

WUI Mitigation Codes, Standards, Programs, and Guidance
A Comparative Analysis to Inform Community Wildfire Risk Reduction in Washington





Prepared by: Community Wildfire Planning Center

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# **Report Acknowledgements**

Technical authors of this report are Molly Mowery, AICP and Kelly Johnston, RPF, FBAN of the Community Wildfire Planning Center (CWPC). CWPC is a non-profit organization dedicated to leading the strategic connections between land use planning, building and development practices, and wildfire risk. Learn more about CWPC at <a href="https://www.communitywildfire.org">www.communitywildfire.org</a>.

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## **Acronyms**

APA American Planning Association

ASIP Assessing Structure Ignition Potential
CWPC Community Wildfire Planning Center
CWPP Community Wildfire Protection Plan
DNR Department of Natural Resources

ESCAPE Fire Evacuation and Sheltering Considerations – Assessment, Planning, and Execution

FAC Fire Adapted Communities

FAC SAT Fire Adapted Communities Self-Assessment Tool

FEMA Federal Emergency Management Agency

HMMP Hazard Mitigation Grant Program
HMM Hazard Mitigation Methodology

IBHS Insurance Institute for Business and Home Safety

ICC International Code Council

IWUIC International Wildland-Urban Interface Code
NIST National Institute of Standards and Technology

NFPA National Fire Protection Association
NWCG National Wildfire Coordinating Group

RCW Revised Code of Washington
RLF Resources Legacy Fund
SBCC State Building Code Council

SFPE Society of Fire Protection Engineers

SIZ Structure Ignition Zone
SHB Substitute House Bill
USFA U.S. Fire Administration

USFS US Forest Service

WAC Washington Administrative Code

WSAFM Washington State Association of Fire Marshals

WUI Wildland-Urban Interface

WUIMC Wildland Urban Interface Mitigation Committee

## **Executive Summary**

In May 2025, Washington Governor Ferguson signed into law Substitute House Bill (SHB) 1539 which requires the Insurance Commissioner and Public Lands Commissioner to co-chair a Wildfire Mitigation and Resiliency Standards Work Group. The work group is tasked with studying and making recommendations to the State Legislature by December 1, 2025, on the following:

- Coordination and alignment of state-level wildfire property mitigation standards with nationally recognized, science-based wildfire mitigation standards;
- Enhancement of wildfire mitigation at the community level;
- Data sharing between state agencies and the insurance industry to address wildfire mitigation gaps and best practices;
- Improvements to consumer transparency related to wildfire hazard and risk;
- Establishment of a grant program to help residential properties resist wildfire loss.

Determining the appropriate type of community wildfire risk reduction standards or other resiliency measures in Washington requires a thorough understanding of what is currently in effect as well as other resources and considerations for adoption or implementation. This report is intended to support Resources Legacy Fund (RLF) and other members of the work group seeking to better understand the landscape of wildfire mitigation codes, standards, regulations, programs and guidance and to help inform decisions that appropriate for Washington.

To achieve this outcome, this report analyzes three categories of wildfire mitigation at various scales focused on wildfire risk reduction measures in the *built environment* (note that this report does not analyze the type, effectiveness or range of *landscape scale mitigations* (e.g. fuel treatments, forest health). Wildfire mitigation categories are:

- **Codes and standards:** this category describes distinctions between national model codes and standards for the WUI developed by authoritative organizations and discusses what Washington State has adopted.
- **Programs:** this category describes state and national level mitigation programs, some of which are being implemented in Washington, and any corresponding technical requirements associated with each program.
- **Guidance:** this category highlights relevant national guidance related to wildfire mitigation best practices or recommendations for homes, lots, neighborhoods, and communities as consolidated into the form of handbooks, guides, or similar publications.

Each category has an associated matrix that makes a comparative analysis across the relevant resources. These categories are separated to help readers distinguish between codes, standards, regulations, programs, and guidance for a more accurate comparison.

Based on a collective analysis of all three categories, Washington is regulating only a narrow portion of the wildland-urban interface (WUI) at the state level through its adoption of portions of the International Wildland-Urban Interface Code (IWUIC) (RCW 19.27.031). The current State WUI code requires mitigation of several components of the structure and driveway but is not comprehensive in scope. Implementation of the State's WUI code is on hold while supporting

products are being developed (wildfire hazard and risk map) and decisions on emergency rulemaking are being determined.

The State does not have WUI requirements for other known hazards and vulnerabilities in the WUI, such as hazardous vegetation / defensible space on properties, or neighborhood or community mitigations, such as minimum fire protection standards for emergency access and water supply in the WUI. Further, many code provisions apply to new homes or specified additions / retrofits but are not retroactive for existing homes. These gaps mean that vulnerable homes, properties, neighborhoods, and communities will continue to face wildfire risk unless local jurisdictions have adopted their own set of WUI regulations (e.g., defensible space ordinances, additional structure protection measures, fire protection standards for access and water supply, development reviews siting certain land uses in wildfire hazard areas) and/or property owners and communities have voluntarily taken appropriate actions to reduce their risk.

Washington implements two voluntary programs: Wildfire Ready Neighbors, a collaboration between Washington Department of Natural Resources (DNR) and local partners, and the national Firewise USA program. Both programs provide resources and opportunities for homeowners to take mitigation actions on their properties or neighborhoods. While educational in scope, both programs exhibit high levels of engagement across the State.

Taken as a whole, there are opportunities for Washington to expand both its approaches for regulatory requirements and implementation of voluntary programs to increase wildfire mitigation across the State. Additional wildfire mitigation guidance could also be leveraged to address gaps in mitigation planning. Preliminary discussions with agency staff across Washington also underscore the need for both existing and new wildfire mitigation standards to consider how they can better align with other state planning goals and ensure that additional conflicts are not created. Maintaining flexible approaches to the development and implementation of any new mitigation requirements may further help to reduce potential conflicts.

## **An Overview of WUI Mitigation Approaches**

In the State of Washington, there are both regulatory and voluntary approaches in place for mitigating wildfire risk to structures, lots, and communities. This section provides an overview of both the regulations and programs in place, as well as other relevant model codes and regulations, programs, or guidance material for awareness and comparison. Key terms and definitions are provided throughout to clarify differences across terminology and summarized in Appendix A for reference.

#### **WUI Codes and Standards**

A Wildland-Urban Interface Code, commonly referred to as a WUI code, can take several forms. States or local jurisdictions can:

- a) Adopt the International Code Council's International Wildland-Urban Interface Code (IWUIC), with amendments.
- b) Adopt the National Fire Protection Association's Fire Code (NFPA 1) Chapter 17 Wildland Urban Interface in conjunction with NFPA technical standards.
- c) Create and adopt their own WUI code which may include provisions of the IWUIC and references to NFPA technical standards.

WUI codes typically regulate a variety of wildfire vulnerabilities in the built environment, ranging from building construction and materials, emergency water supply and access requirements for homes and subdivisions, hazardous and vulnerable land uses, temporary permits or activities, and more. WUI codes may also include management of hazardous vegetation or defensible space and other combustible materials (e.g., fences). In some cases, jurisdictions may address landscaping or other WUI topics in separate local ordinances such as landscaping, public nuisances, or the land use and development code.

WUI codes may reference national standards to ensure a consistent approach is followed to achieve a specific outcome. While codes are legally enforceable documents and specify *what* needs to be done, standards typically describe *how* to meet code requirements.

This section provides a general overview of the IWUIC, NFPA Codes and Standards for the WUI, and Washington's adoption of the IWUIC. A detailed comparative analysis of each is provided in Table 1.

#### International Wildland-Urban Interface Model Code

The <u>IWUIC</u> is a model code published by the International Code Council (ICC), a non-profit association established in 1994 focused on building safety. IWUIC is part of a family of fifteen coordinated <u>International Codes</u> (I-Codes) focused on building safety. I-Codes provide a comprehensive set of model codes that work together and are widely adopted across the U.S. and other countries. I-Codes are developed through a rigorous and inclusive consensus-based <u>process</u> that includes code development committees, hearings, and public comment. The ICC code development process meets the principles defined by the National Standards Strategy of

2000, and complies with OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities (1998) and Public Law 104-113 National Technology Transfer and Advancement Act of 1995. I-Code editions are updated and published every three years.

