that “In 1976, the U.S. experienced 2.9 million fires and 8,800 fatalities.” That is almost triple the U.S. fire deaths currently. Science has been a big factor in the reduction of this loss and will continue to lead the way to a safer future.

There are many reasons the fire death rate has decreased so dramatically but I am convinced that a big contribution comes from the presence of residential smoke alarms. Around the time that fire deaths had reached that 1976 peak the smoke alarm was just coming on the scene in communities across America. Reflecting on the 35 years since the introduction of the smoke alarm it can be seen that this technology has contributed significantly to the reduction in fire deaths. The 2008 University of Cincinnati report Why Smoke Alarms Fall Short of Their Full Potential by John Park describes the link of smoke alarms to the decline in deaths.

There is no doubt that smoke alarms have saved countless lives since its inception, and the link between the growth of its use
and the decline of fire related death/injuries can be documented. Between 1977 and 2003, residential smoke alarms use increased from 22% to 95+%. During the same period, the home fire death rate, relative to resident population, declined by nearly 60% (Public/Private Fire Safety Council, 2006).

So, by all indications we are on the right track and smoke alarms will continue to play a role in home safety in the future. Even with the positive progress we still have some concerns in that there are many homes without this simple protection. NFPA says that between 2003-2006, almost two-thirds of home fire deaths resulted from fires in homes with no smoke alarms or no working smoke alarms. In the same time period, no smoke alarms were present in 40 percent of the home fire deaths and in 23 percent of the home fire deaths, smoke alarms were present but did not sound. So here is an opportunity to begin to market the two-alarm approach through education and door-to-door installation programs. Focus intensely on finding those homes with the complete absence or non-working alarms and at the same time promote the second alarm to all those who have working alarms in place.

We know that the key to reducing home fire deaths is to have the earliest detection a fire with an adequate alarm to allow occupants to escape as quickly as possible. Unfortunately the evolution of building materials and home furnishings in our environment and the modern construction methods of our homes have changed and have made that more difficult. Materials in common home furnishings like beds and upholstered furniture can by themselves supply enough heat and flammable gases to enable a room flashover by themselves; and it can happen so quickly that it leaves only a few precious minutes to escape. Greater flammability of furnishings and the increase in more open architecture and tighter energy efficiency has set up the perfect deadly storm requiring us to depend on every tool in our fire safety bag to prevent deaths. That’s why we need two smoke alarms where in the previously we thought one would do.

Before I bring this to a close let me travel off for a second to the fire environment for a minute. Interesting in all the debate recently, people are talking about home fires as if there were actually two distinct and separate types of fire – smoldering and free burning. Without going into the science of this there is only one type of fire that I am concerned with, the kind that injures and kills people in their homes. Fire is fire and it may move from open flame to non-flaming combustion depending (assuming fuel and heat are present) whether it gets a good supply of air. Ventilation is the key and air availability can keep the fire smoldering if there is insufficient air; or cause it to develop into a violent inferno if ventilation is adequate. Some people promote views during this smoke alarm debate that only smoldering combustion is deadly and that if there is visible flame you have nothing to worry about.

This type of misinformation is dangerously untrue and misleading. Non-flaming combustion known as smoldering can produce disabling and near lethal concentrations of carbon monoxide but the ambient temperature can stay pretty close to normal room temperature and tenable to residents. But when that smoldering upholstered chair or mattress bursts into flames the dynamics can change in an instant. Now this violent free burning fire produces even greater volumes of untenable heat and toxic gases then when it was smoldering. All this extreme heat then helps to further heat all the other materials to the point of giving off flammable and toxic gases and it can fill the spaces and spread through out the home driven by the dynamics and behavioral of the power of the original fire. So statements like “its not the flames that kill people in home fires, it’s the smoke” can be misleading. If you do have flames and free active burning you will be producing a far more life-threatening atmosphere, quicker, then if there are no flames.

We simply must abandon trying to
establish a tit-for-tat comparison of which fire is going to kill you sooner. The important thing is that all fires can kill and we must detect them as early as possible to notify the occupants so they can employ their well practiced escape training and documented fire drill without delay.

There are two smoke alarm technologies that can help us detect a fire in our home: ionization and photoelectric. Let’s celebrate that after thirty-five years of living with smoke alarms we finally realize that two is better than one. Now let’s promote this message as aggressively as we can. There, it’s been said, no more nibbling around the edges. This solves the controversy. Every home to be considered minimally fire safe must have at least an ionization and photo-electric smoke alarm on every level of the home and outside of all sleeping areas. Now let’s get to work and get this done because there are a bunch of homes that need more smoke alarms. There should be thousands of communities right now planning to submit a grant proposal for enough smoke alarms and educational programs to meet this new gap in safety.

SEASONAL REMINDERS
By Richard E. Taylor, Senior Research and Planning Analyst

Now is the time to check and make sure all your heating equipment is in good working order and your smoke alarms are functional.

- Have chimneys cleaned!
- Have furnaces inspected!
- Make sure all fire alarms, hardwired or not, have working batteries.
- Make sure your carbon monoxide detector has working batteries.
- Replace all smoke detectors 10 years old and CO detectors 5 years old.

There is a reason most fire fatalities occur during the cold months. Think about it! If everyone cleans their chimney now, Maine fire departments will respond to about 400 fewer calls this year.

MAINE FIREWATCH
By Richard E. Taylor, Senior Research and Planning Analyst

An unattended cooking fire claimed the life of an Auburn woman this past August. Though no fire death is good, it is the only confirmed fire fatal since the last newsletter.

