

Running head: REDUCING THE RISKS OF ABANDONED BUILDINGS

Reducing the Risks of Abandoned Buildings in East Cleveland, Ohio

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

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Abstract

A significant and increasing number of abandoned buildings in East Cleveland, Ohio, was threatening the safety of surrounding properties, jeopardizing citizen and firefighter safety, and negatively affecting the tax base of the city and the vitality of its neighborhoods. Descriptive research identified means by which the fire department could reduce the risks associated with abandoned buildings by identifying the hazards they created, determining how other like organizations reduce these risks and identifying how other like organizations eliminate abandoned buildings. A literature review identified the primary safety risk factors associated with abandoned buildings as being their lack of maintenance and security. The review also revealed that the very existence of abandoned buildings negatively impacts community vitality and local government revenue, and consequently the ability of local government to provide critical services. Recommendations included incorporating vacant building inspections, subsequent enforcement of applicable nuisance abatement codes leading to demolition of abandoned buildings and vacant building sealing as part of the fire department's community risk reduction program.

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Introduction

Early on a dark wintry morning, the deputy chief looked down on his firefighter strapped to a backboard on a hospital emergency room gurney. An hour earlier his colleagues had rushed the man to the local hospital after he fell through a floor while fighting a fire in an abandoned house on a street of abandoned houses. The firefighter, wide-eyed and fearful, stared at the ceiling, his young wife sitting next to him, holding his hand. The doctor had just delivered the news that the x-rays showed a fracture of the T-12 vertebrae – a broken back in layman’s parlance. The firefighter remained in the hospital for three days, wore a brace for eight weeks and underwent subsequent therapy for nine months. An avid skier, he did not return to full duty for a total of ten months and still suffers a motor deficit in one shoulder stemming from nerve damage.

All that was in the future, though, as he lay unmoving on the gurney. The officer saw the fear in his eyes, but also noted the anger in the wife’s. They seemed to ask, why had her underpaid husband risked his life fighting a fire in a building about which nobody cared in a neighborhood about which nobody cared in a city that had been deteriorating for decades? Why had this officer ordered him to do that? Why had he not protected her husband? She could not know the chief silently was asking himself the same questions.

A 26-year veteran of the fire service, working most of those years in an impoverished and decaying northeastern city, the chief himself had been inside many burning abandoned buildings and had ordered his firefighters into many more. He knew the risks, as did his people. He knew about vacant building placards (of which this house had none) and defensive attacks. He believed in the adage, “Risk a lot to save a lot, risk a little to save a little.” But he also knew the best way to keep a fire from spreading, either in the burning building itself or to surrounding structures in

the densely built urban environment in which they worked, is to get inside and to put the fire out. He knew that a firefighter falling through a floor was not rare, even in occupied and maintained structures, frequently resulting in no severe injury. And, more importantly, he knew human beings are sometimes rescued from burning “vacant” buildings. The problem, he decided, was neither his companies’ response to this fire, but such a building burning in the first place. An abandoned structure *is and of itself a property and life safety hazard*. This hazard must be reduced, if possible.

East Cleveland is experiencing an increasing number of abandoned buildings and fires in those buildings. The fires jeopardize surrounding properties, and the safety of firefighters and citizens alike. Furthermore, the existence of these buildings lowers property values and the attendant tax base, negatively impacting local government revenue, which, in turn, affects the city’s ability to provide basic government services. Descriptive research identified a long-term solution to the abandoned building problem by answering three questions:

What hazards do abandoned buildings pose to property and life safety?

How do other fire and non-fire organizations reduce the hazards associated with abandoned buildings?

How do other fire and non-fire organizations eliminate abandoned buildings?

Background and Significance

The Development of East Cleveland and its Neighborhoods

East Cleveland, a three-square-mile suburb of Cleveland, incorporated in 1895 and grew rapidly from 2,757 people in 1900 to 39,667 in 1930 (City of East Cleveland, 1898, United States Census, 1970, vol. 1, p. 37-19). The community’s physical structure also quickly expanded during the first three decades of the 20th Century, most residential and commercial

buildings in the city dating from that era. While mainly a residential community, the city had a business district and several small factories. Known as “The Place to Live,” East Cleveland’s population peaked at 40,047 in 1950 (United States Census, 1970).

The 1960s, however, ushered in an era of demographic and financial change for East Cleveland’s residents. The city’s population began to fall, reaching fewer than 25,000 in 2007 (United States Census, 2007a). Historically a middle- and upper middle-class suburb, the proportion of the city’s residents living in poverty rose from 13% in 1970 (United States Census, 1970, vol. 1, p. 37-686) to 32% in 2000 and 34.7% in 2007 (United States Census, 2000a, 2007a). The Census also reported a drop in housing stock, from 15,884 housing units, with a vacancy rate of 6%, in 1980, to 13,416 units with a 35.3% vacancy rate in 2007 (United States Census, 1980, vol. 1, p.37-98, 2007b). From 2000 to 2007, the number of vacant housing units increased from 2,281 to 4,731 (United States Census, 2000a, 2007b). A fire department street-by-street survey early this year identified 1,124 vacant buildings, an average of 375 per square mile (East Cleveland Fire Department, 2009a).

