

## WILDLAND-URBAN INTERFACE CODE (WUI CODE)



### HAZARDS ADDRESSED



### HOW IT WORKS

A wildland-urban interface (WUI) code is specifically designed to mitigate the risks from wildfire to life and property. The standards within a WUI code will vary according to the scope that a community is willing to adopt and enforce. Typically, however, a WUI code includes the following topics:

- **Structure density and location:** number of structures allowed in areas at risk from wildfire, plus setbacks (distance between structures and distance between other features such as slopes).
- **Building materials and construction:** roof assembly and covering, eaves, vents, gutters, exterior walls, windows, non-combustible building materials, and non-combustible surface.
- **Vegetation management:** tree thinning, spacing, limbing, and trimming; removal of any vegetation growing under tree canopies (typically referred to as “ladder fuels”), surface vegetation removal, and brush clearance; vegetation conversion, fuel modifications, and landscaping.
- **Emergency vehicle access:** driveways, turnarounds, emergency access roads, marking of roads, and property address markers.
- **Water supply:** approved water sources and adequate water supply.
- **Fire protection:** automatic sprinkler system, spark arresters, and propane tank storage.

A WUI code must also state where it applies. The method to determine applicability is at the discretion of the jurisdiction and may be tied to one or more of the following:

1. All new construction, remodels, and retrofits (including subdivisions and planned unit developments).
2. Broadly defined area at risk to wildfire, such as a WUI boundary map and/or definition.
3. Designated overlay zone other than a WUI (such as a hillside overlay zone).

4. Parcel map that shows individual hazard ratings as determined by the jurisdiction.
5. Hazard rating based on professional site assessment.

A WUI code can also specify under what conditions additional standards may be required. For example, if a site visit determines that the hazard rating is above a certain threshold (e.g., high, very high, or extreme), the jurisdiction may require increased defensible space, an automatic sprinkler system, and a secondary emergency access in addition to the base level WUI code requirements.

## IMPLEMENTATION

A WUI code often works in conjunction with other codes, such as the jurisdiction’s fire code and building code. References to these other codes should be included in the WUI code. The local authority responsible for a WUI code is typically the local fire district/department, land use department, or building department. To be successful, the adopting jurisdiction should ensure there is enough internal capacity to enforce the code.

Model WUI codes can be useful in providing jurisdictions with examples of language for required mitigation and guidance. It is rare that jurisdictions adopt model WUI codes in full; rather, they adopt them in part and/or with local amendments. WUI codes also work best in concert with other voluntary and outreach programs that encourage resident awareness and education.

## WHERE IT’S BEEN DONE

In 2012, **Colorado Springs** updated their WUI mitigation requirements by adopting an appendix for the Hillside Overlay Zone that required additional fuels management, fire protection systems, roof coverings, and other hardened structure features.

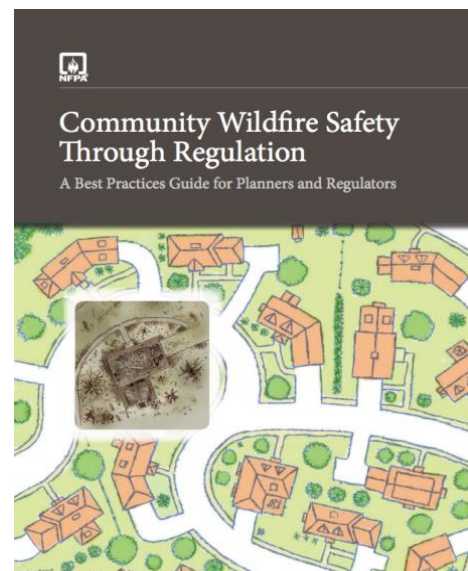
Some communities and counties in Colorado have adopted either their own WUI code or parts of the International Code Council’s Wildland-Urban Interface model code (IWUIC). For example, in 2011 **Pueblo County** adopted most of the IWUIC (2009 edition) as part of their uniform fire code (adopted as the “Fire Codes of Pueblo County”).

