

**2018 NORTHERN NEVADA AMENDMENTS TO THE 2018 INTERNATIONAL WILDLAND-URBAN  
INTERFACE CODE**

**November 13, 2018 (amended by Council)**

The following participating agencies have reviewed the attached document referenced as the 2018 Northern Nevada Fire Code Amendments and agree with the amendments to the 2018 International Fire Code as stated therein. It is noted that the code amendments must be approved and adopted and codified by the local Authority Having Jurisdiction to become code.

**Participating Agencies**

**Carson City Fire Department  
777 South Stewart Street  
Carson City, NV 89701**

**East Fork Fire Protection District  
1694 County Road  
Minden, NV 89423**

**North Lake Tahoe Fire Protection District  
866 Oriole Way  
Incline Village, NV 89451**

**Smith Valley Fire Protection District  
1 Hardie Lane  
Smith, NV 89430**

**Sparks Fire Department  
1605 Victorian Avenue  
Sparks, NV 89431**

**Storey County Community Development  
P.O. Box 526  
Virginia City, NV 89440**

**Tahoe Douglas Fire Protection District  
193 Elks Point Road  
Zephyr Cove, NV 89448**

**Truckee Meadows Fire Protection District  
1001 East Ninth Street, Building D, Second Floor  
Reno, NV 89520**

## Preface

This document comprises proposed amendments to the 2018 Edition of the International Wildland-Urban Interface Code as published by the International Code Council, Inc, amended by the Participating Agencies listed above, with the support of the Northern Nevada Chapter of the International Code Council. This document is hereafter referenced as the 2018 Northern Nevada Wildland-Urban Interface Code Amendment and is prepared to be adopted by reference by the local authority having jurisdiction. These provisions are not considered to be or enacted as the code unless the provisions are adopted and codified by the local Authority Having Jurisdiction.

The purpose of the document is to provide a consistent area-wide application to the enforcement of the fire and life safety code sections noted in the International Wildland-Urban Interface Code, while still acknowledging necessary modifications to the nationally recognized fire and life safety document based upon the local needs of the community.

### Notes:

Deleted language in the base code has been ~~stricken through~~.

Added language to the code section has been underlined.

The entire section amended has been shown for context.

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## 2018 Northern Nevada Wildland-Urban Interface Code Amendments

### Section 101.2 Scope

*Section 101.2 is amended to read:*

**101.2 Scope.** The provisions of this code the Wildland Urban Interface Code shall apply to the construction, alteration, movement, repair, maintenance and use of any building, structure or premises and to the management of fuels on undeveloped lots and on unmodified portions of large lots within the wildland-urban interface areas in this jurisdiction.

Buildings or conditions in existence at the time of the adoption of this code are allowed to have their use or occupancy continued, if such condition, use or occupancy was legal at the time of the adoption of this code, provided such continued use does not constitute a distinct danger to life or property.

Buildings or structures moved into or within the jurisdiction shall comply with the provisions of this code for new buildings or structures.

### Section 105.3 Alternative materials, design, and methods

*Section 105.3 is amended to read:*

**105.3 Alternative materials, design, and methods.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method shall be approved where the building official in concurrence with the fire chief finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

Where the alternative material, design or method is not approved, the building official fire chief shall respond in writing, stating the reasons why the alternative was not approved.

### Section 106.1 General

*Section 106.1 is amended to read:*

**106.1 General.** To determine the suitability of alternative materials and methods and to provide for reasonable interpretations of the provisions of this code see *International Fire Code* section 109 as adopted by the Authority Having Jurisdiction, ~~there shall be and hereby is created a board of appeals consisting of five members who are qualified by experience and training to pass judgment on pertinent matters. The code official, building official and fire chief shall be ex officio members, and the code official shall act as secretary of the board. The board of appeals shall be appointed by the legislative body and shall hold office at their discretion. The board shall adopt reasonable rules and regulations for~~

conducting its investigations and shall render decisions and findings in writing to the code official, with a duplicate copy to the applicant.