Effect on City Revenue

The decline in physical property and population coupled with the increase in poverty has been mirrored in the city’s tax base and revenue collection. From 2000 to 2008 the city’s property tax revenue fell from \$2,018,000 to \$1,916,000 (Ohio Auditor of State, 2001, p. 9, City of East Cleveland, 2009a). Adjusted for inflation, the difference represented a decrease of 24% (United States Bureau of Labor Statistics, 2009).

Income tax revenue also was affected negatively. In nominal dollars income tax collections fell from \$7,836,000 in 2000 to \$6,274,000 in 2008 (Ohio Auditor of State, 2001, p. 8, City of East Cleveland, 2009a). Adjusted for inflation, income tax receipts decreased 36% during the

period. From 1988 to 2006, the city was in a condition of fiscal emergency declared by the state auditor. Upon its release, the mayor said the city, given its poor financial health, could soon find itself under that designation again (“East Cleveland’s,” 2006).

Effect on Government Services and Community Safety

The city’s loss of population and increasing building vacancies, and consequential decrease in tax revenue, led over the years to layoffs in all city departments, and hindered the ability of East Cleveland to provide local government services and to leverage outside funding for the benefit of the community’s safety. In 1978, the city was unable to accept an Ohio Department of Health grant for the purchase and equipping of two new ambulances because it did not have the required matching dollars (Ohio Department of Health, personal letter to East Cleveland city manager, September 20, 1978, J. Banning, personal communication, March 20, 2008). Indeed, the department, strained already by increased fire activity, in 1978 ceased altogether to provide an emergency medical service (EMS). From 1978 to 1982 the city instead contracted with a private ambulance firm for EMS, but had to cease the arrangement for lack of funds (Beard, 1982). Later that year the local hospital began to provide EMS for the community. However, the city’s financial situation was further exacerbated in 2001 when the local hospital discontinued the service (Ott, 2002). Absent another provider, the city resumed the provision of the service as a third safety forces division. In 2003, though, to reduce expenses, the fire department reassumed the emergency medical service and the city then laid off the EMS employees (Ott & Tinsley, 2003). In 2006, again for financial reasons, the city reduced to 12 the minimum number of firefighters on duty each day (City of East Cleveland, 2006). Total daily staffing of two engine companies, one truck company, two ambulances and a command vehicle usually falls to this minimum, which fails to meet the requirements of National Fire Protection Association Standard

1710 (2004), a failure that jeopardizes firefighter and citizen safety, and property protection. East Cleveland's lack of financial resources also disqualified it for a federal Staffing for Adequate Fire and Emergency Response grant (J. Goodrick, personal communication, August 25, 2007). Currently, the federal Department of Housing and Urban Development is questioning the city's "capacity" to use federal funds for housing rehabilitation and demolition, thus jeopardizing their award (A. Houston, personal communication, July 15, 2009).

The city's building department can afford only three full-time inspectors, and only one of those, a residential inspector, is certified by the State of Ohio. Two non-certified housing/zoning inspectors enforce the city's property maintenance code. Three state-certified building inspectors, including one designated as the city's chief building official, are contractors who work only "as needed," a term that has more to do with available funds than with workload (A. Bumbalis, personal communication, March 17, 2009).

In addition to contributing to community blight, with its attendant decreases in tax revenue and government services, vacant buildings pose a significant threat to the safety of the community. From 2006 to 2008, the number of fires in vacant buildings averaged 25.3 annually, representing 36.3% of East Cleveland's total building fires during that period. For the first six months of 2009, East Cleveland had 9 fires in vacant buildings, 31% of the period's total number of building fires (East Cleveland Fire Department, 2009b). These fires endanger surrounding properties, and citizens and firefighters alike. From January 1, 2006, to February 28, 2009, 13 firefighter injuries occurred while operating at vacant building fires, representing 61% of total injuries suffered at all building fires during the period and a cost of \$109,000 in lost time (East Cleveland Fire Department, 2009c).

