LANE COUNTY PUBLIC WORKS

Carbon Monoxide Alarm Requirements

LAND MANAGEMENT DIVISION *3050 N DELTA HYW, EUGENE OR 97408*

Summary:

With the passage of House Bill 3450, the Lofgren and Zander Memorial Act, the Oregon Building Codes Division (BCD) was directed to adopt code amendments requiring carbon monoxide alarms in new residential structures submitted for plan review as of April 1, 2011. Also effective this date, carbon monoxide alarms are required in residential structures that undergo reconstruction, alteration or repair for which a building permit is required.

Applicability:

Beginning April 1, 2011, carbon monoxide alarms are required for the following:

1) New one- and two-dwelling units (site-built or manufactured)
2) New commercial residential structures (as defined in section 310 of the OSSC).
3) Existing dwelling units when:
   a) A new carbon monoxide source is introduced. This includes the installation of heaters, fireplaces, furnaces, appliances and cooking sources using coal, wood, petroleum products, and other fuels that emit carbon monoxide as a by-product of combustion. Petroleum products include, but are not limited to, kerosene, natural gas or propane. Carbon monoxide alarms are not required when a fuel-fired appliance is simply replaced with another fuel-fired appliance.
   b) Work requiring a structural permit occurs, such as an alteration or addition.
      Exception: Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.

Standards:

Carbon monoxide alarms must carry the appropriate listing and be installed in accordance with the manufacturer's installation instructions. Alarms may be single station carbon monoxide alarms or a household carbon monoxide detection system. Carbon monoxide alarms shall be located in each bedroom or within 15 feet outside of each bedroom door. Bedrooms on separate floor levels in a structure consisting of two or more stories shall have separate carbon monoxide alarms serving each story. The full text of the carbon monoxide code requirements from the residential and commercial building codes has been included on the reverse of this handout.

References:

- ORS 476.725 Statewide Standards for residential Carbon monoxide alarms; rules.
- OAR Chapter 837, Division 47 Carbon Monoxide Alarms and Detectors
- OAR 918-460-0015(2) and OAR 918-480-0010(9)
- 2011 Oregon Residential Specialty Code, Section R326 Carbon Monoxide Alarms (full text on reverse)
- 2010 Oregon Structural Specialty Code, Section 908.7 Carbon Monoxide Alarms (full text on reverse)
- 2010 Oregon Structural Specialty Code, Section AN103.6 Carbon Monoxide Alarms

For more information on the Web:

Oregon Office of State Fire Marshal - www.oregon.gov/OSP/SFM

National Fire Protection Association - www.nfpa.org

Home Safety Council - homesafetycouncil.org

Consumer Products Safety Commission - www.cpsc.gov

LAND MANAGEMENT DIVISION / PUBLIC WORKS DEPARTMENT / 3050 N DELTA HYW / EUGENE, OR 97408 / FAX 541/682-3947
BUILDING (541) 682-4651 / PLANNING (541) 682-3577 / SURVEYORS (541) 682-4195 / COMPLIANCE (541) 682-3724 / ON-SITE SEWAGE (541) 682-3754

From the 2011 Oregon Residential Specialty Code:

R326.1 Carbon monoxide alarms. For new construction, approved single station carbon monoxide alarms or a household carbon monoxide detection system shall be installed.

R326.2 Installation Location. Carbon monoxide alarms shall be located in each bedroom or within 15 feet outside of each bedroom door. Bedrooms on separate floor levels in a structure consisting of two or more stories shall have separate carbon monoxide alarms serving each story.

R326.3 Alarm requirements.

R326.3.1 Single station alarm requirements. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

R326.3.2 Household carbon monoxide detection systems. Household carbon monoxide detection systems, that include carbon monoxide detectors and audible notification appliances, installed in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.

R326.3.3 Combination smoke/carbon monoxide alarm/detectors requirements. Combination smoke/carbon monoxide alarms shall be listed as complying with ANSI/UL 2034 and ANSI/UL 217. Combination smoke/carbon monoxide detectors shall be listed as complying with ANSI/UL 2075 and ANSI/UL 268. See Section R313 for additional requirements specific to the installation of smoke alarms.