In its entirety, the IWUIC establishes requirements and minimum standards for land use and the built environment within designated WUI areas using prescriptive and performance provisions. The IWUIC includes requirements for access and water supply for individual structures and subdivisions, preparation of a fire protection plan (if applicable), ignition-resistant construction, defensible space, automatic sprinkler systems, and optional appendices. The IWUIC also includes referenced standards promulgated by the ICC and other organizations that are used to provide requirements for materials and methods of construction.

#### NFPA 1 Fire Code, Wildland Urban Interface (Chapter 17)

NFPA 1 Fire Code is a model code published by the National Fire Protection Association (NFPA), a nonprofit organization founded in 1896 that publishes more than 300 codes and standards. The Fire Code prescribes minimum requirements necessary to establish a reasonable level of fire and life safety and property protection from the hazards created by fire, explosion, and dangerous conditions.

NFPA has a rigorous and consensus-based <u>development process</u> for its code and standards that includes public participation, Technical Committees and Panels, and a Standards Council. All NFPA codes and standards are revised and updated every 3-5 years, in revision cycles that begin twice each year.

NFPA 1 Chapter 17 Wildland Urban Interface focuses on the planning, construction, maintenance, education, and management elements for the protection of life and property from wildfire. This chapter works in conjunction with NFPA 1140 (see below) and any other referenced standards. Key elements of this chapter include requirements to conduct a comprehensive assessment of the structure and its surrounding—referred to as the Structure Ignition Zone (SIZ), develop a wildland fire hazard mitigation plan, and address other fire hazards in wildfire-prone areas (brush, vegetation, fireworks, explosives, etc.).

#### NFPA 1140 Standard for Wildland Fire Protection

NFPA 1140 Standard for Wildland Fire Protection is a consolidation of four previous NFPA standards: NFPA 1051, Standard for Wildland Firefighting Personnel Professional Qualifications; NFPA 1141, Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas; NFPA 1143, Standard for Wildland Fire Management; and NFPA 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire.

NFPA 1140 covers a range of topics including minimum professional qualifications for wildland firefighters, fire officers, and WUI coordinators, requirements for fire protection infrastructure in wildland, rural, and suburban areas, means of access, community safety and emergency preparedness, incident management, and assessing wildland fire hazards in the SIZ.

#### NFPA 1142 Standard on Water Supplies for Suburban and Rural Firefighting

NFPA 1142 Standard on Water Supplies for Suburban and Rural Firefighting identifies a method of determining minimum water supply necessary for structural firefighting purposes in areas where it has been determined that there is no water or inadequate water for firefighting. Topics include approved and alternative water supplies, dry hydrants, calculations for minimum water supplies for structures with and without exposure hazards, structures with automatic sprinkler protection or other automatic fire suppression systems.

#### Washington's Adoption of the International Wildland-Urban Interface Code

The Revised Code of Washington (RCW) Title 19 *Business Regulations—Miscellaneous*, Chapter 27 <u>State Building Code</u> adopts portions of the IWUIC (<u>RCW 19.27.031</u>). The Washington Administrative Code (WAC) Title 51, <u>Chapter 51-55</u> are rules adopted under the authority of RCW Chapter 19.27 that clarify what jurisdictions must do to implement the State's WUI code.

The State's WUI Code adopts a limited number of provisions from the entire IWUIC. The State's WUI code focuses on class 1 ignition-resistant construction (roof coverings, exterior walls, appendages and projections) and driveways. The State WUI code cannot be adopted until the completion of a statewide wildfire hazard map and a base-level wildfire risk map for each county of the state (RCW 43.30.580). To meet this mapping requirement, the Washington State Department of Natural Resources (DNR) is leading the development of a Wildfire Hazard and Risk Mapping Initiative, as directed by Senate Bill 6120.

All counties, cities, and towns in Washington may adopt the IWUIC in whole or any portion thereof (RCW 19.27.560). Some local jurisdictions have adopted the IWUIC—for example, the City of Spokane's Municipal Code <a href="Chapter 17F.110">Chapter 17F.110</a> adopts the IWUIC including appendices and related standards, with limited amendments. Kittitas County has also adopted the IWUIC with several appendices and amendments, and has identified all unincorporated areas within the County as the WUI (<a href="Chapter 20.10">Chapter 20.10</a>). Implementation and enforcement of these locally adopted WUI Codes was not analyzed as part of this report.

Currently, WAC rules (which implement RCW 19.27) specify that the State adopts the 2021 edition in the IWUIC by reference with additions, deletions, and exceptions. In addition to requirements for ignition-resistant construction and driveways, the WAC also defines the State's WUI to determine the applicability of the requirements (<u>WAC 51-55-0300</u>). Other fire protection requirements (e.g., water supply, access) must comply with locally adopted standards.

In January 2025, the Washington State Building Code Council (SBCC) filed expedited rules to rescind the 2021 IWUIC amendments from WAC Chapter 51-55 and reserve these sections for future rule making (WSR 25-03-148). The stated purpose for filing the expedited rules was that during the 2024 legislative session a new law was passed (ESB 6120) which did not allow adoption of the IWUIC before new WUI maps are developed by DNR. Further, the SBCC is anticipating that new rule language will be adopted in the future under these proposed reserved sections. At the time of this report, the proposed rules have not yet been approved, and therefore the WAC Chapter 51-55 is still in force but it's unclear whether any jurisdictions are seeking to follow them.

The Washington State Association of Fire Marshals (WSAFM) provides <u>implementation guidance</u> for local jurisdictions on the implementation of the State's WUI code on their website.

#### **WUI Mitigation Programs**

This section discusses several national and state programs that are administered by various agencies or non-profit organizations focused on wildfire risk reduction in the built environment. These programs are designed to reduce wildfire risk at the parcel or neighborhood scales, or both. There are several key distinctions across programs, including whether a program is strictly educational (i.e. there are no requirements to implement a specific mitigation), whether the program provides a designation or recognition as a result of taking specific actions, if there are associated program costs for the participant, and who conducts the assessment. Each description below provides a general overview of the program; further program details and a comparative analysis is provided in Table 2, however individual program websites should be consulted for additional information on eligibility, application and submittal requirements, or other processes associated with each program.

#### **DNR: Wildfire Ready Neighbors**

<u>Wildfire Ready Neighbors</u> (WRN) is a <u>collaboration</u> between DNR and local partners to help residents and communities prepare for wildfires. WRN is voluntary and participants can receive a free in-person home visit by a wildfire expert to assess the SIZ and, where applicable, forest health conditions on the parcel. The program also provides general guidance with prioritized actions based on a brief online form. WRN program <u>partners</u> that offer trained assessors include fire protection districts and departments, conservation districts, and non-profits from across the State. DNR offers free Assessing Structure Ignition Potential (ASIP) trainings to ensure assessors provide a consistent approach to SIZ assessments. As of the end of August 2025, nearly 7,000 people had signed up for the WRN program.

While many fire protection districts, departments, and other organizations offer assessments in coordination with the WRN program, some have branded their own assessment programs. While still largely aligned with WRN assessments, these may have a different name and slight variations to the assessment, such as the incorporation of additional assessment questions.

#### IBHS: Wildfire Prepared Home

<u>Wildfire Prepared Home</u> is a program of the <u>Insurance Institute for Business and Home Safety</u> (IBHS), a nonprofit scientific research and communications organization supported by property insurers, reinsurers, and affiliated companies. The Wildfire Prepared Home program offers two designation certificate levels: Wildfire Prepared Home Base and Wildfire Prepared Home Plus, distinguished by the mitigation actions an applicant must take to achieve either designation. Designation level requirements are identified in the <u>Wildfire Prepared Home Technical Standard</u>, developed by IBHS.

The program is an "owner-driven" process, where the homeowner takes the lead on completing a home checklist, ensuring mitigation work is completed, and submitting the application and photos for review by IBHS. Homes that qualify for a designation receive a certificate from IBHS.

The entire process can vary significantly (from a few months to many months) depending on the amount of work required. Program fees include an application fee and a fee for annual review. Recertification is also required after three years. The program is currently available to property owners in California and Oregon.