Purpose of the Research

The increasing number of vacant properties in East Cleveland constitutes a significant safety hazard to firefighters and citizens. These buildings contribute to overall city blight and loss of community vitality, leading to population loss and decreasing real estate values. The loss of population and lower property values negatively impacts city revenue, which in turn affects the city's ability to provide local government services, further contributing to blight and loss of community vitality – a self-perpetuating cycle. This trend in urban decay, which shows no sign of reversing in the future, poses a risk to the survival of East Cleveland as a viable community. The problem of vacant buildings and their risks is not an emerging issue unique to East Cleveland, but nationally is “a matter of increasing concern as the economy has weakened” (Ahrens, 2009, p. iii).

The research, which met the National Fire Academy's Strategies for Community Risk Reduction course focus of reducing fire risk in the local community, the course objective to develop and to implement a strategy for changing local policy regarding a pertinent community risk-reduction issue, and the United States Fire Academy's operational objective of responding appropriately in a timely manner to emerging issues, found alternatives to reduce the number of vacant buildings and the risks associated with them by identifying factors affecting their risks, and means by which other fire and non-fire organizations reduce or eliminate them.

Literature Review

A Widespread Problem

Ahrens found 11,400 fires occurred nationally in vacant buildings in 1999, representing 2.2 percent of all structure fires and accounting for 24 civilian deaths, 66 civilian injuries and \$131.5 million in property damage (2003). By 2006, however, the number of these fires had increased

186 percent to 32,700, representing 6 percent of all structure fires, and annually averaged 50 civilian deaths, 141 civilian injuries and \$642 million in property damage (Ahrens, 2009). This increase corresponds with an overall increase in the number of vacant housing units nationally from 10,424,540 in 2000 to 14,628,255 in 2007, an increase of 40 percent (United States Census Bureau 2000b, 2007b). An Associated Press analysis revealed about four million homes have been vacant for at least 90 days as of March 31, 2009 (Bass & Sewell, 2009). Jones and White (2001) recognized vacant buildings as a “significant public safety issue” (p. 20). The International Association of Arson Investigators in a joint report with the United States Fire Administration (2006) said, although no census data is available on vacant buildings, a survey of 100 cities conducted by Miami University and the University of South Carolina concluded that more than 18 percent of urban buildings are unused. Thompson (2008) noted the recent rise in home foreclosures lead to more fires in abandoned properties. Kidd of Great Britain’s Fire Protection Association, too, shared the realization that these buildings pose a growing risk in times of economic recession (Kidd, 1995).

Vacant buildings are not a concern of just the fire service. Schilling stated, “Communities of all sizes confront the disinvestments and public nuisances caused by vacant residential and commercial properties” (2004, p. 12). Although generally thought of as a problem of older cities in the Northeast and Midwest, he found fast-growing communities in the West and Southwest also struggle with patterns of abandonment. Indeed, the Census estimates 11.6 percent of housing units nationwide are unoccupied (United States Census Bureau, 2007b).

A Definition

When speaking of an abandoned, unoccupied or vacant building, one must be clear about the building condition represented by the term. Smith (2004) divided vacant buildings into two

types. The first is a structurally sound building that is between occupants and is temporarily vacant. The second is a building that has been vacant for some time, has been the target of thieves, and is decayed, structurally unsound and abandoned by its owner. Scanlon preferred the term “abandoned building” (2000, p. 26). He stated the building has no activity and has been vacant for five years or more. Henry judged a building to be “derelict” when its owner abandons it and fails to pay taxes on it (1983, p. 30). Hemmeter applied the definition, “a structure not currently occupied nor being prepared for occupancy and which shows clear signs of lack of maintenance” (1975, p. 42). The International Association of Arson Investigators (2006) differentiated between vacant, meaning a viable owner is available, and abandoned, meaning no owner can be found. The National Vacant Properties Campaign (2005) stated a vacant property is one that poses a threat to public safety or has an owner who neglects the fundamental duties of ownership, such as paying taxes or utility bills. Brennan colorfully termed these buildings “collapsing piles of trash” (1997, p. 174).

Without resorting to Justice Potter Stewart’s famous frustration over the definition of hardcore pornography – “I know it when I see it” – this paper defines an abandoned building to be one that is unoccupied and shows no sign of being maintained. The level of building security, availability of an owner and the length of time unoccupied shall not be defining factors. The terms abandoned, vacant, unoccupied and derelict shall be used interchangeably.