## Section 106.2 Limitations of Authority

*Section 106.2 is deleted:*

~~**106.2 Limitations of authority.** The board of appeals shall not have authority relative to interpretation of the administrative provisions of this code and shall not have authority to waive requirements of this code.~~

## Section 302.3 Review of wildland-urban interface areas.

*Section 302.3 is amended to read:*

**302.3 Review of wildland-urban interface areas.** The code official shall reevaluate and recommend modification to the *wildland-urban interface areas* in accordance with Section 302.1 ~~on a 3-year basis or more frequently as deemed necessary by the legislative body.~~ as deemed necessary by the code official.

## Section 402.2.2 Water supply

*Section 402.2.2 is amended to read:*

**Section 402.2.2 Water Supply.** Individual structures hereinafter constructed or relocated into or within wildland-urban interface areas shall be provided with a conforming water supply in accordance with Section 404.

### Exceptions:

1. Structures constructed to meet the requirements for the class of ignition-resistant construction specified in Table 503.1 for a nonconforming water supply.
2. Buildings containing only private garages, carports, sheds and agricultural buildings with a floor area of not more than 600 square feet (56 m<sup>2</sup>).
3. Agricultural buildings constructed for the storage limited to harvested commodities, without electrical or fuel gas services.

## Section 404.1 General

*Section 404.1 is amended to read:*

**404.1 General.** Where provided in order to qualify as a conforming water supply for the purpose of Table 503.1 or as required for new subdivisions in accordance with Section 402.1.2, an *approved* water source shall have an adequate water supply for the use of the fire protection service to protect buildings and structures from exterior fire sources or to suppress structure fires within the *wildland-urban interface area* of the jurisdiction in accordance with this section.

**Exception:** Buildings containing only private garages, carports, sheds and agricultural buildings with a floor area of not more than 600 square feet (56 m<sup>2</sup>), and agricultural buildings constructed for the storage of harvested crops or agricultural commodities without electrical or fuel gas services.

## Section 404.5 Adequate water supply

*Section 404.5 is amended to read:*

**404.5 Adequate water supply.** Adequate water supply shall be determined for purposes of initial attack and flame front control as follows:

1. One- and two-family dwellings. The required water supply for one- and two-family dwellings having a fire flow calculation area that does not exceed 3,600 square feet (334 m<sup>2</sup>) shall be 1,000 gallons per minute (63.1 L/s) for a minimum duration of 30 minutes. The required fire flow supply for one- and two-family dwellings having a flow calculation area in excess of 3,600 square feet (334 m<sup>2</sup>) shall be 1,500 gallons per minute (95 L/s) for a minimum duration of 30 minutes.

**Exception:** A reduction in required flow rate of ~~75~~ 50 percent, as approved by the code official, is allowed where the building is provided with an approved automatic sprinkler system.

2. Buildings other than one- and two-family dwellings. The water supply required for buildings other than one- and two-family dwellings shall be as approved by the code official but shall not be less than 1,500 gallons per minute (95 L/s) for a duration of 2 hours.

**Exception:** A reduction in required flow rate of up to ~~75~~ 50 percent, as approved by the code official, is allowed where the building is provided with an approved automatic sprinkler system. The resulting water supply shall not be less than 1,500 gallons per minute (94.6 L/s).

## Section 501.2 Objective

*Section 501.2 is amended to read:*

**501.2 Objective.** The objective of this chapter is to establish minimum standards to locate, design and construct buildings and structures or portions thereof for the protection of life and property, to resist damage from wildfires, and to mitigate building and structure fires from spreading to wildland fuels.

The minimum standards set forth in this chapter vary with the critical *fire weather*, slope and fuel type to provide increased protection, above the requirements set forth in the *International Building Code* and the *International Residential Code*, from the various levels of hazards.

## **Section 502.1 General**

*Section 502.1 is amended to read:*

**502.1 General.** The fire hazard severity of building sites for all buildings hereafter constructed, modified or relocated into *wildland-urban interface areas* shall be established in accordance with Table 502.1 or Appendix C or the map developed by the Authority Having Jurisdiction as determined by the code official. ~~See also Appendix C.~~

