

RESCINDED 04-04-11



OREGON FIRE CODE Interpretations and Technical Advisories

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Date: November 22, 2005

Ruling: Technical Advisory No. 05-04

Subject: NFPA 1142 Delivery Rate Best Practices Guideline

Code Reference: Oregon Fire Code, Section 508.3, Appendix B, Section B103.3 and NFPA 1142 – 2001 Edition

Content: The delivery rate at which water is transported or moved from a water source to a point where the water is applied during fire suppression operations is critically important to the fire department's ability to suppress fire or control its spread. The term "Delivery Rate", as used in this advisory, is for the purposes of determining how rapidly water must be moved or transported by fire apparatus or equipment such as water tenders, hose lays, or from dry hydrants at static water sources. This is typically performed in rural or remote areas without fixed and/or adequate water supply systems. The term "Delivery Rate" should not be confused with the term "Fire Flow" as used in Appendix B, Section B102.1 of the Oregon Fire Code.

Background Information: The adoption of the 1996 Oregon Uniform Fire Code referenced NFPA 1231 for rural and suburban areas when determining fire protection water supplies and delivery rates. The last revisions to the Oregon Uniform Fire Code in 2002 began to refer to NFPA 1142 as the replacement standard for NFPA 1231. The 2004 Oregon Fire Code continues to refer to NFPA 1142. The current edition of NFPA 1142 is dated 2001. When NFPA 1142 replaced NFPA 1231 it eliminated the sections that provided guidelines for determination of a delivery rate based upon the total water supply requirement for a building. This is the situation as of the 2001 edition of NFPA 1142.

"As for fire flow, neither NFPA 1231 nor 1142 provided direct guidelines or requirements. There is information contained within the NFPA Fire Protection Handbook that refers to using either the Iowa (Royal/Nelson) formula ($\text{ft}^3/100$) or the National Fire Academy (NFA) formula ($\text{ft}^2/3$). Based upon a 3,600 ft^2 dwelling without exposures, NFA would require 1,200 GPM while Iowa (Royal/Nelson) would require 423 GPM which is more consistent with NFPA 1231 Delivery Rate.

Conclusion: For the reasons stated above, it is recommended that fire code officials, when applying NFPA 1142, use the guidelines specified in this table.

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<u>Total Water Supply Required (in Gallons)</u>	<u>Minimum Delivery Rate (in GPM)</u>
Up to 2500	250
2500 to 10,000	500
10,000 to 20,000	750
More than 20,000	1,000

Other References: NFPA Fire Protection Handbook, 19th Edition, pages 10-9 and 10-60.