

Residential Fire Sprinklers
The Local Government Perspective

John Waters
Upper Merion Township

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**Background Information
concerning
John R. Waters**

DEGREES AND CERTIFICATIONS

Bachelor of Science
University of Maryland
College Park, MD
1990

Certified Fire Protection Specialist
Fire Protection Specialist Certification Board
Quincy, MA
#152

Certified Fire Instructor II
National Board on Fire Service Professional Qualifications
Quincy, MA
#42497

Certified Fire Investigator
National Board on Fire Service Professional Qualifications
Quincy, MA

Executive Fire Officer
National Fire Academy
Emmitsburg, MD
December 2000

Master of Science
Grand Canyon University
May 2009

EMPLOYMENT HISTORY

January, 1983 to present:

**Upper Merion Township
175 W. Valley Forge Road
King of Prussia, PA 19406**

Originally hired as the Fire Marshal for the municipality, I was promoted to the department head of Safety and Codes Enforcement 6 years later. This department consists of the Fire and Rescue Services Division, Building Regulations Division and Property Maintenance Regulations Division. This department is responsible for all construction and fire and emergency medical service response activities throughout the township.

In 1987, Upper Merion Township began its leadership role in municipal fire protection, passing legislation which, ultimately, led to the requirement for automatic sprinklers in virtually all new construction, including residential.

During my tenure here, I was awarded the Township Manager's "6 P's" Award for service as incident commander of a 500,000 gallon gasoline spill which occurred within the municipality.

September, 1978 to December, 1982: **Albert Einstein Medical Center
York and Tabor Roads
Philadelphia, PA**

Originally hired as a Fire Protection Specialist, I was promoted to Assistant Director of Safety and Security 3 years later. During this period, I was awarded the Hospital Association of Pennsylvania's Excellence Award for Management and Organization.

Einstein was one of the first health care organizations in the nation to be granted a multi-year accreditation by the Joint Commission on the Accreditation of Hospitals. Fire safety was one of the criteria that was considered during the inspection process.

June, 1976 to September, 1978: **Lower Merion Township Fire Dept.
Belmont Hills Fire Company
4 So. Washington Ave.
Bala Cynwyd, PA**

Served as a career firefighter and driver/operator.

September 1971 to present: **Bon Air Fire Company
541 Royal Avenue
Havertown, PA 19083**

Served as a volunteer firefighter, member of the Board of Directors, Treasurer and President.

Abstract

The Commonwealth of Pennsylvania has mandated that local municipalities provide for fire protection for their community, yet there are attempts to limit the authority of those local governments in carrying-out the state mandate by prohibiting the use of fixed protection as a part of the community fire protection plan. Clearly, one should not give responsibility without the corresponding authority.

Studies have shown that a change in the manner in which fire protection is provided is in order. Traditionally, such fire protection was limited to fire department response.

Construction technology has advanced to the point that fire departments cannot respond quickly enough to make a difference; fixed systems are the answer.

Recent tests by Underwriter's Laboratories have shown that the potential for structural failure due to fire has increased in newer buildings; this puts our emergency responders at greater risk of injury or death; fixed systems can address this threat.

The Pennsylvania Homebuilders Association and others are attempting, *with no education or background on the subject*, to limit fire protection decisions on the local municipalities who are now mandated to provide said fire protection. Now, in 2009, we have those with *no expertise in fire protection* attempting to convince elected officials to either, a) delete the sections of the residential code that would require proven fire protection systems from being included in the code, and, b) to prohibit local elected officials, who the legislature just made responsible for community fire protection, from requiring those same proven fire protection systems. Clearly, this is wrong.

The legislature has set a process for the review of new editions of the codes; this process was followed, yet now, the builders are pushing the legislature to ignore their own process in order to prohibit sprinklers in new housing. Clearly, this is wrong.

Fire protection is a local municipal problem and the state should not limit their authority to fulfill that mandate.

Mandating Responsibility – Limiting Authority

In 2008, the Commonwealth of Pennsylvania legislature passed laws (Act 7 of 2008 and its companion bills) making local municipalities responsible for the fire service delivery system for their constituents. Sprinklers, acting as flashover prevention systems, can have a definitive effect on that delivery system.

