**15-078**

**1. State Building Code to be Amended:**

International Building Code  State Energy Code

ICC ANSI A117.1 Accessibility Code  International Mechanical Code

International Existing Building Code  International Fuel Gas Code

x International Residential Code  NFPA 54 National Fuel Gas Code

International Fire Code  NFPA 58 Liquefied Petroleum Gas Code

Uniform Plumbing Code  Wildland Urban Interface Code

**Section(s): R315.2**

(e.g.: Section: R403.2)

**Title: Carbon Monoxide Alarms**

(e.g: Footings for wood foundations)

**2. Proponent Name (Specific local government, organization or individual):**

**Proponent: Neil B. Hampson, MD**

**Title: Emeritus Physician, Virginia Mason Medical Center, Seattle**

**Clinical Professor of Medicine, University of Washington School of Medicine**

**Date:2/28/15**

**3. Designated Contact Person:**

**Name: Self**

**Title: As above**

**Address: Center for Hyperbaric Medicine**

**Virginia Mason Medical Center H4-CHM**

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**Seattle, WA 98101**

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**4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC [website](https://fortress.wa.gov/ga/apps/sbcc/Page.aspx?nid=191))

**Code(s)** 2015 IRC **Section(s) R315.2.1 and R315.2.2**

Enforceable code language must be used; see an example [by clicking here](https://fortress.wa.gov/ga/apps/SBCC/File.ashx?cid=1803).

Amend section to read as follows:

**R315.2.1 New construction.** For new construction, carbon monoxide alarms shall be provided in dwelling units. ~~where either or both of the following conditions exist.~~

~~1. The~~ *~~dwelling unit~~* ~~contains a fuel-fired appliance.~~

~~2. The~~ *~~dwelling unit~~* ~~has an attached garage with an opening that communicates with the dwelling unit.~~ **R315.2.2 Alterations, repairs and additions**. Where alterations, repairs or additions requiring a permit occur, or where one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with carbon monoxide alarms located as required for new dwellings. **Exceptions:**

1. 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, is exempt from the requirements of this section.

~~2. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.~~

1. **Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.** Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

* All residences should have carbon monoxide alarms regardless of the presence or absence of fuel-burning appliances, fire places, and attached garages. People can bring fuel-burning appliances into the home. Generators used by themselves or neighbors can produce CO poisoning.
* The 2015 IRC is not as protective as the current WA State amendments and does not comply with state law.
* Repair of mechanical systems seems like a good time to make sure there is a CO alarm.
* CDC: Carbon Monoxide Poisoning: <http://www.cdc.gov/co/default.htm>
* See list of supporting publications at end of proposal

1. **Specify what criteria this proposal meets.** You may select more than one.

x The amendment is needed to address a critical life/safety need.

x The amendment is needed to address a specific state policy or statute.

x The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

x The amendment corrects errors and omissions.

1. **Is there an economic impact:**  Yes     x No

Explain: The current state amendment already requires CO alarms. The building inspector is already inspecting for code compliance with significant changes to the mechanical system.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Building Type | Construction[[1]](#footnote-1) | | Enforcement[[2]](#footnote-2) | | Operations & Maintenance[[3]](#footnote-3) | |
| Costs | Benefits[[4]](#footnote-4) | Costs | Benefits4 | Costs | Benefits4 |
| Residential |  |  |  |  |  |  |
| Single family |  |  |  |  |  |  |
| Multi-family |  |  |  |  |  |  |
| Commercial/Retail |  |  |  |  |  |  |
| Industrial |  |  |  |  |  |  |
| Institutional |  |  |  |  |  |  |

Please send your completed proposal to: [sbcc@ga.wa.gov](mailto:sbcc@ga.wa.gov)

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.

Supporting publications:

* Gulati R, Kwan-Gett T, Hampson NB, Baer A, Shusterman D, Shandro J, Duchin J. A carbon monoxide epidemic among immigrant populations: King County, Washington, 2006. *Am J Pub Health* 2009; 99(9):1687-1692. Epub 2009 Jul 16.
* Hampson NB, Weaver LK. Residential carbon monoxide alarm use: Opportunities for poisoning prevention. *J Environ Health*; 2011 Jan-Feb; 73(6):30-33.
* Hampson NB, Courtney TG, Holm JR. Diffusion of carbon monoxide through gypsum drywall. *JAMA* 2013; 310(7):745-746.
* Hampson NB, Dunn SL. Carbon monoxide poisoning from portable electrical generators. *J Emerg Med* 2015; Manuscript in press.
* Vermizi I, Restuccia F, Walker-Ravena C, Rein G. Carbon monoxide diffusion through porous walls: A critical review of the literature and incidents. Fire Research Foundation Report. February 2015. <http://www.nfpa.org/research/fire-protection-research-foundation/reports-and-proceedings/detection-and-signaling/carbon-monoxide-detection/carbon-monoxide-diffusion-through-porous-walls>. Accessed February 28, 2015

1. $ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs

   that impact the total cost of the construction to the owner/consumer. [↑](#footnote-ref-1)
2. Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement. [↑](#footnote-ref-2)
3. Cost to building owner/tenants over the life of the project. [↑](#footnote-ref-3)
4. Measurable benefit. [↑](#footnote-ref-4)