#### NFPA: Firewise USA

Washington has <u>numerous communities</u> from across the State voluntarily participating in the national Firewise USA® recognition program. <u>Firewise USA</u>® is administered by NFPA and helps communities get organized and take action to reduce wildfire risks at the local level. Recognized Firewise USA sites are required to have a minimum of eight dwelling units and a maximum of 2,500. The process includes completing a community wildfire risk assessment, making a three-year action plan with annual communitywide priorities, and implementing actions. Typical actions include community education workshops, organizing a Firewise day, and providing information at local events. Volunteer hours and costs are tracked to document investments and meet program reporting criteria. There is no application fee to join the Firewise USA program, but participating communities must meet an annual investment requirement which can be met through documenting volunteer hours, in-kind services, or monetary costs.

#### **IBHS: Wildfire Prepared Neighborhood**

IBHS is launching a Wildfire Prepared Neighborhood <u>pilot program</u> in six existing neighborhoods in California or Oregon with a Homeowners Association. The program is based on the <u>Wildfire Prepared Neighborhood Technical Standard</u> developed by IBHS, which incorporates Wildfire Prepared Home requirements and additional requirements for fuel management and structure separation distances.

## **WUI Mitigation Guidance and Tools**

Many national organizations have developed community wildfire risk reduction guidance and resources. While not exhaustive, this section provides an overview of national WUI mitigation guidance relevant to helping communities undertake wildfire risk reduction measures. Each description below provides a general overview of the most relevant resource(s) issued by the organization; further details and a comparative analysis is provided in Table 3. While not included in this report, some states have also developed state-specific WUI mitigation guidance that may also provide useful examples of community planning best practices, structure mitigation, and more.

### APA: Planning the Wildland-Urban Interface

The <u>American Planning Association</u> (APA) is the largest membership organization of professional planners and planning resources available. While APA resources focus on many planning topics, some are focused on hazard mitigation planning, disaster recovery, and the WUI. WUI planning guidance includes <u>Planning the Wildland-Urban Interface</u>, a Planning Advisory Services Report 594 published in 2019. This report provides planners with an in-depth introduction to the WUI and wildfire basics, covering challenges, trends, and historical context along with content on

understanding wildfire ignition science. The report also provides solutions through a holistic planning framework and practical guidance on how to address WUI and wildfire challenges in plans, policies, and regulations, opportunities for collaboration with fire departments, federal and state agencies, and other key stakeholders. Case study examples show how communities across the country are integrating planning strategies for reducing wildfire risk in the WUI.

#### FEMA: Home Builder's Guide to Construction in Wildfire Zones

The <u>Federal Emergency Management Agency</u> (FEMA) is part of the U.S. Department of Homeland Security and is comprised of Program Offices and Regional Offices located throughout the United States to support people and communities before, during, and after disasters through resources, assistance, guidance, funding, grants, and others programs.

FEMA's <u>Building Science Resource Library</u> contains FEMA's hazard-specific guidance for communities. This includes FEMA P-737, Home Builder's Guide to Construction in Wildfire Zones; Technical Fact Sheet Series (2008). This series features 17 Fact Sheets that collectively provide information about wildfire behavior and recommendations for building design and construction methods in the WUI. FEMA has previously recommended that Hazard Mitigation Grant Program (HMGP) applicants consult P-737 design guidance for defensible space and ignition-resistant construction projects.

Other resources include Wildfire Mitigation Assessment Team reports that provide detailed postfire observations on how buildings performed during the fires, recommendations for actions that property owners, decision makers, practitioners, and communities can take to reduce wildfire risk, and other information. Recent reports focus on the Marshall Fire and Maui / Lahaina Fire.

#### NIST: Hazard Mitigation Methodology

National Institute of Standards and Technology (NIST) is non-regulatory government agency within the U.S. Department of Commerce that develops standards, guidelines, and best practices. NIST's Fire Research Division's research projects and programs cover a range of WUI and fire topics, including fire risk reduction in communities, improving WUI community fire protection through fire-resistant building design and materials, and more. The Fire Research Division also facilitates a Wildland-Urban Interface Group comprised of federal and state agencies, codes and standards organizations, and others in the fire research community.

NIST tools and resources for the WUI include the <u>Hazard Mitigation Methodology</u> (HMM) is supported by NIST Technical Note 2205 <u>WUI Structure/Parcel/Community Fire Hazard Mitigation Methodology</u>. HMM is a comprehensive performance-based approach to WUI fire hazard mitigation for structures, parcels, and communities. The proposed methodology was developed to reduce structural losses in WUI fires by hardening structures and parcels across a community. The HMM demonstrates the complexities of structure hardening, and how and why hazards associated with both fire and ember exposures need to be mitigated, describes the relationships between exposure and hardening within the methodology, and addresses housing density, structure separation distance, and parcel layouts. The HMM was designed to address current building stock with efforts made to limit retrofit expenses; while developed primarily for retrofits it can be applied to new construction.

NIST also released a Technical Note 2262r1 <u>WUI Fire Evacuation and Sheltering Considerations – Assessment, Planning, and Execution</u> (ESCAPE), 2025. This publication discusses technical challenges related to community evacuations, lessons learned based on the 2018 Camp Fire, and concepts for planning and decision-making support tools for community notification and evacuation plans. NIST also offers an ESCAPE educational <u>course</u> and additional resources.

#### NWCG: Wildland Urban Interface Standards and Field Guide

The <u>National Wildfire Coordinating Group</u> (NWCG) provides national leadership to enable interoperable wildland fire operations among federal, state, local, Tribal and territorial partners. NWCG's <u>Wildland Urban Interface Mitigation Committee</u> (WUIMC) is comprised of agency representatives from the US Fire Administration, National Association of State Foresters, Bureau of Indian Affairs, Bureau of Land Management, US Forest Service, International Association of Fire Chiefs, and others.

The committee provides resources and information related to fire adapted communities, including the PMS 052 NWCG Standards for Mitigation in the Wildland Urban Interface (2023), which provides an overview of wildfire mitigation concepts and general SIZ standards compiled from a combination of sources (NIST, NFPA and IBHS fact sheets, USFS research), information on Community Wildfire Protection Plans (CWPPs) and more. The PMS 053 NWCG Wildland Urban Interface Mitigation Field Guide (2025) provides supplemental information and recommendations for practitioners on ways to accomplish mitigation work described in the NWCG Standards for Mitigation in the Wildland Urban Interface.

# SFPE / SFPE Foundation: WUI Virtual Handbook for Fire Risk Assessment & Mitigation

The <u>Society of Fire Protection Engineers</u> (SFPE) is a professional society for fire protection and fire safety engineering. SFPE issues standards, guides, handbooks, journals, magazines, and other resources for fire protection engineers and other applicable professionals.

In partnership with the <u>SFPE Foundation</u> (the non-profit arm of SFPE), the two organizations released a <u>WUI Virtual Handbook for Fire Risk Assessment & Mitigation</u> (2nd Edition) in 2025 to address fire risk assessment and mitigation at the property, lot, neighborhood, and community scales. Associated content includes a parcel-scale wildland fire assessment checklist, and instructional videos and handouts.