## **Table 503.1 Ignition-Resistant Construction**

*Table 503.1 is amended to read as follows:*

**Table 503.1**

**IGNITION-RESISTANT CONSTRUCTION <sup>a</sup>**

DEFENSIBLE  SPACE <sup>c</sup>	FIRE HAZARD SEVERITY					
	Moderate Hazard		High Hazard		Extreme Hazard	
	Water supply <sup>d</sup>		Water supply <sup>b</sup>		Water supply <sup>b</sup>	
	Conforming <sup>d</sup>	Nonconforming <sup>e</sup>	Conforming <sup>d</sup>	Nonconforming <sup>a</sup>	Conforming <sup>d</sup>	Nonconforming <sup>e</sup>
Nonconforming	IR 2	IR 1	IR 1	IR 1 N.C.	IR 1 N.C.	Not Permitted
Conforming	IR 3	IR 2	IR 2	IR 1	IR 1	IR 1 N.C.
1.5 x Conforming <sup>f</sup>	Not Required	IR 3	IR 3	IR 2	IR 2	IR 1

- a. Access shall be in accordance with Section 403.
- b. Subdivisions shall have a conforming water supply in accordance with Section 402.1.  
 IR 1= Ignition-resistant construction in accordance with Section 504.  
 IR 2= Ignition-resistant construction in accordance with Section 505.  
 IR 3= Ignition-resistant construction in accordance with Section 506.  
 N.C.= Exterior walls shall have a fire-resistance rating of not less than 1 hour and the exterior surfaces of such walls shall be noncombustible. Usage of log wall construction is allowed.
- c. Conformance based on Section 603.
- d. Conformance based on Section 404.
- e. A nonconforming water supply is any water system or source that does not comply with Section 404, including situations where there is not water supply for structure protection or fire suppression.
- f. Only with the approval of the fire code official



## Section 504.2 Roof covering

*Section 504.2 is amended to read:*

**504.2 Roof covering.** Roofs shall have a Class A rating when tested in accordance with ASTM E108 or UL 790. For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends and ridge line shall be fire-stopped to preclude entry of flames or embers, or have one layer of 72-pound (32.4 kg) mineral-surfaced, nonperforated cap sheet complying with ASTM D 3909 installed over the combustible decking. Roof coverings consisting of shakes or shingles made of wood are not approved as part of any Class A roof assembly.

### **Exceptions:**

1. Class A roof assemblies include those with coverings of brick, masonry or an exposed concrete roof deck.
2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile or slate installed on noncombustible decks or ferrous, copper or metal sheets installed without a roof deck on noncombustible framing.
3. Class A roof assemblies include a minimum 16 oz/sq. ft. (0.0416 kg/m<sup>2</sup>) copper sheets installed over combustible decks.

## Section 504.7.1 Underfloor areas

*Section 504.7.1 is amended to read:*

**504.7.1 Underfloor areas.** When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have all underfloor areas enclosed to within 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 504.5.

**Exception:** When approved by the code official, unenclosed underfloor areas are allowed and are to be kept free of all combustible materials.

### Section 504.10.1 Vent locations

*Section 504.10.1 is amended to read:*

**504.10.1 Vent locations.** Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Ember-resistant gable end and dormer vents shall be located at least 10 feet (3048 mm) from lot lines. Underfloor ventilation openings shall be located as close to grade as practical.

#### **Exceptions:**

1. Listed vents complying with ASTM E2886.
  - 1.1 The Ember Intrusion Test shall have no flaming ignition of the cotton material.
  - 1.2 There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test. The maximum temperature of the unexposed side of the vent shall not exceed 662 degrees Fahrenheit (350 degrees Celsius).
2. The fire code official may accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers.

### Section 505.2 Roof covering

*Section 505.2 is amended to read:*

**505.2 Roof Covering.** Roofs shall have a roof assembly that complies with not less than a Class A B rating when tested in accordance with ASTM E108 or UL 790, ~~or an approved noncombustible roof covering.~~ For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire stopped to preclude entry of flames or embers, or have one layer of 72-pound mineral-surfaced, nonperforated cap sheet complying with ASTM D3909 installed over the combustible decking

### Section 505.10.1 Vent locations

*Section 505.10.1 is amended to read:*

**505.10.1 Vent locations.** Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Ember-resistant gable end and dormer vents shall be located at least 10 feet (3048 mm) from lot lines. Underfloor ventilation openings shall be located as close to grade as practical.

#### **Exceptions:**

1. Listed vents complying with ASTM E2886.
  - 1.1 The Ember Intrusion Test shall have no flaming ignition of the cotton material.
  - 1.2 There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test. The maximum temperature of the unexposed side of the vent shall not exceed 662 degrees Fahrenheit (350 degrees Celsius).