The fire below took place on Spencer Mountain in Piscataquis County (see photo below). The fire took several days to completely extinguish due to the difficulty firefighters had in reaching the remote area and the thickness of the vegetation. The flame was likely the result of lightning or another spark.

Nearly 60 firefighters battled a fire at this 3-story single family home in Waterford this past September. Three adults and three children escaped the blaze though the smoke alarms present failed to work. The home was completely destroyed by the fire.
For the second time this year, a major fire has destroyed a downtown business. The fire above leveled the GMC Valley Auto dealership in Fort Kent. Portions of downtown Fort Kent were lost earlier this year to a bigger fire. This fire at the auto dealership had in addition to members of the Fort Kent Fire Department; firefighters from Sinclair, St. Francois, New Brunswick, Frenchville, Madawaska, Eagle Lake and Clair, New Brunswick, responding. No operable sprinkler system was in the building.

This fire (see lower left hand corner) started in one Lewiston apartment before spreading to neighboring structures. As the fire grew in intensity, dozens crowded into the streets joined by others just curious to see the spectacular fire. Needless to say many residents were displaced and the Red Cross was sent to assist those residents who lost their belongings and a place to stay.

One man was injured in a mobile home fire in Augusta pictured above. This early October fire was caused by a mobile space heater. Space heaters as you may know, have caused a number of fires over the years due to a malfunction, but more frequently people simply placing them too close to combustible materials such as a couch, draperies, and other items. Furniture in particular when ignited burns very fast, hot, and in the process emits very toxic gases. In a mobile home this can be deadly and has been before.

In addition, the resident of this apartment as Fire Chief Audette pointed out, had no working smoke detection in the home. Given the lack of mitigation and fire spread capacity, the man in this mobile home is lucky to be alive.

http://www.smokefreeforme.org/
This Month in Fire History

NFPA’s Fire News begins (as NFPA News Letter), 1916
First national Fire Prevention Week proclaimed by President Warren Harding, 1922
Brush fire kills 28, Griffith Park, Los Angeles (CA), 1933
First Fire Fighters Memorial Sunday is held, 1979
Forest fire kills 1,152 around Peshtigo (WI), 1871
Great Chicago Fire kills 250, loss worth $2,568 million (2003 dollars), Chicago (IL), 1871
First Fire Prevention Day, 1911, marks end of two-day Great Chicago Fire, 1871
Forest fire kills 22, Minnesota/Ontario border, 1938
Forest fire kills 559, Cloquet (MN), 1918
Colliery fire kills 439, Mid Glamorgan, Wales, 1913
Alexander Hamilton home hotel fire kills 15, Paterson (NJ), 1984
Geiger nursing home fire kills 15, Honesdale (PA), 1971
International Association of Fire Chiefs founded, Baltimore (MD), 1873
Oakland fire storm kills 25, loss worth $2,024 million (2003 dollars), Oakland (CA), 1991
Stag Canyon #2 coal mine explosion kills 263, Dawson (NM), 1913
Phillips Petroleum plant fire, loss worth $1,113 million (2003 dollars), Pasadena (TX), 1989
Puerto Rican Social Club fire kills 25, New York (NY), 1976
“Old” wildland fire loss worth $975 million (2003 dollars), San Bernadino (CA), 2003
St. John’s Parochial School fire kills 22, Peabody (MA), 1915
Society of Fire Protection Engineers is founded, Boston (MA), 1950

October 1947, Bar Harbor, ME

Bar Harbor, Me., Oct. 24. (AP) -- The swank summer colony of this playground of the rich, and six other communities, were virtually wiped out today as strong winds fanned woodland fires ravaging New England into fresh fury with the death toll already at fifteen and property damage mounting above $26,000,000.

A spectacular all-night evacuation by land and sea a peacetime Dunkerque, left Bar Harbor a deserted town as 3,500 townsfolk fled in fright before flames that levelled from 200 to 300 homes, including summer showplaces of the international society set.

You can see the Bar Harbor fire in the picture below.

UPCOMING EVENTS & ANNOUNCEMENTS

Maine Fire Chiefs’ Association

2012 Annual Meeting & Conference
Sunday River Grand Summit Resort Hotel & Conference Center, Newry, Maine

“History & Tradition”
October 24-26, 2012
Exhibitors • Educational Sessions
Membership Meeting • Networking
Thank you to our major sponsor: Kaplan University

www.mainefirechiefs.com

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JUVENILE FIRESETTER INTERVENTION
SPECIALIST II
Sponsored by: Office of State Fire Marshal

November 7 and 8, 2012
at
Presque Isle Fire Department
43 North Street
Presque Isle, ME

Course Pamela Tourangeau, LCPC, CEMME
Instructor: Director, York County Juvenile Fire
Safety and Intervention Collaborative

To register for the course use the attached form and
fax, e-mail or mail to:
Adam Rider
Presque Isle Fire Department
43 North Street Presque Isle, Maine 04769
Phone: (207) 769-0881  Fax: 207-764-2537
E-Mail: arider@presqueisleme.us
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To submit articles for publication contact the Fire Marshal’s Office at (207) 626-3870 and ask to speak with the editors. You may also e-mail an article or comment to Richard.e.taylor@maine.gov or Kathy.Chamberlain-Robitaille@maine.gov

Articles submitted for publication in this newsletter from outside sources do not necessarily reflect the opinion of the State Fire Marshal’s Office.

All articles are subject to an editorial staff review prior to inclusion. For a copy of submission requirements contact the editorial staff.

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If you have an announcement or upcoming event you’d like to post in this newsletter, please feel free to forward it to us using the contact information below. The next issue will be in January 2013.