#### Additional WUI Mitigation Guidance and Resources

There are many other national organizations or agencies that provide WUI mitigation guidance, tools, or other information to support communities in understanding wildfire risk and taking action. The following resources are included for awareness (listed in alphabetical order by agency or organization):

 The <u>Community Wildfire Planning Center</u> (CWPC) helps communities understand how to address wildfire risk in the built environment through land use planning, community assistance, and parcel-level mitigation tools and trainings. CWPC's <u>WUI Planning Hub</u> features national and state planning resources; a Fire and Land Use Planning Evaluation

- <u>(FLUPE) Tool</u> offers an introduction to in-depth assessments that CWPC provides for communities.
- The <u>Fire Adapted Communities</u> (FAC) <u>Learning Network</u> supports and connects people and communities working on wildfire resilience across the country. The network provides technical assistance to its members, supports peer learning exchanges, and provides resources to practitioners to help them take an active role in reducing and managing wildfire risk. FAC Network tools includes sources such as a <u>Fire Adapted Communities Pathways Tool</u> and a <u>Fire Adapted Communities Self-Assessment Tool</u> (FAC SAT). These tools help communities complete their own assessment to better understand their fire adaptation needs, priorities, and opportunities.
- The <u>U.S. Fire Administration</u> (USFA) is an entity of the FEMA. USFA supports and strengthens fire and emergency medical services, engages in fire prevention and public education campaigns, conducts research, collects data, promotes community risk reduction, and provides funding and grants to support fire departments and EMS agencies. USFA provides WUI information, links, and resources related to <u>fire-adapted communities</u>, <u>WUI data</u>, CWPP planning guidance, and more.
- The <u>US Forest Service</u> (USFS) is an agency of the U.S. Department of Agriculture. The USFS manages the National Forest System, provides fire management and response, and helps communities, state, local and tribal governments, forest industries, and private forest landowners through assistance, research, programs, funding and grants, and other forms of support. The USFS provides research and technical publications, data, articles, and other information on the WUI and WUI mitigation. For example, the USFS tracks <u>WUI growth trends</u>, provides resources and links related to <u>fire adapted communities</u>, national datasets on wildfire risk to communities, and more.

## **Comparative Analysis**

This section features three matrices to compare and analyze each of the three categories described in the previous section:

- Table 1. Comparison of Model WUI Codes and Standards with Washington State Requirements
- Table 2. Comparison of National and State Voluntary WUI Mitigation Programs
- Table 3: Comparison of National WUI Mitigation Guidance for Homes and Communities

Distinguishing between these three categories allows for a more accurate "apples to apples" comparison within each category to help inform decision making. Note that some information within each matrix may also vary based on what is most applicable or relevant to that category.

# **Table 1. Comparison of Model WUI Codes and Standards with Washington State Requirements**

	TABLE 1: Comparison of Model WUI Codes and Standards with Washington State Requirements								
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code			
General Information									
Publisher	National Fire Protection Association (NFPA)	National Fire Protection Association (NFPA)	National Fire Protection Association (NFPA)	International Code Council (ICC)	Washington State Legislature	Washington State Legislature			
Туре	Standards	Standards	Model code	Model code	State laws	State rules			
Resource Link(s)	NFPA 1140	NFPA 1142	NFPA 1	IWUIC	RCW <u>19.27.031</u> , <u>19.27.560</u> , <u>43.30.580</u>	WAC Chapters 51-55			
Accessibility	Free online access but requires log in to NFPA Link; subscription provides additional access	Free online access but requires log in to NFPA Link; subscription provides additional access	Free online access but requires log in to NFPA Link; subscription provides additional access	Free for basic read-only access on ICC website; purchase required for additional access (redline and PDFs)	Free access online	Free access online			
Overview	Comprehensive standard that consolidates previous standards related to wildland fire, including professional qualifications, fire protection infrastructure for land development, wildland fire management, reducing structure ignition hazards from wildland fire	Identifies a method of determining the minimum water supply necessary for structural fire-fighting purposes in areas where it has been determined that there is no water or inadequate water for firefighting.	Provides a comprehensive, integrated approach to fire code regulation and hazard management. It addresses all the bases with extracts from and references to more than 130 NFPA codes and standards	Part of the I-Codes family; the IWUIC is a model code that establishes requirements for land use and the built environment within designated WUI areas using prescriptive and performance-based provisions	RCW 19.27.031 adopts portions of the IWUIC as specifically referenced in RCW 19.27.560 RCW 19.27.560 adopts technical provisions of the IWUIC by reference that focus on structure hardening and driveways RCW 43.30.580 requires the establishment of wildland urban interface areas, the development and administration of a grant program for the purposes of finding of fact and developing risk	WAC Chapters 51-55 implement the provisions of RCW 19.27 by adopting the IWUIC by reference with additions, deletions, and exceptions			

TABLE 1: Comparison of Model WUI Codes and Standards with Washington State Requirements								
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code		
					mapping, and the maintenance of hazard map and base-level wildfire risk map			
Publication date and update cycle	Current edition 2022; next edition: 2027	Current edition 2022; next edition: 2027	Current edition 2024; next edition: 2027	Current code is 2024; next code update: 2027	Online RCW is updated in early fall following the legislative session and at the end of the year if a ballot measure that changes the law passed at the general election	Regulations of executive branch agencies are issued by authority of statutes		
Where it's being used / how it's being applied	Widespread application nationally; NFPA standards are frequently referenced in the adoption of other codes (e.g. ICC and NFPA codes)	Widespread application nationally; NFPA standards are frequently referenced in the adoption of other codes (e.g. ICC and NFPA codes)	Widespread adoption of fire code by state agencies but limited or unknown adoption and enforcement of Chapter 17	Widespread application nationally (per ICC website: Adopted in nearly 200 jurisdictions and at state level for some states, typically with amendments)  Executive Order 13728 (2016) requires new federal buildings over 5,000 square feet in the WUI to comply with IWUIC.  FEMA assistance for rebuilds of public facilities in the WUI must comply with IWUIC.	Provisions will take effect upon completion of statewide wildfire hazard map and base- level wildfire risk map for each county	Required but implementation by local jurisdictions across Washington has not been evaluated as part of this analysis		
Scale(s)	Different portions of the standard apply to subdivisions and individual structures	Different portions of the standard apply to subdivisions and individual structures	Chapter 17 References NFPA 1140 and 1142 in which different portions of the standards apply	Different portions of the code apply to subdivisions and individual structures	RCW 19.27.560 focuses on the structure (and driveways); RCW 43.30.580 extends to the county, city or	Requirements focus on individual structures; defers to local requirements for subdivisions		

	TABLE 1: Comparison of Model WUI Codes and Standards with Washington State Requirements								
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code			
			to subdivisions and individual structures		town scale for the purposes of grant administration				
Applicability (new, existing construction)	New, including any changes or additions to existing development	New, including any changes or additions to existing development	New, including any changes or additions to existing development by reference to NFPA 1140 and NFPA 1142	New, including any changes or additions to existing development; some existing conditions could be retroactive	New	New, including any changes or additions to existing development; and existing conditions determined to be egregious hazards			
Intended user group(s)	Authority Having Jurisdiction	Authority Having Jurisdiction	Authority Having Jurisdiction	Authority Having Jurisdiction	All counties, cities and towns in WA	All counties, cities and towns in WA			
Mitigation Topics									
Structures / Buildings	5								
Hazard / Risk Assessments	24.3 Structure Ignition Zone only	NOT ADDRESSED	17.1.2 -17.1.9 REFERENCES NFPA 1140	502.1, 503.1 IWUIC utilizes a specific fire hazard severity rating approach to determine mitigation requirements	RCW 19.27.031 authorizes RCW 19.27.560 to reference specific parts of the IWUIC  RCW 19.27.560 utilizes RCW statewide hazard map and base-level wildfire risk map for each county of the state as per RCW 43.30.580	WAC 51-55-0302; 0502; 0800  Fire hazard severity class based on WUI designation as determined by state or local government  Fire Hazard Severity  Form provides alternative methodology to using Table 502.1			
Mitigation Plan / Fire Protection Plan	24.4, 24.5	NOT APPLICABLE	17.1.10, 17.1.11 REFERENCES NFPA 1140	405	NOT ADDRESSED	WAC 51-55-0700 Chapter 7			