Risk to Firefighter, Public and Property Safety

Scanlon (2000) stated vacant building fires lead to increased casualties for firefighters and civilians, and the chance of fire spreading to other structures. Thompson also recognized abandoned homes “present additional hazards to firefighters and contribute to the juvenile firesetter problem” (2008, p. 2). Mead (1996) noted the attraction of vacant buildings to playing

children. Hoyler (1972) wrote about the hazards, such as holes in floors and walls and damage to utility systems, created by derelicts, vandals, looters and children. Smith (1994) commented on the effect of weather on abandoned masonry structures, specifically rain weakening walls by washing away the mortar between the bricks or blocks. He also warned of squatter-rigged electrical systems, loose stair treads and railings, and a general state of building decay as making these buildings particularly hazardous to firefighters (2004). Jones and White (2001) observed because these structures are uninhabited, fires can burn for a significant time before they are detected and reported, resulting in fires well advanced before firefighters arrive, leading to firefighters operating in and around buildings in imminent risk of structural failure. They also listed open shafts, stairways, holes in floors, and unprotected hazardous materials and fuel packages that would not be found in an occupied building. Butler (1996) added missing drainage covers, loose roofing, fallen debris, broken glass, exposed nails, torn metal and weakened supports as hazards firefighters face particularly in vacant buildings. The National Fire Protection Association (2008) found in a five-year study that the firefighter line-of-duty death rate from fires in vacant buildings was second only to that from fires in stores and offices.

The safety risk is not to just firefighters, but also to the general public. Jones and White (2001) noted vacant buildings attract criminal activity, and are “a significant public safety issue” and “a threat to public safety where ever they exist” (p. 20). The National Vacant Properties Campaign characterized vacant properties as “breeding ground[s] for crime, tying up an inordinate amount of police resources” (2005, p. 3). The organization also cited rodent infestations as going hand-in-hand with derelict buildings. Thompson (2008) cited the National Fire Protection Association’s Urban Fire Safety Project Report that found abandoned homes are a danger to homeless people they attract and children vandalizing or playing in them. Smith

(2004) also pointed out that abandoned buildings become shelters for the homeless and recounted an incident where a squatting family of four lost their lives in a “vacant” building fire.

The risk is not to just personal safety, but also to the property itself. Hoyler (1972), Hemmeter (1975), Henry (1983), Smith (1994), Scanlon (2000), and Jones and White (2001) all observed unoccupied buildings are frequently targets for arson. In addition to fire, Kidd (1995) noted vacant buildings are prone to vandalism, intrusion by squatters and the theft of anything of value in them. Smith also commented that thieves frequently strip these buildings of “systems or contents that would have a resale or scrap value, including all piping, toilet and plumbing fixtures and kitchen cabinets, etc.” (1994, p. 16). The Fire Protection Association (1995) and Mead (1996) also worried about the liability risk to vacant building owners should trespassers or emergency workers become injured in these structures.

The Greater Effect of Community Blight

Schilling noted abandoned buildings lead to a “spiral of decline and disinvestment” that encourages businesses and residents to flee neighborhoods affected by them (2004, p. 12). Coulton and Schramm (2007) stated abandoned homes significantly impact a neighborhood, contributing to disorder and decay. The National Vacant Properties Campaign (2005) added that these buildings are sites for illegal dumping and buildups of trash, and might contain toxic waste. It recognized these properties require a disproportionate amount of public maintenance in the form of board-ups and clean-ups. A building abandoned lowers not only its own value, but also the value of surrounding buildings, negatively affecting a community’s property tax revenue. The Campaign noted a 2001 Temple University study showed an inhabited property lost an average \$7,627 of its value when it is situated within 150 feet of an abandoned building and \$6,819 when its from 150 to 300 feet away. The Campaign summed up the effects of derelict

structures as degrading the quality of life and threatening neighborhood livability and stability. Smith (1994) also remarked on the community blight created by these buildings. Ohio's Senator George Voinovich was concerned about the blight they caused (Gillispie, 2009). A resident of a neighborhood of abandoned homes expressed her frustration.

"I'd move in a heartbeat if I had somewhere to go right now," said Cindy Olejniczak of Buffalo, raking trash from the lawn of a boarded-up house to keep it from blowing in her yard. Roughly every third home in her neighborhood is vacant. Not even pizzerias will deliver to the area now.

"It's almost like you wish they would just level the whole neighborhood," she said, "and start rebuilding again from scratch." (Bass & Sewell, 2009, p. A5)

Jenning's study (as cited in International Association of Arson Investigators, 2006) summed up the effect of vacant buildings, noting they are "the most striking indication of neighborhood decline" and that large scale abandonment "threatens the stability of neighborhoods and undermines the value of investments made by other property owners" (p. 7). He concluded the decline of property is a contagious phenomenon, and that fire is both a cause of abandonment and a side effect.

Fire a Significant Risk

Abandoned buildings are particularly susceptible to intentionally set fires. As noted above, Hoyler (1972), Hemmeter (1975), Henry (1983), Smith (1994), Scanlon (2000), and Jones and White (2001) all recognized the vulnerability of these structures to arson. The Fire Protection Association (1995) reported arson as the chief cause of fires in vacant buildings in the United Kingdom. Ahrens (2009) found incendiarism to be the leading cause of vacant building fires in

the United States. Arson accounted for 43 percent of such fires compared to 10 percent in all buildings.