R326.4 Power Source.

R326.4.1 Carbon Monoxide Alarms. Single station carbon monoxide alarms shall be battery operated, or may receive their primary power from the building wiring system. Plug in devices securely fastened to the structure and installed in accordance with the manufacturer's installation instructions are deemed to satisfy this requirement. Hard wired and plug-in carbon monoxide alarms shall be equipped with battery back up.

R326.4.2 Household carbon monoxide detection systems. Required power supply sources for household carbon monoxide detection systems shall be in accordance with NFPA 720.

R326.4.3 Combination smoke/carbon monoxide alarms/detectors. Combination smoke/carbon monoxide alarm/detectors shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarm features of combination smoke/carbon monoxide alarms/detectors shall be interconnected.

Exceptions: Interconnection and hard-wiring of combination smoke/carbon monoxide alarms /detectors in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure.

R326.5 Where required in existing dwellings. Where a new carbon monoxide source is introduced or work requiring a structural permit occurs in existing dwellings, carbon monoxide alarms shall be provided in accordance with Section R326.1.

Exception: Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, or the *addition* or replacement of windows or doors, or the *addition* of a porch or deck, are exempt from the requirements of this section.

From the 2010 Oregon Structural Specialty Code:

908.7 Carbon monoxide alarms. For new construction, approved single station carbon monoxide alarms or a household carbon monoxide detection system shall be installed in each of the following occupancies:

1. Group R Occupancies identified in Section 310 of this code, and
2. Groups SR-3 and SR-4 Occupancies indentified in Appendix SR of this code.

908.7.1 Installation Location. Carbon monoxide alarms shall be located in each bedroom or within 15 feet outside of each bedroom door. Bedrooms on separate floor levels in a structure consisting of two or more stories shall have separate carbon monoxide alarms serving each story.

908.7.1.2 Three or More Dwelling Units. In addition to the locations required by section 908.7.1, a carbon monoxide alarm shall be installed in any enclosed common areas within buildings containing three or more dwelling units.

908.7.2 Alarm requirements.

908.7.2.1 Single station alarm requirements. Single station carbon monoxide alarms shall be listed as complying with ANSI/UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

908.7.2.2 Household carbon monoxide detection systems. Household carbon monoxide detection systems, that include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with ANSI/UL 2075.

908.7.2.3 Combination smoke/carbon monoxide alarm/detector requirements. Combination smoke/carbon monoxide alarms shall be listed as complying with ANSI/UL 2034 and ANSI/UL 217. Combination smoke/carbon monoxide detectors shall be listed as complying with ANSI/UL 2075 and ANSI/UL 268. See section 907.2.11 of this code for additional requirements specific to the installation of smoke alarms.

908.7.3 Power Source.

908.7.3.1 Carbon Monoxide Alarms. Single station carbon monoxide alarms shall be battery operated, or may receive their primary power from the building wiring system. Plug in devices securely fastened to the structure and installed in accordance with the manufacturer's installation instructions are deemed to satisfy this requirement. Hard wired and plug in carbon monoxide alarms shall be equipped with battery back up.

908.7.3.2 Household carbon monoxide detection systems. Required power supply sources for household carbon monoxide detection systems shall be in accordance with NFPA 720.

908.7.3.3 Combination smoke/carbon monoxide alarms/detectors. Combination smoke/carbon monoxide alarms/detectors shall receive their power source in accordance with Section 907.2.11.4 and NFPA 72. Smoke alarm features of combination smoke/carbon monoxide alarms shall be interconnected.

Exception:
Interconnection and hard-wiring of combination smoke/carbon monoxide alarms/detectors in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure.

908.7.4 Where required in existing affected occupancies. Where a new carbon monoxide source is introduced or work requiring a structural permit occurs in existing occupancies as identified in Section 908.1, carbon monoxide alarms shall be provided in accordance with Section 908.7 of this code.

Exception: Work involving the exterior surfaces of affected occupancies, such as the replacement of roofing or siding, or the *addition* or replacement of windows or doors, or the *addition* of a porch or deck, are exempt from the requirements of this section.