	TABLE 1:	Comparison of Model W	/UI Codes and Standards	with Washington State F	Requirements	
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code
Construction Plan Documents and Review	25.1.2	NOT APPLICABLE	17.2 NO REFERENCE	106	NOT ADDRESSED	NOT ADDRESSED
Spark Arrestors (Chimneys and Flues)	25.8	NOT APPLICABLE	17.3.5.2.1.7 REFERENCES NFPA 1140	605	NOT ADDRESSED	NOT ADDRESSED
Roof design, assembly, materials	25.3	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	504.2, 505.2, 506.2, 507.1	RCW 19.27.560 (1)(a)(i)(A), (B), (C) REFERENCES specific parts of the IWUIC class 1 ignition- resistant construction	501.4 Roof covering 501.4.1 Roof valleys.
Vents	25.3	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	504.10, 505.10	NOT ADDRESSED	501.8 Vents
Gutters and Downspouts	25.3.2	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	504.4, 505.4	NOT ADDRESSED	NOT ADDRESSED
Eaves	25.3.4	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	504.3	NOT ADDRESSED	NOT ADDRESSED
Exterior Walls	25.6	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	504.5, 505.5	RCW 19.27.560 (1)(a)(ii)(A), (B), (C) (D), (E) REFERENCES specific parts of the IWUIC class 1 ignition- resistant construction	501.5 Exterior walls and projections other than decks
Exterior Doors and Openings	25.7	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	504.9 505.9	NOT ADDRESSED	501.7 Exterior glazing
Underfloor enclosure, areas	NOT ADDRESSED	NOT APPLICABLE	NOT ADDRESSED	504.6, 504.7.1, 505.6, 505.7.1, 505.11.1, 506.3	NOT ADDRESSED	504.12.1; 505.12.1 (detached structures only)

	TABLE 1:	Comparison of Model W	/UI Codes and Standards	with Washington State R	Requirements	
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code
Accessory Structures	25.1.3 25.9	NOT APPLICABLE	17.3.5.2.1.8 DEFERRED TO	504.11 505.11	NOT ADDRESSED	501.6 Decks and appendages
Defensible Space, Fuel Modification	26.2	NOT APPLICABLE	17.3.5.2 DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	603	NOT ADDRESSED	Chapter 7—Vegetation management plan
Ignition-Resistant Building Materials	25.2	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	503.2	NOT ADDRESSED	501.2 Objectives
Ignition-Resistant Building Construction	25.2	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	504, 505, 506, 507	NOT ADDRESSED	501.2 Objectives
Maintenance (Defensible Space)	24.5	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	604	NOT ADDRESSED	Chapter 7—Vegetation management plan
Mobile and Manufactured Homes	25.10	NOT APPLICABLE	17.3.5.2.1.9 DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	NOT ADDRESSED	NOT ADDRESSED	101.2 Scope
Projections, Overhangs	25.4, 25.5, 25.6.3	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	504.7, 505.7	Sec RCW 19.27.560 (1)(a)(iii)(A)(I), (II), III), (B) REFERENCES specific parts of the IWUIC class 1 ignition- resistant construction	504.12 Detached accessory structures; 504.12.1 Underfloor areas
Structure separation, Location (Accessory Structures)	12.2, 25.1.3	NOT APPLICABLE	17.3.5.2.1.8	504.11 505.11	NOT ADDRESSED	505.12 Detached accessory structures.
Sprinklers	14.1	NOT APPLICABLE	NOT ADDRESSED	602	NOT ADDRESSED	602.1 General. An approved automatic sprinkler system shall be installed when required

	TABLE 1:	Comparison of Model W	/UI Codes and Standards	with Washington State F	Requirements	
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code
						by the authority having jurisdiction.
Access						
Access to Buildings for Apparatus	12.1	NOT APPLICABLE	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED
Driveways	Chapter 12 (see note)	NOT APPLICABLE	17.3.7	403.2	RCW 19.27.560 (1)(b) REFERENCES specific parts of the IWUIC class 1 ignition- resistant construction	403.2.4. Turnarounds and turnouts
Width	11.2.3	NOT APPLICABLE	17.3.7	403.3	NOT ADDRESSED	403.3. Fire apparatus access road- defers to locally adopted street, road, and access standards
Bridges and Culverts	11.2.10	NOT APPLICABLE	17.3.7	403.2.6	NOT ADDRESSED	403.3. Fire apparatus access road- defers to locally adopted street, road, and access standards
Cul-de-sacs	11.2.17.2 11.2.17.3	NOT APPLICABLE	17.3.7	NOT ADDRESSED	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Dead Ends	11.2.17 11.2.18.8	NOT APPLICABLE	17.3.7	403.3	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Easements / Right of Way	11.2.1	NOT APPLICABLE	17.3.7; 17.3.5.3	NOT ADDRESSED	NOT ADDRESSED	403.3. Fire apparatus access road defers to

	TABLE 1:	Comparison of Model W	/UI Codes and Standards	with Washington State F	Requirements	
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code
	11.2.12					locally adopted street, road, and access standards
Fire lanes / fire apparatus access road	11.3	NOT APPLICABLE	NOT ADDRESSED	403.3	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Grades	11.2.16	NOT APPLICABLE	17.3.7	403.7	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Intersections	11.2.5 11.2.8	NOT APPLICABLE	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Number of Means of Access	11.1.4	NOT APPLICABLE	17.3.7 (see note)	NOT ADDRESSED	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Obstructions	NOT ADDRESSED	NOT APPLICABLE	17.3.7.3	A103.3.1	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Operation of vehicles (motors, scooters) and aircraft in	NOT ADDRESSED	NOT APPLICABLE	17.3.7.4	A103.4	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards

	TABLE 1:	Comparison of Model W	VUI Codes and Standards	with Washington State F	Requirements	
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code
WUI/hazardous fire areas						
Parking / Parking lots	11.4	NOT APPLICABLE	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Restricted Access/ Entry	11.1.3	NOT APPLICABLE	17.3.3	403.1, A103.1	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Signage (addresses, street names)	11.2.18; Chapter 13	NOT APPLICABLE	17.3.7	403.4, 403.6, A103.2.1 A108.4	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Speed bumps/ Traffic calming	11.2.13; 11.2.14	NOT APPLICABLE	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Surface	11.2.2	NOT APPLICABLE	17.3.7	403.3	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Traffic signals	11.2.9	NOT APPLICABLE	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards

	TABLE 1:	Comparison of Model V	VUI Codes and Standards	with Washington State F	Requirements	
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code
Trespassing	NOT ADDRESSED	NOT APPLICABLE	NOT ADDRESSED	A103.2	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Turning radii (for roads)	11.2.7	NOT APPLICABLE	NOT ADDRESSED	403.3	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Turnarounds (for roads)	11.2.17.1	NOT APPLICABLE	17.3.7	403.3	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Turnouts, Emergency pull-offs	11.2.15	NOT APPLICABLE	17.3.7	403.2.5	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Vehicle load limits	11.2.11	NOT APPLICABLE	NOT ADDRESSED	403.2.6	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Vertical Clearance	11.2.6	NOT APPLICABLE	17.3.7	403.3	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards

	TABLE 1	: Comparison of Model V	VUI Codes and Standards	with Washington State F	Requirements	
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code
Vegetation clearance along roadways	11.2.12	NOT APPLICABLE	17.3.5.3	NOT ADDRESSED	NOT ADDRESSED	403.3. Fire apparatus access road defers to locally adopted street, road, and access standards
Water supply and st	torage					
Approved Water Sources	15.1	7.1, B.2, B.3	NOT ADDRESSED	404.2	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Access to Water Sources	NOT ADDRESSED	7.5, B.2, B.3	NOT ADDRESSED	404.3.1, 404.3.2	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Adequate Water Supply	15.1, 15.2	7.1	NOT ADDRESSED	404.5	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Hydrants	15.1, 15.3	Chapter 8	NOT ADDRESSED	404.4	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Municipal-Type Water System	15.3	Annex D	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Alternative Water Supply	NOT ADDRESSED	Annex B	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Cisterns	NOT ADDRESSED	B.4	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance

	TABLE 1:	Comparison of Model V	VUI Codes and Standards	with Washington State F	Requirements	
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code
						requirements to locally adopted standards
Draft Sites	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.3	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Mobile Water Supply Apparatus	NOT ADDRESSED	Annex C	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Mobile Water Supply Training	NOT ADDRESSED	7.6	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Ponds	NOT ADDRESSED	B.7	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Swimming Pools	NOT ADDRESSED	B6	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Underground Storage Tanks	NOT ADDRESSED	B.5	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Wells	NOT ADDRESSED	B.9	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards
Water supply location	11.2.18.7	7.1, 7.3	NOT ADDRESSED	404.7, 404.8	NOT ADDRESSED	404.1. defers water supply and maintenance

