



Seattle Fire Department **FIRE PREVENTION ALERT**

FIRE PREVENTION ALERT #2014-01

ISSUE DATE: April 3, 2014 (Revised August 27, 2014)

SUBJECT: Low Frequency Fire Alarm Signals in Sleeping Areas

FOR FURTHER INFORMATION CONTACT: SFD Plan Review, 206-386-1455

The 2012 Seattle Fire Code includes the adoption of NFPA 72, 2010 edition, which contains the following provision:

18.4.5.3 Effective January 1, 2014, where audible appliances are provided to produce signals for sleeping areas, they shall produce a low frequency alarm signal that complies with the following:

- 1) The alarm signal shall be a square wave or provide equivalent awakening ability.
- 2) The wave shall have a fundamental frequency of 520 Hz \pm 10 percent.

Due to cost impacts and availability of low frequency audible appliances (horns), the deadline for installation of these audible appliances in sleeping areas has been extended until January 1, 2015. All fire alarm system plans for buildings vested under the 2012 Seattle Fire Code containing sleeping areas that are submitted through the DPD Electrical Counter on or after January 1, 2015 must comply with NFPA 72 Sec. 18.4.5.3.

The intent of the new requirement is to improve waking effectiveness, because smoke alarms and fire alarm systems are most valuable when occupants are asleep. Sleeping areas affected by the low frequency requirement include hotel rooms, dormitory rooms, and dwelling unit bedrooms within apartment buildings where there is a protected premises fire alarm system to activate the occupant notification system. Group I-2 occupancies like hospital patient rooms are excluded because trained staff is responsible for waking patients. However, child care facilities, alcohol and drug centers, assisted living facilities, congregate care facilities, convalescent facilities; group homes, half-way houses, residential board and custodial care facilities, must include low frequency audible appliances in the sleeping areas. Note that this is not a retroactive requirement, unless there is a substantial renovation to a building or to the building fire alarm system.

Questions pertaining to this Fire Prevention Alert may be directed to the Senior Fire Protection Engineer, Russ Byrd, by email to russ.byrd@seattle.gov or by phone at 206-386-1455.