Butler (1996) recognized that homeless persons or other intruders accidentally set fire to vacant buildings. Brennan (1997) stated they set small fires for heat that can spread and catch the building on fire. Norton (as cited in Federal Emergency Management Agency, 1997) said where “persons seeking refuge in abandoned buildings are under the influence of alcohol or drugs, there is an added risk that careless use of smoking materials will ignite a fire” (p. 11). Hoyler (1972), Mead (1996) and Thompson (2008) noted children playing are a risk to these buildings. The author knew a group of homeless children in an abandoned building who inadvertently started a fire with a candle they were using for light. Finally, Smith (2004) warned of the fire danger of improvised electrical hook-ups the homeless will rig in abandoned buildings. The author witnessed at least one such fire where power was being stolen via a long extension cord from an occupied building next door. In all cases these writers recognized the lack of building security as being the main contributing factor to the intrusions that led to the fires.

Fire Department Role in Local Government Approaches to Vacant Buildings

Schilling (2004) pointed out the responsibility for abating the public nuisance of abandoned buildings rests with local government, but in older, urban communities the demand exceeds the ability of needed staff and resources. He commented local governments also find it difficult to include different city departments in the abatement program. To tackle the problem successfully, he said, local governments must have sufficient staff to investigate, to inventory and to monitor vacant buildings as they move through the abatement process. For a community to be effective in the time-consuming and costly process of dealing with these structures, it must approach the problem from several perspectives, requiring cooperation between government departments

(International Association of Arson Investigators, 2006).

Compton and Granito (2002) stated reactive fire protection was what communities expected from their fire departments. “But when a fire department is able to extend its resources and empower its personnel to do more than just fight fires, the number of ways the department can contribute to the safety and overall good of the public is almost unlimited.” (p. 128). Risk management involves any activity that identifies risks, and develops and implements control measures that alters it. Fire departments are a critical organization in defending communities not only against fires, but other risks to lives and property. Departments must provide services that are part of a community’s overall risk management program, including hazard recognition, avoidance and elimination (Federal Emergency Management Agency, 1996).

Hemmeter (1975) stated the whole problem of vacant buildings in Dayton, Ohio, is beyond the fire department’s curing. He quoted his fire chief, “Our role is particularly suited to protecting lives and property from these fires. We are, of course, the only agency which can provide fire fighting capability. . .” (p. 45). However, the chief recognized the fire department could cooperate with non-fire agencies dealing with other aspects of the vacant building problem. Hemmeter stated Dayton, Ohio’s community development department used a local nuisance ordinance to compel vacant property owners to maintain their properties or the city, if necessary, would demolish them. Housing officials regarded the nuisance abatement program, which the fire department supported with the assignment of a fire inspector to the nuisance abatement team, as being successful.

Scanlon (2000) noted the importance of identifying and cataloging vacant buildings as a starting point to rehabilitating or to demolishing them. Communities must know which buildings are vacant before they can take action and as early as possible they should identify viable owners

(Federal Emergency Management Agency, 2006). Jones and White (2001) also recognized the need for a system to track those that are vacant.

Once identified, jurisdictions must then use adopted codes and ordinances to compel the owners to repair vacant buildings. Failing that, the community should begin abatement procedures leading to, if necessary, demolition (Federal Emergency Management Agency, 2006). Scanlon (2000) remarked that the abandoned building identification work done by firefighters led to improvements in their jurisdiction, including the razing of many of the structures. Cleveland's mayor pushed for demolition of derelict buildings as a way to jumpstart redevelopment (Gomez, 2009). A city councilman also called for demolitions as a way to encourage a neighborhood renaissance (Gillispie, 2009).

Short of razing, Hemmeter commented many fire and police officials recommend boarding structures to prevent children and other trespassers from gaining entry. Housing officials, however, were less sure of the effectiveness of that tactic. Cronin (1983) believed in the efficacy of sealing vacant buildings to prevent fires and reviewed the New York Fire Department's requirements for doing so. The Fire Protection Association (1995), Kidd (1995), Loss Prevention Council (1995), Mead (1996), and Jones and White (2001) all recommended the securing of vacant buildings through boarding as a means of protecting them from fire and other hazards. Schilling (2004) characterized the securing of these buildings as the "most immediate public safety need" (p. 13). The International Association of Arson Investigators (2006) even detailed the materials and techniques to be used in boarding. Henry (1983) commented that sealing abandoned buildings was deemed so important to safety in New York City that the insurance industry helped to fund the activity.

