

BOARD OF ALDERMEN

ITEM NO. D(2)

AGENDA ABSTRACT

MEETING DATE: April 1, 2008

TITLE: A Report from Fire-Rescue Department on Future Fire Protection Measures

DEPARTMENT: Fire-Rescue Department	PUBLIC HEARING: NO
ATTACHMENTS: Attachments: None	FOR INFORMATION CONTACT: Travis Crabtree, 918-7349

PURPOSE

Due to the number of fires that have occurred recently within the Town of Carrboro, the Carrboro Fire-Rescue Department proposes several enhancements to the Town Code. This is an effort to reduce the number of fires that have greatly impacted the safety of all citizens and town emergency responders. These recommendations target the specific problems that have killed 7 citizens from the 29 major incidents that have occurred since 1975.

INFORMATION

Items to be covered in the April 1st presentation include potential restrictions on landscape materials, possible changes in multi-family building materials and sprinkler system benefits and costs.

As our residential and commercial buildings continue to age, the frequency of larger, more intense fires will continue to increase. This has been seen over the past several years and particularly the past few weeks to six months. It is important to add that this is not just a local problem. Inevitably, there is a large working fire somewhere within our state everyday as people continue to discard smoking materials near combustible homes, apartments, motels, and restaurants. As an added hazard, the drought has not assisted in keeping moisture within the envelope of the buildings or upon the materials outside of the structures. In addition, call volume continues to increase. We responded to 372 emergency calls in 1997 of which 352 were fire calls. In 2007, we responded to 1397 emergency calls of which 743 of these were fire calls.

The majority of the major fires (28%) that have occurred are on exterior balconies either due to smoking paraphernalia or ashes from fireplaces, mostly at multi-family housing. Electrical faults (21%) and cooking (17%) also cause a large number of fires. Heating devices too close to combustibles and the maintenance of these devices have created several fires (14%). Sweating pipes while trying to repair plumbing systems (7%) have been a problem in times past. Intentionally set fires (7%) have been a random issue. The cause of 6% of fires is unknown because the fire was too intense or burned too long for evidence to be collected.

Hundreds of thousands of gallons of water have been used to extinguish the flames. During a time when water is of the utmost concern, installing fire sprinklers in a home is a great way to conserve water. A sprinkler head will put about 10-16 gallons per minute (gpm) on a fire. Our fire hoses will place about 150 gpm on a fire. By the time we arrive it is a much larger fire and usually will take us 10-30 minutes to achieve a successful knockdown on a normal house fire and a minimum of one hour on a large apartment building fire. If those buildings that burned had been sprinkled, only 200-300 gallons of water (less than 1/10 the water) would have been used per building and a life might have been saved. Engineering tries to minimize the risks and decrease the consequences of failure, thus reducing the magnitude of the damage by limiting the fire growth and progression.

We have had approximately \$2,500,000 worth of fire damage in 2007 along with one civilian fatality, two civilian injuries, two firefighter injuries (one Carrboro, one Chapel Hill) and two police officer injuries. Five out of the six injuries had to be treated at UNC Hospital. During just two of these large apartment fires, the Fire-Rescue department had over \$5,800 in additional overtime expenditures, \$1200 in destroyed fire hose and \$255 of foam usage.

Another big concern is that each of these fires completely depleted the Carrboro Fire-Rescue Department's and most of the Carrboro Police Department's resources along with two-thirds of the Chapel Hill Fire Department's resources. New Hope, North Chatham, Durham City Fire Departments attended along with Orange County EMS, South Orange Rescue Squad, and the State Bureau of Investigation. In all, over 262 personnel hours were spent on the 601 Jones Ferry Road fire along with approximately 150 gallons of fuel and over 300 personnel hours were spent on the 180 BPW Club Road fire with approximately 200 gallons of fuel used.

Today, most of our resources are allocated to suppression efforts; until that changes our ability to educate and enforce is limited, simply because we do not have the resources to better address the fire problem. So it makes sense to focus more on the fire-prevention parameter we have some control over – engineering. It provides the opportunity to better protect our citizens and our firefighters without the need for a drastic fiscal shift of departmental resources. There is no reason to believe that, in the foreseeable future, we will see a major shift toward allocating more public resources to fire prevention locally or nationally.

We need to live within our means and yet accomplish our objective of reducing fire fatalities. Here is where reliance on technology and engineering solutions could be of tremendous value without requiring fiscal realignment in our departments. Simply stated focusing on the engineering aspect of fire prevention may save lives and reduce property losses without allocating additional funding. Engineering refers not only to fire sprinkler systems, but to all available passive and active built-in fire-protection technologies. Fire sprinklers are not the end, but the means.

Fire sprinklers can't prevent fires, but they can minimize the adverse consequences of failure once the fire has ignited. Focused on reducing fire fatalities in residential occupancies, the Home Fire Sprinkler Coalition and Fire Team USA claim that "installing both working smoke alarms and a fire sprinkler system reduces the risk of death in a home fire by 82 percent relative to having neither."

We know what we should be focusing on and how to significantly reduce fire fatalities and decrease fire loss. We have the know-how and simple, affordable life-saving technologies, such as smoke alarms and residential sprinkler systems. Yet, while smoke alarms are now quite common in our households and 96 percent of homes have smoke alarms installed, residential fire-sprinkler systems have been installed in only two percent of homes. It is important to consider changing the building codes to require residential fire-sprinkler systems in all new homes.

Based on the feasibility and availability of current fire-protection technology, automatic fire-sprinkler systems present the most effective means of saving lives – both occupants and firefighters.

This accomplishes multiple Board of Aldermen goals simultaneously. Water conservation, reduced smoke emissions, fuel conservation, and conservation of natural resources (wood, iron ore, etc...).

FISCAL AND STAFF IMPACT

\$250 for advertising fees for any public hearings notices

Staff impact will consist of creation of new ordinances to allow the enforcement of the report as presented. This will take between 30-40 hours to prepare proper ordinances. Also, state enabling legislation may be required for some of the initiatives.

RECOMMENDATION

Accept the report and provide direction for staff.