The numbers of those willing to volunteer as firefighters is dwindling. It may seem axiomatic, but keeping fires small keeps the force needed to confront them small. Sprinklers are the proven cost-effective method of providing fire protection for a community.

The builders have made it abundantly clear that they oppose any efforts to require residential sprinklers; certainly, that is their right. Their implied position, that the current rate of fire fatalities and injuries in the Commonwealth is acceptable is their prerogative, but is that their decision to make? Local government is the authority having jurisdiction regarding the provision of fire protection, not the builders; local government should have the right to decide how best to provide fire protection for their constituents, not the builders.

Local governments should not be hamstrung in their mandated fire safety responsibility by legislation that would forbid them to use all of the resources needed to combat their fire problem, primarily fire sprinkler systems.

Fire Department Response Times

The point at which a fire becomes deadly is known as flashover. Flashover is generally defined as the transition from a growing fire to a fully developed fire in which

all combustible items in the room or compartment are involved in fire. (Thomas, Walton, 1994). The prevention of flashover in a compartment fire is key to reducing fire deaths and injuries.



On 22 December 2006, Upper Merion Fire and Rescue Services responded to a house fire at 409 North Gate Road in the Candlebrook section of Upper Merion Township. The fire was reported at 0405 hours and the on-scene time for the first piece of fire apparatus was recorded at

0411 hours. The photo above depicts conditions upon arrival – 6 minutes from dispatch.



On 12 January 2009, Upper Merion Fire and Rescue Services responded to a house fire at 722 Lookout Lane in the Valley Forge Estates section of Upper Merion Township. The fire was reported at 1736 hours and the on-scene

time for the first piece of fire apparatus was recorded at 1744 hours. The photo above depicts the conditions upon arrival – 8 minutes from dispatch. The fire was contained to 1/3 of the area of a mattress on the 2nd floor.



On 09 January 2009, Upper Merion Fire and Rescue Services responded to a house fire at 1227 Rebel Hill Road in the Rebel Hill section of Upper Merion Township. The fire was reported at 0036 hours and the on-scene time for the first piece of fire apparatus was recorded at 0046 hours.



The photo to the left depicts conditions upon arrival – 10 minutes from dispatch. That which is missing in the photo is the dryer next to the washer. This is what it looked like when it was removed. .

The fire on North Gate Road, an unsprinklered home, achieved flashover and resulted in a fatality. Both the Lookout Lane and Rebel Hill Road fires were well on their way to flashover. One sprinkler head operated at both the Lookout Lane and Rebel Hill Road fires, neither family had to move out for the evening.

Firefighter Safety

Recent studies by Underwriter's Laboratories' tests have shown that modern residential construction techniques, including both TJI's and wood truss, can fail in as little as 6 minutes after being exposed to fire. This situation greatly impacts firefighter

safety. *So now, it's not just about civilian safety, but the safety of our emergency responders.*

Expertise in Fire Protection

America Burning Re-commissioned (1999) made two succinct statements regarding residential sprinklers:

1. No tactic or strategy should detract from the requirement for sprinklers and,
2. Smoke alarms should always be the locality's second option.

The International Association of Fire Chiefs also weighed-in on the subject, stating on its website "The IAFC encourages its members to become active in supporting appropriate code changes relating to residential properties."

Appendix "A" displays a resolution supporting the requirement for the installation of residential sprinklers and opposing any attempt to block said mandate in the Commonwealth of Pennsylvania. As of 21 September 2009, this resolution, or similar documents, has been passed by:

- ✓ Montgomery County Municipal Fire Officers Association
- ✓ Borough of Bridgeport
- ✓ Eastern Division of the International Association of Fire Chiefs
- ✓ Pennsylvania Career Fire Chiefs Association
- ✓ Pennsylvania Association of Building Code Officials
- ✓ Upper Merion Township
- ✓ Delaware Valley Burn Foundation
- ✓ Lehigh Valley Burn Prevention Foundation