A Building and Housing Department Approach

In an interview to discover how a municipal building and housing department approaches abandoned buildings, Anthony Bumbalis, chief building official of the City of East Cleveland (personal communication, May 21, 2009), summarized how his organization attempts to eliminate the hazards associated with these structures. Building and housing is charged with enforcing several codes adopted by the city, including the Ohio Residential Code (applying to one-, two- and three-family dwellings), the Ohio Building Code (applying to all other buildings) and the city's Property Maintenance Code (applying to all buildings), which is an adoption of the International Code Council's model property maintenance code. Ohio requires inspectors enforcing the state residential and building codes to be certified by the state as housing or building inspectors, as applicable. Inspectors enforcing the city's property maintenance code require no certification, but must take informal training given by the chief building official. The training covers the property maintenance code, key conditions for which to look, and the process for issuing and adjudicating a citation. The property maintenance code is part of the city's ordinances and violators are cited into the local municipal court.

Although the property maintenance code applies to the correction of deficiencies in existing structures, another statute available for use with abandoned buildings is Chapter 1313 (Abatement of Nuisances and Demolition of Structures) in the city's codified ordinances (City of East Cleveland, 2002). The statute provides for the abatement, including demolition, of structures declared to be a "public nuisance" by the building inspector with the concurrence of either the fire chief or health official (Section 1313.05). Section 1313.01(l)(5) lists a building so out of repair that it constitutes a fire hazard as one of the requirements that can be used to declare a structure a public nuisance. The law requires that the above officials or their respective

subordinates document the building's condition through a written report and photographs, and provides the building owner with the opportunity to appeal the public nuisance declaration. Should the owner fail to respond to the declaration or fail to abate the nuisance, the city may abate the nuisance, including demolition of the building.

In June, 2009, East Cleveland city council passed an ordinance (City of East Cleveland, 2009b) requiring owners of buildings vacant for more than 45 days to register them annually with the city's building department. Along with the registration the owner must pay a fee, the amount of which depends on the length of time the building has been vacant and the building's condition. Out-of-state owners must provide contact information for an in-state agent who is responsible for the upkeep of the building.

Summary

Review of the literature revealed the danger of abandoned buildings goes well beyond their fire hazards and the consequent effect on firefighter and citizen safety. Their overarching harm is the community blight they engender and its injurious effect on quality of life and government revenue. The business sector, suffering declining property values and increased liability issues, also is hurt by this decay. The problem of vacant buildings is not unique to East Cleveland, but is shared by communities of all sizes in all regions. Many organizations, both public and private, have adopted approaches to the abandoned building problem, with the intent of reducing the personal and property safety hazards they create for their communities, and their harmful effects on community vitality and tax base. These approaches include cataloging and securing vacant buildings, code enforcement, and demolition. The literature indicated roles the fire service can take in combating the derelict building problem. These findings from the literature pointed to the need to determine more particularly the role fire departments in East Cleveland's metropolitan area play in managing their community's abandoned buildings.

Procedures

The obtaining of information regarding area fire departments' involvement in eliminating the risk created by abandoned buildings required original research. The author canvassed 49 fire departments serving 57 local communities in East Cleveland's county of Cuyahoga, and also the Akron, Canton and Toledo fire departments, to assess the severity of their vacant building problem, their participation in cataloging vacant buildings, their role in nuisance abatement proceedings and their involvement in securing abandoned buildings. The literature review suggested this information could be useful in addressing East Cleveland's vacant building problem. The Akron, Canton and Toledo departments made up the remaining large, older, urban communities in northern Ohio. This sample group provided the full range of community types and sizes from small towns and rural areas to metropolitan suburbs and large, urban communities. Fire department types and sizes ranged from small, suburban volunteer organizations to large, career departments and represented entirely the full range of fire department organization and staffing within the communities of Ohio's largest metropolitan area. On the dates of March January 25, February 8, February 20 and February 23, the author spoke by phone with each department's chief or a fire prevention officer, who would be knowledgeable about the department's approach to vacant buildings. The author used a phone survey, rather than a mail survey, to obtain a response rate of 100% and to allow respondents the opportunity to amplify their answers in order to get the fullest possible information.

The author posed the same series of five closed-ended and one open-ended questions to all respondents.

1. Does your department regard vacant buildings to be a significant hazard in your community?

2. Does your department inspect vacant one-, two- and three-family dwellings?
3. Does your jurisdiction use fire inspection reports in declaring a vacant building to be a public nuisance?
4. What codes do your department's inspectors enforce?
5. Does your department maintain a list of the vacant buildings in your jurisdiction?
6. Does your department secure vacant buildings?