	TABLE 1: Comparison of Model WUI Codes and Standards with Washington State Requirements							
	NFPA 1140 Standard for Wildland Fire Protection	NFPA 1142 Standards on Water Supplies for Suburban and Rural Firefighting	NFPA 1 Fire Code, Chapter 17 Wildland Urban Interface	International Wildland- Urban Interface Code	Revised Code of Washington (RCW) – WUI Code	Washington Administrative Code (WAC) – WUI Code		
identification; obstructions	15.1.4					requirements to locally adopted standards		
Power supplies	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.10.3, A107.5	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards		
Water storage and pumping facilities (fuel modification area)	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.10.2, A107.3, A107.4	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards		
Records	NOT ADDRESSED	7.7	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards		
Testing and Maintenance	15.4	7.1.3, 8.7	NOT ADDRESSED	404.9	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards		
Use Agreements	NOT ADDRESSED	7.2	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	404.1. defers water supply and maintenance requirements to locally adopted standards		
Land Uses								
Apiaries	NOT ADDRESSED	NOT APPLICABLE	17.3.4.5	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED		
Clearance from ignition sources	NOT ADDRESSED	NOT APPLICABLE	17.3.5.2.1.11.1	A104.3	NOT ADDRESSED	NOT ADDRESSED		
Combustible materials (storage)	NOT ADDRESSED	NOT APPLICABLE	17.3.5.2.1.11.5	A105.4	NOT ADDRESSED	NOT ADDRESSED		
Dumping – waste material	NOT ADDRESSED	NOT APPLICABLE	NOT ADDRESSED	A106.1	NOT ADDRESSED	NOT ADDRESSED		

	TABLE 1: Comparison of Model WUI Codes and Standards with Washington State Requirements							
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Dumping – ashes and coals	NOT ADDRESSED	NOT APPLICABLE	NOT ADDRESSED	A106.2	NOT ADDRESSED	NOT ADDRESSED		
Electrical Transmission Lines	NOT ADDRESSED	NOT APPLICABLE	17.3.5.1	A104.10	NOT ADDRESSED	NOT ADDRESSED		
Equipment, sources of ignition	16.1, 16.2	NOT APPLICABLE	17.3.5.2.1.11.1	A104.5	NOT ADDRESSED	NOT ADDRESSED		
Explosives and Blasting	NOT ADDRESSED	NOT APPLICABLE	17.3.4.3	A105.3	NOT ADDRESSED	NOT ADDRESSED		
Fire Protection During Construction	16.1, 16.2	NOT APPLICABLE	NOT ADDRESSED	A104.5	NOT ADDRESSED	NOT ADDRESSED		
Firewood	25.12	NOT APPLICABLE	DEFERRED TO NFPA 1140 IN 17.1.10, 17.1.11	607	NOT ADDRESSED	NOT ADDRESSED		
Fireworks	NOT ADDRESSED	NOT APPLICABLE	17.3.4.4	A104.6	NOT ADDRESSED	NOT ADDRESSED		
Hazardous materials (storage)	NOT ADDRESSED	NOT APPLICABLE	17.3.5.2.1.11.5	A105.2	NOT ADDRESSED	NOT ADDRESSED		
Incinerators, outdoor fireplaces, grills	25.12	NOT APPLICABLE	17.3.5.2.1.11.2 17.3.5.2.1.11.3	A104.8	NOT ADDRESSED	NOT ADDRESSED		
Liquefied Petroleum	25.12	NOT APPLICABLE	NOT ADDRESSED	606	NOT ADDRESSED	NOT ADDRESSED		
Outdoor fires	NOT ADDRESSED	NOT APPLICABLE	NOT ADDRESSED	A104.7	NOT ADDRESSED	NOT ADDRESSED		
Smoking	NOT ADDRESSED	NOT APPLICABLE	17.3.4.1	A104.4	NOT ADDRESSED	NOT ADDRESSED		
Temporary Uses (fairs etc.)	NOT ADDRESSED	NOT APPLICABLE	NOT ADDRESSED	A108	NOT ADDRESSED	NOT ADDRESSED		
Tracer Bullets, Chargers, Rockets	NOT ADDRESSED	NOT APPLICABLE	17.3.4.2	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED		
Reckless behavior	NOT ADDRESSED	NOT APPLICABLE	NOT ADDRESSED	A104.9	NOT ADDRESSED	NOT ADDRESSED		

	TABLE 1: Comparison of Model WUI Codes and Standards with Washington State Requirements						
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Vehicle Parking Areas (ignition source)	25.11	NOT APPLICABLE	17.3.5.2.1.10	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	
Fire Safety Equipm	ent						
Tampering	NOT ADDRESSED	NOT APPLICABLE	17.3.8	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	
Marking / identification	11.2.18.6, 11.2.18.7	NOT APPLICABLE	17.1.10.7	403.5	NOT ADDRESSED	NOT ADDRESSED	
Maintenance (equipment)	NOT ADDRESSED	NOT APPLICABLE	17.3.9	NOT ADDRESSED	NOT ADDRESSED	NOT ADDRESSED	
Methodology							
Development Process	Developed by a Technical Committee through consensus- based process	Developed by a Technical Committee through consensus- based process	Developed by a Technical Committee through consensus- based process	Developed by a Code Development Committee, hearings, public comment, and consensus-based process	Laws are passed by the State Legislature and signed by the Governor or enacted through the voter initiative process	Developed through a formal rulemaking process mandated by Washington's Administrative Procedure Act	
Scientific Basis	Subject Matter Expert input (Technical Committee), Standardized testing (ASTM, UL) other NFPA Standards, USDA Forest Service and IBHS research	Subject Matter Expert input (Technical Committee), Standardized testing (ASTM, UL) other NFPA Standards	Subject Matter Expert input (Technical Committee), Standardized testing (ASTM, UL) other NFPA Standards	Code development committees; Reference to Standardized testing (ASTM, UL) and NFPA Standards	Reliance on IWUIC finding of fact for the adopted parts of class 1 ignition	Reliance on IWUIC finding of fact	

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Other Topics								
Potential Issues, Conflicts, or Limitations	Standard that must be adopted and integrated into local codes; upgrades to meet road requirements outside of current development may be cost-prohibitive or limited by land ownership; does not account for diversity and dynamics of local site conditions	Could significantly limit some new development based on required water supply	Very limited as a code in directly addressing the WUI; relies heavily on referencing other NFPA codes and standards	Typically adopted with numerous amendments to implement at local or state level; does not account for diversity and dynamics of local site conditions	Hazard map is currently not completed	Does not adopt significant portions of IWUIC leaving gaps; for example, defers to local water supply and access requirements which may not meet the minimum industry standard; does not account for diversity and dynamics of local site conditions; does not address Defensible Space		
Opportunities	NFPA Standards, or portions of standards, are often easily referenced in code or regulations	NFPA Standards, or portions of standards are often easily referenced in code or regulations	Pre-structured as a code; minimal updates with changes to NFPA Standards as they are referenced	Pre-structured as a code and aligned with other I- Codes	Allows for the local jurisdiction to undertake geographically specific mapping	Allows for flexibility in local adoption		

