



Staff Report

Fire Services

Report To: Committee of the Whole
Meeting Date: April 23, 2018
Report Number: FAF.18.53
Subject: Fire Inspector as Educator / The Educator as Fire Inspector
Prepared by: Duncan Rydall

A. Recommendations

THAT Council receive Staff Report FAF.18.53 Fire Inspector as Educator/ The Educator as Fire Inspector, for information.

B. Overview

In June of 2017 Chief Fire Prevention Officer Duncan Rydall was elected for a two-year term to 1 of 5 seats as a Director to the National Fire Protection Association (NFPA) Education Section and is the only Canadian Director. Duncan Rydall wrote and submitted a paper on developing and utilizing fire personnel to maximize proficiencies with hybrid fire prevention staff on shift. The paper was selected for the 2018 NFPA Conference and Exposition and Duncan has been asked to present the paper in Las Vegas, Nevada.

C. Background

Since 1896, the NFPA is a global not-for-profit organization devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. NFPA builds many industry standards that provide direction, research, education, outreach and advocacy. Provincially, Ontario follows the NFPA standards for many facets of the fire service's operations, deployment, education, investigation and inspection into fires and incidents. This is an opportunity to put Blue Mountains on the international stage as a cutting edge fire service in a rural Municipality.

D. Analysis

Blue Mountains Fire Services operates with unique staffing in the aspect of value added fire inspectors/public educators. The ability to rotate hats from educator to inspector to firefighter created a hybrid employee within the department that is unique to Blue Mountains and is a model from which to learn from and enhance the current standards. New ways of operating and creating efficiencies within the department brought about this successful speaking opportunity.

E. The Blue Mountains Strategic Plan

Goal #2: Engage Our Communities & Partners

Goal #4: Promote a Culture of Organizational & Operational Excellence

F. Environmental Impacts

Reduced responses to fire emergencies reduces environmental damage from fire and reduces firefighter exposure to carcinogens.

G. Financial Impact

No impact, trip expenditures are within prevention budget

H. In consultation with

Fire Chief Rob Collins

I. Attached

- Who is NFPA
- Fire Inspector as an Educator / The educator as a Fire Inspector

Respectfully submitted,

Duncan Rydall
Chief Fire Prevention Office

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Rob Collins
Fire Chief

March 22, 2018

Greetings, Mayor and Council

Who is the NFPA?

The National Fire Protection Association (**NFPA**) is a United States trade association, albeit with some international members, that creates and maintains private, copyrighted standards and codes for usage and adoption by local governments.

The NFPA is a global nonprofit organization, established in 1896, devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards.

NFPA delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy; and by partnering with others who share an interest in furthering our mission. Our mission is to help save lives and reduce loss with information, knowledge and passion.

Sparky the Fire Dog has been and still stands as the Mascot to encourage children to be fire safe.

The Province of Ontario has adopted the NFPA standards for most fire service operations, establishment, training and education.

I was nominated and elected in June of 2017 to the Education Section of NFPA and sit as a Director for education initiatives. Previously, Bev Gilbert of the Office of the Fire Marshal now retired sat as Director in the seat I now hold.

The opportunity to speak at the NFPA convention and boast about our local fire service and hybrid inspectors on how we are organized is quite honourable. We are unique in many aspects and serve as a model for others to pattern from.

This is a rare opportunity to speak to such a large delegation of the international fire services in North America and abroad.

I have attached a summary of the presentation that I will be sharing, I have a co-presenter that will be presenting part of the time but this is my contribution.

Best Regards,

Duncan Rydall, Chief Fire Prevention Officer

The Fire Inspector as an Educator – The Educator as a Fire Inspector

For centuries fire has been a tool in nature to regenerate forests, change landscapes, develop land and at the same time it devastates property, lives and livelihoods. Early humans harnessed fire and were respectful of the properties fire held, their very existence was dependent on respecting fire. One thing remains constant, fire shows or gives no respect, it will consume everything in its' path.

Our ancestors treated fire with respect as the consequences should fire be unleashed could be fatal to their family or their livelihood. A brief timeline of significant fires from an education standpoint, we have come along way but really haven't applied the lessons learned. Why?

- 1251 Lubeck - Germany, entire city burned and triggered building with stone and mortar as a fire safe material
- 1666 London, a Bakers shop fire destroys most of London, only 16 perish and fire breaks were the factor in stopping the blaze. (the breaks were houses demolished with gunpowder)
- 1760 Boston, 349 buildings destroyed new law stated homes taller than 7 feet shall be stone, brick and mortar and any place built of wood taller than 7 feet would be fined.
- 1788 Great Orleans Fire, 856 of 1100 structures destroyed 80% loss, all new buildings to be built of masonry.
- 1794 Great Orleans, another fire yet only lost 212 buildings, less than 20% loss
- 1847 First practical fire sprinkler was installed in a piano factory (171 years ago)
- 1849 St Louis, fire killed the first US firefighter
- 1894 Underwriters Laboratory is born
- 1896 NFPA is born
 - NFPA 13 is born, sprinkler code
 - NFPA 70 is born, electrical code