Results

Cuyahoga County, Ohio, Fire Departments Survey

By conducting a telephone survey, the author was able to obtain a response rate of 100% (see Appendix). Of the 52 departments surveyed, only nine (17%) regarded vacant buildings to be a significant hazard to their communities. All four (Akron, Canton, Cleveland and Toledo) of the large cities saw them as a hazard, as did Newburgh Heights and Lakewood, two of Cleveland's older, "inner ring" suburbs. North Randall, an outlying Cleveland suburb, is primarily concerned about one large commercial property, a closed shopping mall. Lakewood, however, was the only department routinely to inspect vacant houses, although Toledo inspects them based upon a complaint. The Lakewood respondent stated representatives from the fire and building departments meet biweekly to go over building issues, including vacant structures. The Canton respondent replied the fire department used to inspect vacant houses as a team with the housing department, but stopped about seven years ago. The thinking at the time was these inspections did not require two inspectors to conduct them. Forty (77%) of the departments stated their local governments use fire inspection reports to support public nuisance declarations, although usually for just commercial buildings. Bedford Heights consolidates all inspection records, fire and building. Fifty-one departments (98%) enforce only the Ohio Fire Code and related local fire

safety ordinances. Cleveland Fire, however, also enforces the Ohio Building Code. Solon's officer in charge of the inspection bureau is also a state-certified building inspector and he occasionally enforces that code. Thirty of the departments (58%) have a list of vacant properties, usually compiled by another city department. Seventeen of those 30 keep track of only vacant commercial structures, though. None of the departments surveyed directly secure vacant buildings, the task being left to their community's building and housing departments.

The table below summarizes the survey findings.

Table: Northern Ohio Fire Departments Abandoned Building Survey Summary (n = 52)

Departments identifying vacant buildings to be a significant fire hazard	9
Departments inspecting vacant one-, two- and three-family dwellings	1
Jurisdictions using fire inspection reports in declaring a building to be a public nuisance	40
Codes enforced by department's fire inspectors	
Ohio Fire Code	52
Ohio Building Code	1
Ohio Residential Code	0
Local property maintenance code	0
Other code	0
Departments maintaining a list of vacant buildings	30
Vacant commercial structures only	17
Departments securing vacant buildings	0

Discussion

Broad-based Hazards

Although the fire service traditionally focuses on the hazard of fires in abandoned buildings and the injury and death to firefighters they cause (Hoyler, 1972, Smith, 1994, Butler, 1996, Scanlon, 2000, Jones & White, 2001, Ahrens, 2003, 2009, National Fire Protection Association, 2008, Thompson, 2008), the risk vacant buildings introduce to a community is more broad-based. They contribute to crime (Jones & White, 2001, National Vacant Properties Campaign, 2005) and rodent infestations (National Vacant Properties Campaign, 2005). Children are attracted to them for play (Thompson, 2008) and homeless people take shelter in them (Butler, 1996, Brennan, 1997, Smith, 2004, Thompson, 2008). Also, the risk attached to vacancy is not to just personal safety, but to the property itself (Hoyler, 1972, Hemmeter, 1975, Henry, 1983, Smith, 1994, Kidd, 1995, Scanlon, 2000, Jones & White, 2001). The Fire Protection Association (1995) and Mead (1996) stated vacant buildings also create liability risks for their owners.

The most serious long-term community hazard of abandoned buildings, however, is the blight they cause and its attendant negative impact on neighborhood livability (Smith, 1994, International Association of Arson Investigators, 2006, Coulton & Schramm, 2007, Bass & Sewell, 2009, Gillispie, 2009). This blight contributes to loss of population and lower tax revenue (National Vacant Properties Campaign, 2005), which negatively affects the ability of local governments to deliver critical services. In this sense, the very existence of the abandoned building, even if otherwise “safe,” is a risk to the community.

Multi-departmental Approach to Risk Reduction

Clearly, the responsibility for eliminating these hazards rests with local government. To be effective, however, government must address the problem with a multi-departmental approach (Schilling, 2004). The fire service must see itself as a proactive participant in the reduction of the risks of abandoned buildings (Compton & Granito, 2002). The 1975 fire chief expressed the

traditional fire service view of its purpose – to fight fires. However, even he recognized his department could cooperate with other agencies and assigned a fire inspector to work with housing officials in nuisance abatement.

However, most Northern Ohio fire departments, including East Cleveland's, take the traditional view of their solitary role in combating the abandoned building problem. Only two fire departments (Lakewood and Newburgh Heights) regularly inspect vacant houses. Also, only two others (Cleveland and Solon) enforce a code other than the Ohio Fire Code. Fire departments limiting their inspections to commercial buildings is not surprising, as the state fire code does not apply to one-, two- and three-family dwellings. Of those that do get involved with nuisance abatement proceedings, most do so for only commercial structures. Nevertheless, Bumbalis stated fire inspectors could be authorized to enforce locally-adopted property maintenance codes, allowing them to inspect buildings not covered by the Ohio Fire Code. These inspections could be used to initiate local nuisance abatement proceedings. As a good example of interdepartmental cooperation, Bedford Heights unified all inspection records, whether generated by the fire department or another city agency.