Many other jurisdictions, including **Boulder County**, **Eagle County**, and **Summit County** have integrated wildfire hazard mitigation requirements into their land use regulations and building codes to specify when new construction, additions, or retrofits require additional mitigation. *For more examples related to wildfire, see additional examples in the Building Code and Site-Specific Hazard Assessment tools.*

## ADVANTAGES AND KEY TALKING POINTS

Implementing a WUI code promotes safer development by ensuring that life and property are uniformly protected from wildfire risk. In addition, WUI codes:

- Provide a robust, comprehensive, and consolidated



*This 24-page guide by NFPA provides information on community wildfire safety specifically for planners and regulators.*

Source: [nfpa.org/safety-information/for-consumers/outdoors/wildland-fires/reports-case-studies-and-guides](https://www.nfpa.org/safety-information/for-consumers/outdoors/wildland-fires/reports-case-studies-and-guides)

set of regulations for developers, contractors, and residents.

- Complement existing building and fire codes to ensure that additional standards are met.
- Are based on scientific findings on the effectiveness of ignition loss reduction.
- While some WUI code requirements may require more upfront financial investment through the building and construction process, codes can reduce long term spending on suppression and rebuilding because features are built to a higher standard and increase a structure’s survivability.
- WUI codes promote safer development that protects life and property.

## CHALLENGES

WUI codes can also bring a number of challenges, although many of these can be overcome if the community is committed to the process:

- May bring additional costs to construction, although this varies by jurisdiction.
- Typically WUI codes only apply to new development and improvements or repairs, leaving existing development still at risk.
- Adoption can be controversial; successful WUI code adoptions engage a number of stakeholders and the public long before the adoption process began.
- Enforcement can be challenging and requires adequate internal staff capacity to effectively implement.

## KEY FACTS

<b>Administrative capacity</b>	Experienced planner; coordination with local fire authority and building department
<b>Mapping</b>	WUI map or hazard ratings required for applicability
<b>Regulatory requirements</b>	N/A
<b>Maintenance</b>	Yes. Periodic updating encouraged for maps and technical standards
<b>Adoption required</b>	Yes. Can be integrated into zoning code
<b>Statutory reference</b>	N/A
<b>Associated costs</b>	Varies; may require consultant

## EXAMPLES

<b>Boulder County</b> WUI Code	<a href="https://bouldercounty.org/property/build/pages/default.aspx">bouldercounty.org/property/build/pages/default.aspx</a>
<b>City of Colorado Springs</b> WUI Code	<a href="https://dora.state.co.us/taskforce/FieldTrip/WUI%20Mitigation%20Ordinance.pdf">dora.state.co.us/taskforce/FieldTrip/WUI%20Mitigation%20Ordinance.pdf</a>
<b>Eagle County</b> WUI Code	<a href="https://eaglecounty.us/Building/Wildfire/Overview">eaglecounty.us/Building/Wildfire/Overview</a>
<b>Pueblo County</b> WUI Code	<a href="https://pueblo.org/government/county/code/title8/chapter8-16">pueblo.org/government/county/code/title8/chapter8-16</a>

**Town of Jackson and  
Teton County, WY**      [tetonwyo.org/fire/topics/contractors-page/252358](https://tetonwyo.org/fire/topics/contractors-page/252358)  
WUI Code

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**Kittitas County, WA**      [co.kittitas.wa.us/firemarshal/wildland-urban-interface.aspx](https://co.kittitas.wa.us/firemarshal/wildland-urban-interface.aspx)  
WUI Code

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## FOR MORE INFORMATION

### **International Code Council Wildland-Urban Interface Code (IWUIC)**

model WUI code: [publicecodes.cyberregs.com/icod/iwuic/2012/index.htm](https://publicecodes.cyberregs.com/icod/iwuic/2012/index.htm)

### **National Fire Protection Association**

*Community Wildfire Safety Through Regulation: A Best Practices Guide for Planners and Regulators:*  
[nfpa.org/safety-information/for-consumers/outdoors/wildland-fires/reports-case-studies-and-guides](https://nfpa.org/safety-information/for-consumers/outdoors/wildland-fires/reports-case-studies-and-guides)

*Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas:* [nfpa.org/1141](https://nfpa.org/1141)

*Standard for Reducing Structure Ignition Hazards from Wildland Fire:* [nfpa.org/1144](https://nfpa.org/1144)