# **Table 2. Comparison of National and State Voluntary WUI Mitigation Programs**

	TABLE 2. Comparison of National and State Voluntary WUI Mitigation Programs						
	Wildfire Ready Neighbors	Wildfire Prepared Home	Firewise USA	Wildfire Prepared Neighborhood			
General Information							
Administrator	WA Department of Natural Resources (DNR) in <u>partnership</u> with local entities	Insurance Institute for Business and Home Safety (IBHS)	National Fire Protection Association (NFPA) and co-sponsored by the US Forest Service, Department of the Interior, National Association of State Foresters	Insurance Institute for Business and Home Safety (IBHS)			
Program Link	Wildfire Ready Neighbors	Wildfire Prepared Home	Firewise USA	Wildfire Prepared Neighborhood			
Overview	State voluntary educational program to engage residents in taking action to reduce wildfire risk and increase preparedness at the parcel scale; includes a SIZ assessment conducted by a trained wildfire expert	Voluntary designation program with specified technical requirements to achieve one of two designations at the parcel scale; includes a home self-assessment and verification process	National voluntary recognition program to encourage neighbors to work together on wildfire risk reduction based on Firewise USA program criteria that includes a neighborhood assessment, plan, and documented reporting information	Voluntary pilot designation program being launched for eligible neighborhoods that meet specific technical requirements at the parcel and neighborhood scales established by IBHS			
Where it's being implemented	Across Washington (available for local jurisdictions to participate)	Available in California and Oregon	Nationally; thousands of <u>sites</u> in good standing are recognized across the U.S., including over 100 in Washington	One example of a <u>neighborhood</u> in California; IBHS is seeking six pilot neighborhoods in Oregon or California			
Scale(s)	Parcel Scale / Structure Ignition Zone and may include larger parcels	Parcel Scale / Structure Ignition Zone	Neighborhood, subdivision, small community	Neighborhood as defined in technical standard			
Intended Outcomes	Completion of mitigation actions based on a Wildfire Ready Plan and consultation to increase resiliency of homes and properties	Completion of required mitigation activities to receive a designation (certificate) from IBHS	Completion of required program activities to receive Firewise USA recognition	Completion of required mitigation activities to receive a designation from IBHS			
Launch Date	Launched as a pilot program in 2021 in Spokane, Okanogan, Chelan Counties and has since been expanded across the State	Launched in California with designations in 2022	Developed by NFPA, US Forest Service and other partners in 2002 with 12 initial pilot sites around the country	Currently being launched			

	TABLE 2. Comparison of National and State Voluntary WUI Mitigation Programs						
	Wildfire Ready Neighbors	Wildfire Prepared Home	Firewise USA	Wildfire Prepared Neighborhood			
Program Requirements							
Eligibility	Eligible property owners in Washington (located in participating local jurisdictions)	Property owners in California or Oregon	Sites in the USA; sites must be between 8 and 2,500 dwelling units	Neighborhoods in California or Oregon; 90% of structures within defined neighborhood must be separated by a minimum distance greater than 10 ft and less than or equal to 100 ft			
Application Process	Eligible applicants request an assessment through the website or calls program number	Eligible applicant creates an account and applies on IBHS website; pays fee	Resident leader creates an account and applies online through Firewise Portal	Eligible neighborhoods interested in pilot program apply online			
Assessment Process	Parcel assessment conducted in- person by a trained wildfire expert	Conducted by the homeowner	Community wildfire risk assessment conducted by Firewise board / committee and may include community members or experts	Not available			
Action Plan or Report	Assessor creates report and gives to homeowner	Homeowner is advised to follow program home checklist	Three-year action plans are created by Firewise board / committee	Not available			
Requirements to Complete Work	None	Must submit photos	Must document activities and investments	Not available			
Verification Process	No follow up is required unless part of a grant program	Evaluated by a 3 <sup>rd</sup> party in-person evaluation	Firewise state liaisons approve applications and final processing is completed by NFPA	Not available			
Renewal	No follow up is required unless part of a grant program	Requires annual review by homeowner or 3 <sup>rd</sup> party and a recertification every 3 years	Requires annual renewal by reporting activity; community assessment must be updated every five years	Not available			
Vulnerabilities Addressed							
Structure	Detailed assessment that provides a descriptive narrative and notes on:  Roof condition and cleanliness  Vent types (ridge, gable, eaves/soffit, crawlspace  Gutter (material and cleanliness	Base Level (Required):     Class A fire rated roof covering with non-combustible bird block (if applicable) and free of debris     Noncombustible gutters and downspouts	General guidance for all homeowners on:  Roof condition and cleanliness  Vent types (ridge, gable, eaves/soffit, crawlspace  Gutter (material and cleanliness	Homes must meet the IBHS Wildfire Prepared Home Plus designation and additional requirements outlined in the Neighborhood Technical Standard and the How to Prepare My Home Checklist			

	· · · · · · · · · · · · · · · · · · ·	on of National and State Voluntary	WUI Mitigation Programs	
Wildfire	Ready Neighbors	Wildfire Prepared Home	Firewise USA	Wildfire Prepared Neighborhood
and  Doc con Sidi spa Dec con	ndow and screen materials glazing or and screen materials and dition ng material, condition and cing from grade k/Patio material and dition- storage of materials or under	<ul> <li>Corrosion-resistant vents conforming with ASTM E2886, or Noncombustible corrosion-resistant mesh with openings not to exceed 1/8-inch in diameter functional forced exhaust vents</li> <li>6 inches from grade non-combustible siding</li> <li>Fully enclosed to the ground with noncombustible corrosion-resistant mesh with openings not to exceed 1/8 inch in diameter. Exception: Complete enclosure shall not be required where underfloor areas are elevated more than 4 feet above the ground. In such a case, a minimum of 6 inches of noncombustible material or metal flashing shall be extended vertically from grade on the exterior of columns and supporting wall.</li> <li>Attached patio, deck and overhead structure – 5-foot noncombustible zone, and specific detailed requirements for top of deck, overhead structures and underneath deck</li> <li>Plus Level:</li> </ul>	Window and screen materials and glazing     Door and screen materials and condition     Siding material, condition and spacing from grade     Deck/Patio material and condition- storage of materials on or under	
		Eaves- Noncombustible		
		materials, or 1-hour fire-		

	TABLE 2. Comparis	son of National and State Voluntary	WUI Mitigation Programs	
	Wildfire Ready Neighbors	Wildfire Prepared Home	Firewise USA	Wildfire Prepared Neighborhood
Zone 1 Immediate	Detailed assessment that provides a descriptive narrative and notes on:  Fence material and condition 0-5 feet Accessory Structures Immediate zone condition Allows for fire resistant vegetation	or 2-inch nominal dimension lumber  Exterior Wall Coverings: Noncombustible building material  Exterior Glass- Multipaned glass with at least two tempered panes, or 20-minute fire-resistance rating when tested in accordance with NFPA 257, or Glass blocks (windows only), and operable skylights protected by a noncombustible 1/8-inch mesh screen  Appendages and projections-Noncombustible building material  Fences and Retaining Walls- no combustible parallel fences  Base Level (Required):  No organic or combustible material allowed including trees of any species or size  Noncombustible fence and retaining walls within 5 feet of primary dwelling unit and attachments	General guidance for all homeowners on:  Cleaning roofs and gutters of dead leaves, debris and pine needles that could catch embers  Replacing or repairing any loose or missing shingles or roof tiles to prevent ember penetration  Reducing embers that could pass through vents in the eaves by installing 1/8-inch metal mesh screening.  Cleaning debris from exterior attic vents and install 1/8-inch metal mesh screening to reduce embers.	Homes must meet the IBHS Wildfire Prepared Home Plus designation and additional requirements outlined in the Neighborhood Technical Standard and the How to Prepare My Home Checklist

	TABLE 2. Comparis	son of National and State Voluntary	WUI Mitigation Programs	
	Wildfire Ready Neighbors	Wildfire Prepared Home	Firewise USA	Wildfire Prepared Neighborhood
Zone 2 Intermediate	Detailed assessment that provides a descriptive narrative and notes on: Zone characteristics  slope topography vegetation fire resistance outbuildings propane tank above ground electrical lines aspect)	Base Level (Required):  Trees 6 ft vertical clearance from ground, 10 feet horizontal clearance between edges of adjacent tree canopies and stove pipe outlets  Shrubs (any species) minimum horizontal spacing of twice the vertical height to a maximum of 10 feet; maximum 10-foot diameter of grouped shrubs; no shrubs under trees  Grass less than 4 inches; exception on slopes less than	<ul> <li>Repairing or replacing damaged or loose window screens and any broken windows</li> <li>Screening or boxing-in areas below patios and decks with wire mesh to prevent debris and combustible materials from accumulating</li> <li>Moving any flammable material away from wall exteriors – mulch, flammable plants, leaves and needles, firewood piles – anything that can burn</li> <li>Removing anything stored underneath decks or porches.</li> <li>General guidance for all homeowners on:</li> <li>Clearance of vegetation from under large stationary propane tanks</li> <li>Creation of fuel breaks with driveways, walkways/paths, patios, and decks</li> <li>Keeping lawns and native grasses mowed to a height of four inches</li> <li>Removing ladder fuels (vegetation under trees) so a surface fire cannot reach the</li> </ul>	Homes must meet the IBHS Wildfire Prepared Home Plus designation and additional requirements outlined in the Neighborhood Technical Standard and the How to Prepare My Home Checklist
		<ul> <li>18 inches</li> <li>Firewood 30 feet from home unless in an approved accessory structure</li> <li>Shall have no more than 3 detached accessory structures and ADUs with a footprint greater than or equal to 15</li> </ul>	<ul> <li>crowns</li> <li>Pruning trees up to six to ten feet from the ground; for shorter trees do not exceed 1/3 of the overall tree height</li> <li>Spacing trees to have a minimum of eighteen feet between crowns with the</li> </ul>	

