



Southwest Ohio Fire Safety Council

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POSITION PAPER
on
RESIDENTIAL SMOKE DETECTORS
by the
SOUTHWEST OHIO FIRE SAFETY
COUNCIL

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The Southwest Ohio Fire Safety Council (SWOFSC) is an organization of fire prevention professionals throughout the State of Ohio. To promote fire prevention, we uniformly support code changes, promote fire safety issues, acting and speaking with a cohesive voice.

Our membership comes from fire departments throughout Southwest Ohio and our membership is growing. Our organization is recognized by the Ohio State Fire Marshal's Office and the Ohio Fire Chief's Association. The purpose of the SWOFSC is to involve ourselves in education, enforcement and engineering to protect the public from fire, utilizing our network of fire code offices.

In our work, we have recognized the need to establish a position for our organization on the issue of residential smoke detectors, a critical aspect of home fire safety. Evolving technologies have changed the level of protection that smoke detectors can provide and this fact should be communicated as part of our organization's commitment to fire safety.

The SWOFSC recognizes the need for establishing a critical position on residential fire protection through the use of residential smoke detectors. Manufacturers of smoke detectors now offer a combination of improved technologies so that residential homeowners can be better protected from fire. However, many older technologies are still being sold which provide a delayed response in certain fires and are prone to false alarms.

As an organization we have researched articles and data published by the National Institute of Standards and Testing (NIST), the International Association of Fire Chiefs, The National Fire Protection Association (NFPA) and Texas A&M University, the SWOFSC is establishing this position paper to support the installation of residential smoke detectors utilizing photoelectric and ionization technologies. Several states have already passed legislation including Vermont, Maine and Massachusetts. Other states are aggressively evaluating the possibility of such legislation.

Residential fires account for the majority of all fire fatalities. Fires occurring in the residential setting can be either smoldering or flaming types of fires. They can also begin slow smoldering and then rapidly progress to flames. It is the position of the SWOFSC that all homes be protected with a minimum of both photoelectric and ionization type smoke detectors with additional emphasis on placement of specific smoke detector technology in areas subject to false alarms.

Since false alarms of smoke detectors can result in the removal of batteries, which in turn renders the smoke detector inoperative, it is our position that photoelectric technology placement be considered in certain areas of the home. Our documentation clearly supports the replacement of ionization smoke detectors with photoelectric smoke detectors in areas commonly exposed to false alarms (i.e. kitchens and bathroom areas).

The current standards indicate a smoke detector be installed on every floor level and in every bedroom of residential occupancies. In areas where smoke detectors are close to the kitchen and or bathrooms, it is the SWOFSC's position that photoelectric smoke detectors should be installed. This intent is to reduce false alarms commonly associated with cooking and steam from showers and baths. These are both causes for ionization smoke detectors to alarm. In turn, this will reduce the likelihood of battery removal and improve overall smoke detector performance.

The remaining portions of all homes should be protected, at a minimum, by smoke detectors utilizing both photoelectric and ionization technologies. This is best accomplished by utilizing a combination of smoke detectors. Since the type of fire cannot be predicted, utilization of both technologies within a single smoke detector provides maximum protection and the earliest possible warning for the occupants.

It is imperative for the above recommendations be followed in their entirety. When a choice must be made, photoelectric smoke detectors should be chosen over ionization smoke detectors. Photoelectric smoke detectors alert much faster for smoldering fires that cause many of the deaths when occupants are sleeping. Photoelectric smoke detectors are less susceptible to false alarms in the areas previously stated, which reduces the potential for battery removal and the smoke detector being rendered inoperable.

The Southwest Ohio Fire Safety Council issues this position paper on residential smoke detectors to clarify the specific type and placement of detectors in the residential setting to maximize occupant safety while limiting false alarms that may lead occupants to disable or remove an otherwise working smoke detector.

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