The Federal Emergency Management Agency (2006) and Jones and White (2001) recommended the identification and tracking of vacant buildings. Scanlon (2000) saw firefighters as being well-suited to this task, as they know their response areas. Cataloging is used to prioritize buildings for abatement and to track the success of the abatement program. East Cleveland's recently enacted vacant property registration ordinance is designed to assist with this cataloging and tracking. However, as an abandoned building is going through the abatement process, Cronin (1983), the Fire Protection Association (1995), Kidd (1995), the Loss Prevention Council (1995), Mead (1996), and Jones and White (2001) all state it must be secured. Henry

(1983) recognized sealing as being the most effective way to prevent intruders and fires in these buildings. Although doing board-up work is not part of a fire department's generally recognized duties (none of the surveyed departments do it), the work nevertheless could be done by on-duty firefighters, given the proper tools and materials. The International Association of Arson Investigators (2006) recommended materials and techniques to do the work effectively.

Recommendations

First, East Cleveland Fire must expand its fire service culture to include proactive participation in abandoned building risk abatement. It must enlist itself with the city's building and housing department in a multi-departmental approach to the abandoned building problem. All inspection records must be combined into a single database and firefighters must be cross-trained to enforce the city's property maintenance code. This training is well within organizational and financial reach, as it would be done "in house" by the city's chief building official.

Second, department personnel must inspect abandoned buildings with the view of judging their suitability to be declared a public nuisance, thus triggering repair by the owner or demobilization.

Third, East Cleveland Fire must equip and supply itself to board up unsecured derelict buildings. This task, though a departure from traditional fire service activities, reduces the risks associated with these buildings and enhances the value of the department to the community. The work itself is well within the organizational capability of the department and would not interfere with emergency operations, as firefighters could leave the boarding detail to respond to an alarm.

These recommendations, significantly expanding the community risk reduction role of the

fire department, might be regarded as a stretch for the traditional fire service. However, given the increasing risk to safety and neighborhood vitality abandoned buildings pose in East Cleveland and other jurisdictions, the work is necessary to preserve community viability.

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Appendix

Northern Ohio Fire Departments Abandoned Building Survey

- (1) Identified vacant buildings as a significant fire hazard
- (2) Inspect vacant one-, two- and three-family houses
- (3) Use fire inspection reports in declaring properties a public nuisance
- (4) Enforce codes other than the Ohio Fire Code
- (5) Maintain a list of vacant buildings (C = commercial only)
- (6) Secure vacant buildings

Department	(1)	(2)	(3)	(4)	(5)	(6)
Akron	X		X		C	
Bay Village						
Beachwood			X			
Bedford			X		C	
Bedford Heights			X			
Berea			X			
Brecksville			X			
Broadview Heights						
Brook Park			X		C	
Brooklyn					C	
Brooklyn Heights			X		C	
Canton	X		X		X	
Chagrin Falls			X			
Cleveland	X			X	C	

Northern Ohio Fire Departments Abandoned Building Survey (continued)

- (1) Identified vacant buildings as a significant fire hazard
- (2) Inspect vacant one-, two- and three-family houses
- (3) Use fire inspection reports in declaring properties a public nuisance
- (4) Enforce codes other than the Ohio Fire Code
- (5) Maintain a list of vacant buildings (C = commercial only)
- (6) Secure vacant buildings

Department	(1)	(2)	(3)	(4)	(5)	(6)
Cleveland Heights			X		X	
Cuyahoga Heights					C	
Euclid			X		X	
Fairview Park			X			
Garfield Heights			X		C	
Gates Mills					X	
Highland Heights			X			
Highland Hills			X			
Independence			X		C	
Lakewood	X	X	X		X	
Lyndhurst			X		X	
Maple Heights					C	
Mayfield			X			
Mayfield Heights			X			
Middleburg Heights			X		C	

Northern Ohio Fire Departments Abandoned Building Survey (continued)

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- (3) Use fire inspection reports in declaring properties a public nuisance
- (4) Enforce codes other than the Ohio Fire Code
- (5) Maintain a list of vacant buildings (C = commercial only)
- (6) Secure vacant buildings

Department	(1)	(2)	(3)	(4)	(5)	(6)
Newburgh Heights	X	X	X		X	
North Olmsted					X	
North Randall	X		X			
North Royalton						
Oakwood			X		C	
Olmsted			X		C	
Olmsted Falls			X			
Orange			X			
Parma			X		X	
Parma Heights			X		C	
Pepper Pike			X			
Richmond Heights					C	
Rocky River	X		X		X	
Seven Hills			X		X	
Shaker Heights			X		X	