- 1903 Chicago, Iroquois Theatre over 602 deaths.
 - 1600 seats but over 2200 in attendance
 - Single main entrance, alternate exits were locked
 - Doors opened inward against egress
 - No exit signs, emergency lights, fire escapes unfinished
 - Inspectors given free tickets to look the other way
- Iroquois Theatre, post incident changes, panic hardware invented
 - Proscenium opening to have fire resistant curtain
 - Doors shall open in direction of travel
- 1911 New York, Triangle Shirt Co. 146 deaths
 - Doors locked to prevent theft and employee breaks
 - Suspicious fires occurred in owners' other buildings prior to fire
 - American Society of Safety Engineers founded as a result
- 1977 Kentucky, Beverly Hills Supper Club 165 dead
 - 3000 occupants in a space designed for 1600
 - No fire alarm, no sprinklers
- 2003 R.I. Station Nightclub 100 dead
 - Overcrowded and poor funneled single exit
 - Unapproved indoor fireworks
 - Flammable wall coverings
- 2016 California, Ghost ship 36 dead
 - Property was a warehouse not residential or assembly
 - Unapproved occupied space residential squatters
 - Unsafe wiring
 - No action by officials to chase out occupants prior to fire occurring
- 2017 London, Grenfell Tower, 71 killed
 - Substituted cladding flammable
 - No fire alarm, no sprinklers, poor exiting

North America has approximately 1.3 million firefighters on the job, 900,000 are volunteers and 400,000 are career firefighters. There is no data collected to determine the number of fire inspectors and fire educators to date. I believe every fire fighter is an inspector and educator in some form. For over a century we have had the knowledge to minimize property loss, fatalities and injuries yet we continue to not apply or enforce it. “Acceptable losses” is a term many have become accustomed to and many expect to win the lottery before ever being impacted by fire. Pyrophobia, fear of fire doesn’t even make the top ten lists of what humans most feared, it’s 52 on the top 100.

A primal instinct, fire is to be afraid of yet it is not often thought about. As a fire inspector, we inspect a variety of buildings, mainly industrial, commercial and assembly. Sometimes we inspect residential properties but that is usually on complaint, request or after a fire and a neighborhood is canvassed with firefighters. For the most part, we look for code violations, situational hazards or are completing an inspection for an approval or regulation. Our knowledge base is comprised of structured education, life experiences and on the job training. Our experiences provide us with many examples of what not to do and how to prevent a fire or minimizing the progression of a fire. If the inspector were to speak to an assembly of people the subject, anecdotes and education to share is unlimited. Placing an educator in the inspector role expands the subject matter for the educator and provides real world examples of the things the educator is teaching. The phrase “Some things cannot be learned from a book”, is valid in this instance, real world experience builds the educators knowledge base.

Creating the hybrid inspector/educator diversifies the personnel as they can switch roles seamlessly bringing increased value to the fire service as that person can multitask without switching hats. As life safety advocates the confidence in having the knowledge to answer a technical inspector question or to help a family develop a home escape plan is seamless. Inspectors addressing a group as an educator they can draw on inspection history with confidence and reflection to impact the group with a dynamic presentation. Smaller fire services require an educator and an inspector yet do not have the resources for both or sometimes either position.

The hybrid inspector/educator is a cost-effective solution to community risk reduction (CRR) in small settlements. Taking it a step further, smaller municipalities can share a hybrid inspector/educator to ensure they are meeting their individual CRR obligations. The hybrid is a diverse tool for the fire service to educate, inspect, and build within the community. In Ontario Canada, Blue Mountains Fire Services is a composite department and operates with this hybrid model as a trifecta being that our hybrid inspector/educators are also certified firefighters able to respond to any emergency.

Building our department in this manner encompassed a buy in from our municipal council as they are getting the most value for the tax payers dollar. The career inspector/educators are always busy with inspections, educational engagements or hall duties leaving little down time. We also have a pilot project that brings several volunteer firefighters out to assist the career educator/inspector during public education engagements. If education is the paramount key in preventing fires from occurring the more people in the department with the knowledge base the better. Word of mouth that we offer free home inspections spreads through the community faster than advertising promotions as we have found attendants from one of our speaking engagements usually contacts us after an event. We are all firefighters and we are all educators in this huge fire service family across our countries.

Inspection and Education go hand in hand; every opportunity to be in front of the public is teachable moment; think of it as an opportunity to save a life. 2016 US Statistics show that most fire fatalities occur in residential properties.ⁱ A civilian injury every 34 minutes, a civilian death every 2 ½ hours and 69 fire fighter deaths along with over 62,000 injured.ⁱⁱ

Building a fire service with inspector/educators will provide an enhanced level of service and focusing on home escape planning, maintenance of life safety devices, CRR will develop into reduced property loss, a reduction of injuries and fatalities across our nations.

ⁱ <https://www.nfpa.org/News-and-Research/Fire-statistics-and-reports/Fire-statistics/Fires-in-the-US>

ⁱⁱ <https://www.nfpa.org/News-and-Research/Fire-statistics-and-reports/Fire-statistics/The-fire-service>