2. The fire code official may accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers.

### **Section 603.2.1.1 Adjacent land**

*Section 603.2.1.1 is added to Section 603.2.1 Responsible party to read:*

**603.2.1 Responsible party.** Persons owning, leasing, controlling, operating or maintaining buildings or structures requiring defensible spaces are responsible for modifying or removing non-fire-resistive vegetation on the property owned, leased or controlled by said person.

**603.2.1.1 Adjacent land.** Property owners of land that is directly adjacent to property containing buildings or structures requiring defensible space are responsible for modifying or removing non-fire-resistive vegetation on their own property. Nothing in this provision shall be deemed to require an owner of real property to perform any work on land that he or she does not own.

### **603.2.2 Trees**

*Section 603.2.2 is amended to read:*

**603.2.2 Trees.** Trees are allowed within the *defensible space*, provided the horizontal distance between crowns of adjacent trees and crowns of trees and structures, overhead electrical facilities or unmodified fuel is not less than 10 feet (3048 mm) or an acceptable distance as determined by the code official.

### **Section 604.4 Trees**

*Section 604.4 is amended to read:*

**604.4 Trees.** Tree crowns extending to within 10 feet (3048 mm) of any structure shall be pruned to maintain a minimum ~~horizontal~~ clearance of 10 feet (3048 mm) or an acceptable distance as determined by the code official. Tree crowns within the *defensible space* shall be pruned to remove limbs located less than ~~6~~ 10 feet (3048 mm) above the ground surface adjacent to the trees; or an acceptable distance as determined by the code official.

### **Section 604.4.1 Chimney clearance**

*Section 604.4.1 is amended to read:*

**604.4.1 Chimney clearance.** Portions of tree crowns that extend to within 10 feet (3048 mm) of the outlet of a chimney shall be pruned to maintain a minimum ~~horizontal~~ clearance of 10 feet (3048 mm).

## 604.5 Non-combustible area

*Section 604.5 is added to Section 604 Maintenance of Defensible Space to read:*

**604.5 Non-combustible area.** The area extending from the base of any structure to 5 feet beyond the base of such structure shall be composed entirely of non-combustible material or fire resistive vegetation.

## Section 607.1 General

*Section 607.1 is amended to read:*

**607.1 General.** Firewood and combustible material shall not be stored in unenclosed spaces beneath buildings or structures, or on decks or under eaves, canopies or other projections or overhangs. When required by the code official, storage of firewood and combustible material stored in the *defensible space* shall be located a minimum of ~~20-30~~ feet (~~6096~~ 9144 mm) from structures and separated from the crown of trees by a minimum horizontal distance of 15 feet (4572 mm).

**Exception.** Approved fire-resistance-rated coverings used in accordance with their listing and as approved and allowed by the Fire Code Official.

## Appendix Section B101.1 Scope

*Section B101.1 is amended to read:*

**B101.1 Scope.** Where required vegetation management plans shall be submitted to the code official and the State Forester Fire Warden for review and approval as part of the plans required for a permit.

## Appendix Section B101.2 Plan content

*Section B101.2 is amended to read:*

**B101.2 Plan content.** Vegetation management plans shall describe all actions that will be taken to prevent a fire from being carried toward or away from the building. A vegetation management plan shall include at least the following information:

1. A copy of the ~~site~~ *defensible space* plan.
2. Methods and timetables for controlling, changing or modifying areas on the property. Elements of the plan shall include removal of slash, snags, vegetation that may grow into overhead electrical lines, other ground fuels, ladder fuels and dead trees, and the thinning of live trees.

3. A plan for maintaining the proposed fuel-reduction measures.

## **Appendix Section B102 Defensible Space Plans**

*Sections B102, B102.1, and B102.2 are added to Appendix B Vegetation Management Plan is read:*

### **B102 Defensible Space Plans.**

**B102.1 General.** Where required, defensible space plans must be submitted to the code official for review and approval as part of the plans required for a permit.

**B102.2 Plan content.** A defensible space plan shall include at least the following information:

1. Property boundaries.
2. Current and proposed structures on the property.
3. Trees and vegetation taller than 3 feet in height.
4. Individual plant or brush fields 20 square feet or larger in area.
5. Tree drip lines.
6. Roads and driveways abutting the property.