- ✓ Pennsylvania Fire & Emergency Services Institute
- ✓ Municipality of Norristown
- ✓ Northhampton County Fire Chiefs Association
- ✓ Bucks County Fire Chiefs & Firefighters Association
- ✓ Cumberland Valley Volunteer Fireman's Association
- ✓ Lancaster County Fireman's Association
- ✓ Rothsville Volunteer Fire Company
- ✓ Strasburg Fire Company
- ✓ George Clay Volunteer Fire Company
- ✓ Borough of West Chester
- ✓ Borough of Narberth
- ✓ City of Reading
- ✓ City of Reading Planning Commission

Expertise is defined as the knowledge of an expert. In addition to the above listed groups, the United States Fire Administration supports residential sprinklers; so to whom should one defer; to the builders, or to those who have the education, background and experience to make informed recommendations regarding fire protection and the best method for which it should be provided?

Interestingly, the builders have used statistics from the National Fire Protection Association to prove their point that sprinklers are not needed. That which the builders don't mention is that the National Fire Protection Association states "Home fire sprinklers are a proven technology that saves lives and protect property against fires at

home.” It seems somewhat disingenuous to use statistics to refute the position of the group that provided the statistics.

The Process

About 80% of a given building code addresses fire protection and fire protection is a local government function (when you dial “911” to report your house on fire, a state-owned fire truck does not arrive). When the Uniform Construction Code was first proposed, one of the provisions was that local government could strengthen the code to fit its respective community needs. The wording that was adopted in the regulation, however, permitted a Labor and Industry hearing officer to judge the local elected officials’ decisions. Those local communities that attempted to require sprinklers have, for the most part, failed to convince the hearing officer that sprinklers were right for their communities. The wording set unreasonable standards to be met in order to be successful.

At the time, the builders stated that since sprinklers were not in the International Residential Code, they shouldn’t be allowed in a mandate from local government. Last year, the sprinklers were adopted in the International Residential Code, the builders appealed and lost.

At that point, the legislature created the Uniform Construction Code Review and Advisory Committee to make recommendations as to whether the provisions in the International Residential Code were relevant in Pennsylvania. The Review and Advisory Committee then recommended that sprinklers stay in the code; that sprinklers were right for Pennsylvania. Now, legislation is pending to delete the provisions for sprinklers in the International Residential Code and to ignore the recommendation of the Review and

Advisory Committee, the very group the legislature created to advise them. This is the reason for this hearing.

Confusion reigns and the disappointment is palpable.

REFERENCES

United States Fire Administration. (1999). *America burning recommissioned*.

Washington, D.C.: Author.

Thomas, P. & Walton, W. (1995). *The SFPE handbook of fire protection engineering*.

Quincy, MA: National Fire Protection Association.

APPENDIX A

WHEREAS, analysis of fire injuries and fatalities conclusively show that the majority of such incidents occur in residential properties and;

WHEREAS, every major fire safety conference in the last 90 years has called for improvements in the area of residential fire safety and;

WHEREAS, the United States Fire Administration (2008) has stated ***“The USFA fully supports all efforts to reduce the tragic toll of fire losses in this nation, including the proposed changes to the International Residential Code that would require automatic sprinklers in all new residential construction;”*** and

WHEREAS, the Fire and Life Safety Section of the International Association of Fire Chiefs (2008) resolved ***“No other action can possibly be more responsible for saving citizen and firefighter lives and personal property than adding residential sprinkler protection to our homes;”*** and,

WHEREAS, America Burning Recommissioned (1999) recommended ***“No tactic or strategy should detract from the requirement for sprinklers”*** and ***“Smoke alarms should always be the locality’s second option.”*** and

WHEREAS, efforts are underway to block the requirement for residential sprinklers in the Commonwealth of Pennsylvania; and,

WHEREAS, the (organization) feels that the fire fatality and injury rates in the Commonwealth of Pennsylvania are unacceptable and,

WHEREAS, every major fire safety organization recognizes that the installation of automatic sprinklers will have a definitive long-term effect on reducing such losses.

NOW, THEREFORE, BE IT RESOLVED, the (organization) supports the requirements for the installation of residential sprinklers and opposes any attempt to block said mandate in the Commonwealth of Pennsylvania.

RESOLVED this xxx day of xxx, 2009.

