



STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

Log # 14-03

RECEIVED

FEB 28 2014

1. State Building Code to be Amended:

- | | |
|---|---|
| <input type="checkbox"/> International Building Code | <input type="checkbox"/> State Energy Code |
| <input type="checkbox"/> ICC ANSI A117.1 Accessibility Code | <input type="checkbox"/> International Mechanical Code |
| <input type="checkbox"/> International Existing Building Code | <input type="checkbox"/> International Fuel Gas Code |
| <input type="checkbox"/> International Residential Code | <input type="checkbox"/> NFPA 54 National Fuel Gas Code |
| <input checked="" type="checkbox"/> International Fire Code | <input type="checkbox"/> NFPA 58 Liquefied Petroleum Gas Code |
| <input type="checkbox"/> Uniform Plumbing Code | <input type="checkbox"/> Wildland Urban Interface Code |

Section(s):

IFC Section 507.3

Title:

Fire flow.

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

Proponent: Randy Vissia

Title: Building Director, Spokane County

Date: 2/27/2014

3. Designated Contact Person:

Name: Randy Vissia

Title: Building Director

Address: 1026 W. Broadway Ave.
Spokane, WA. 99260

Office Phone: (509) 477-7126

Cell: n/a

E-Mail address: rvissia@spokanecounty.org

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](#))

Code(s): International Fire Code **Section(s):** Section 507.3 Fire flow

Enforceable code language must be used; see an example [by clicking here](#).
Amend section to read as follows:

507.3 Fire flow. Fire flow requirements for buildings or portions of buildings and facilities shall be determined by an approved method. The use of NFPA 1142 for the purposes of calculating fire flow shall be an approved method for structures used for production, processing, or sales of agricultural products. Such structures shall be located outside of Urban Growth Areas (UGA) on agricultural resource land, not served by or unable to be served by municipal type water systems. These structures shall be limited to one-story above grade plane and occupancy groups, A-2, A-3, B, F, M, S, and U.

Exception: Fire flow is not required for structures under 500 square feet with a B, U or R-1 occupancy where structures are at least 30 feet from any other structure and are used only for recreation.

5. **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.

Agricultural producers have diversified their operations as a means to remain vital and many such operations have legitimate business interests, such as direct marketing, which requires supply or development of fire flow for the structures they occupy based on the occupancy groups assigned by the International Building Code (IBC). Washington State's Growth Management Act (GMA) requires communities to plan for structured growth in an effort to prevent development sprawl, and ensures urban areas are in-filled and served by appropriate facilities/services such as fire service, police protection, municipal water, and sewer systems. These services and amenities are common within Urban Growth Areas (UGA). Outside of UGA boundaries the GMA further directs communities to designate and protect agricultural resource lands, maintaining Washington's vitality in agricultural markets.

Recognizing that rural areas typically are not served by public/municipal-type water systems, and that certain structures related to agricultural business, or other small business activities require the development of on-site fire flow for fire-fighting purposes, building and fire code officials are permitted to consider alternatives under the provisions of IBC 104.11, IFC 104.9. Alternative standards such as NFPA 1142 are contained within the adopted state model codes, specifically the International Fire Code under the authority of 19.27.031 (3) RCW: "The International Fire Code, published by the International Code Council[,] Inc., *including those standards of the National Fire Protection Association specifically referenced in the International Fire Code: PROVIDED, That, notwithstanding any wording in this code, participants in religious ceremonies shall not be precluded from carrying hand-held candles*".

This standard developed by the National Fire Protection Association (NFPA) under the American National Standards Institute (ANSI) process, results in reduced quantities of on-site water storage for fire-fighting purposes, and is considered applicable for rural fire suppression based on lower densities and greater distances between structures. NFPA and ANSI standards/process are developed under a national consensus process utilizing expertise and interests from all viewpoints of fire safety.

A further difficulty arises when the alternative use of NFPA 1142 is proposed in these instances, whereby the Washington Survey and Ratings Bureau does not legitimize the use of NFPA 1142 resulting in “deficiencies” to ratings for rural area Fire Districts, and increased insurance rates for rate payers.

Placing NFPA 1142 within the body of the IFC as a recognized method of calculating required fire flow in rural agricultural based areas will provide appropriate water supplies for firefighting purposes within this environment without diminishing levels of safety. This proposal further serves to legitimize recognition of this national standard by rate setters, provide sufficient fire flow for fire service efforts and protection of property, and continues Washington’s agricultural market strengths not only in production, but in the agri-tourism sector, and small business as well.

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

- The amendment is needed to address a critical life/safety need.
- The amendment is needed to address a specific state policy or statute.
- The amendment is needed for consistency with state or federal regulations.
- The amendment is needed to address a unique character of the state.
- The amendment corrects errors and omissions.

7. Is there an economic impact: Yes No

Explain:

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		Enforcement ²		Operations & Maintenance ³	
	Costs	Benefits ⁴	Costs	Benefits ⁴	Costs	Benefits ⁴
Residential						
Single family						
Multi-family						
Commercial/Retail	<i>See attached discussion below.</i>					
Industrial						
Institutional						

The use and recognition of NFPA 1142 for development of fire flow in rural and agricultural lands will contain upfront costs for development as is typical of new development. There may exist a construction cost benefit as NFPA 1142 fire flow quantities required, understanding that these are rural locations with low density development, can be as low as 10% of the quantities required by Appendix B, which are in part based on urban needs with higher development densities. At an estimated one dollar per gallon (\$1.00/gal.) capacity for development of onsite tank storage, this can provide substantial savings as compared to extending municipal type water systems extended distances, which can range into hundreds of thousands of dollars.

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.

² Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

³ Cost to building owner/tenants over the life of the project.

⁴ Measurable benefit.

Enforcement costs would reflect minimal change from current processing/review/inspection practices as compared to like structures with available municipal type water systems.

Operations and maintenance cost perspective, the proposal will likely impact the owner/operator of an NFPA 1142 system, as the standard requires annual testing and records keeping. Some Fire Departments may choose to use their own equipment/personnel to perform these annual tests, although it is more likely that the owner will incur the cost of private third-party testing. As an example; 2013 Washington Fire Service Rates list a Type 1 Engine (pumper) capable of developing proper test flows, at one-hundred-thirty dollars per hour (\$130.00/hr.) manned by three (3) personnel at seventeen dollars per hour each (\$17.00/hr. x 3). Based on an estimated test time of one hour (1 hr.), total cost to the owner equals: \$181.00 minimum annually. From a benefits perspective, the ability to utilize NFPA 1142 without deficiencies to fire district ratings and increased insurance premiums, results in agricultural and small business opportunities that may not have been available without the use of this nationally recognized methodology.

Please send your completed proposal to: sbcc@ga.wa.gov

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