	TABLE 2. Comparis	son of National and State Voluntary	/ WUI Mitigation Programs	
	Wildfire Ready Neighbors	Wildfire Prepared Home	Firewise USA	Wildfire Prepared Neighborhood
		square feet located between 10-30 feet of the primary dwelling unit and attachments	distance increasing with the percentage of slope  Tree placement planned to ensure the mature canopy is no closer than ten feet to the edge of the structure  Tree and shrubs in this zone should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscape	
Zone 3 Extended	Detailed assessment that provides a descriptive narrative and notes on:	NOT ADDRESSED	<ul> <li>Disposal of heavy accumulations of ground litter/debris</li> <li>Removal of dead plants and tree material</li> <li>Removal of small conifers growing between mature trees</li> <li>Removal of vegetation adjacent to storage sheds or other outbuildings within this area</li> <li>Trees 30 to 60 feet from the home should have at least 12 feet between canopy tops (with a general caveat to be aware of slope and difference in species)</li> <li>Trees 60 to 100 feet from the home should have at least 6 feet between the canopy tops (with a general caveat to be aware of slope and difference in species)</li> </ul>	NOT ADDRESSED
Scientific Methodology				
Basis for program requirements	Assessments and site-specific guidance are based on NFPA	Requirements are described in the How to Prepare My Home Checklist	Program concepts are based on home ignition zone research by Dr.	Requirements are based on technical standards developed by

TABLE 2. Comparison of National and State Voluntary WUI Mitigation Programs						
	Wildfire Ready Neighbors	Wildfire Prepared Home	Firewise USA	Wildfire Prepared Neighborhood		
	Standards, Firewise, IBHS and other technical guidance and fact sheets on how structures ignite	and based on technical standards developed by IBHS (based on research from IBHS <u>Suburban</u> <u>Wildfire Adaptation Roadmaps</u> )	Jack Cohen, social science models on behavior, and similar recognition programs (Tree City USA)	IBHS Wildfire Prepared Neighborhood Technical Working Group		
Other Program Consideration	ns					
Benefits	Already established in WA with significant program infrastructure across the State; free / no barriers for participating in program; includes in-person assessment from a trained wildfire professional; opportunity for homeowner understanding and behavioral change.	Provides a designation based on a specific set of requirements; Recertification process helps ensure maintenance and ongoing mitigation.	Already established in WA across multiple communities; encourages work across a community or neighborhood and provides recognition. Some insurance providers are offering discounts in some jurisdictions.	Provides a designation based on a specific set of requirements; other information not yet available.		
Associated Costs, Fees, Investments	No application fee; mitigation costs vary depending on activities undertaken.	\$125 application fee, either \$25 or \$100 for annual renewal; mitigation costs vary depending on activities undertaken.	Each site is required to annually invest the equivalent of one volunteer hour per dwelling unit in wildfire risk reduction actions.	Requires same costs as Wildfire Prepared Home Plus and any other applicable costs (information not available).		
Potential Limitations, Issues or Conflicts	No follow up mechanism to ensure work is completed and maintenance is ongoing. No confirmed insurance benefit. Homeowner may select the work they complete, leaving potential gaps in mitigation.	No exceptions, fixed approach; requires technical understanding by homeowner for self-intake; may conflict with WA state tree preservation and conservation goals; may also conflict with fire behavior science and create significant additional short- and long-term financial burden on property owners (application fee, technical tree removal costs, renewal fee, increased energy costs).  Does not provide opportunity for homeowner engagement for long-term behavioral change. No confirmed insurance benefit.	Does not measure work being completed. No specific risk reduction standards to ensure a specific outcome is achieved. Relies on voluntary actions from homeowners.	Defines new terms (external fuel sector, neighborhood flame zone) contrary to industry standard and not used in other codes or standards; limited applicability for a range of diverse neighborhood development patterns; may conflict with WA state tree preservation and conservation goals; specific structure density requirements will not apply to all types of neighborhoods; may conflict with energy conservation objectives. No confirmed insurance benefit.		

**Table 3: Comparison of National WUI Mitigation Guidance for Homes and Communities** 

	TABLE 3: Comparison of National WUI Mitigation Guidance for Homes and Communities						
	Planning the WUI	Home Builder's Guide	Hazard Mitigation Methodology	WUI Standards / Field Guide	WUI Virtual Handbook		
General Information							
Publisher	American Planning Association (APA)	Federal Emergency Management Agency (FEMA)	National Institute of Standards and Technology (NIST)	National Wildfire Coordinating Group Wildland Urban Interface Mitigation Committee (NWCG WUIMC)	Society of Fire Protection Engineers (SFPE) and SFPE Foundation		
Туре	Downloadable Report	Downloadable Fact Sheets	Online Tool and Downloadable Publication	Downloadable Publications	Downloadable Handbook and Online Tool		
Resource Link(s)	PAS 594 Planning the Wildland-Urban Interface	FEMA P-737 Home Builder's Guide to Construction in Wildfire Zones	Hazard Mitigation Methodology with accompanying NIST Technical Note 2205	PMS 052 NWCG Standards for Mitigation in the Wildland Urban Interface and PMS 053 NWCG Wildland Urban Interface Mitigation Field Guide	WUI Virtual Handbook for Fire Risk Assessment & Mitigation		
Publication Date	2019	2008	(No date)	2023; 2025	2025		
Overview	Publication that provides indepth explanations of the WUI, wildfire hazard and risk, and explains how different land use plans and regulations can be used to reduce wildfire risk across communities.	Series of 17 Fact Sheets with information about wildfire behavior and recommendations for building design and construction methods to reduce wildfire risk to structure and infrastructure in the WUI.	Outlines structure and parcel hardening measures across different WUI types based on structure density and other local conditions to reduce structural losses in WUI fires and prioritize mitigation efforts to reduce overall costs.	Provides overview of the WUI and mitigation concepts and a series of mitigation standards or recommended practices for addressing wildfire at structure, parcel and community scales. Standards are compiled from other sources.	Updated edition that has detailed guidance for structure, parcel, and community scale mitigation that matches potential vulnerabilities and challenges with wildfire mitigation solutions.		
Primary Audiences	Planners and other professionals interested in WUI planning tools, best practices, and guidance (developers, architects, land managers, etc.)	Home builders, developers, and WUI mitigation practitioners	WUI mitigation practitioners	WUI mitigation practitioners and others interested in WUI mitigation	Fire protection engineers, fire departments, developers, planners, decision makers		
Scale(s) Addressed	Multiple – structure, parcel, neighborhood, community	Primarily focuses on structure and parcel but includes information on utilities and infrastructure	Primarily focuses on structure and parcel but includes mitigation considerations for	Primarily focuses on structure and parcel but includes mitigation considerations for	Multiple – structure, parcel, neighborhood, community		

TABLE 3: Comparison of National WUI Mitigation Guidance for Homes and Communities							
	Planning the WUI	Home Builder's Guide	Hazard Mitigation Methodology	WUI Standards / Field Guide	WUI Virtual Handbook		
			neighborhoods and communities	neighborhoods and communities			
Mitigation Topics (X = topi	c is addressed)						
Buildings / Structures	X	X	Х	Х	X		
Landscaping & Defensible Space	Х	Х	Х	Х	х		
Fences and Walls	X	X	Х	Х	X		
Structure Density	X	-	Х	-	X		
Hazardous Land Uses	X	-	-	-	X		
Infrastructure	Х	Х	-	-	X		
Multi hazard	X	-	-	-	X		
Access	X	X	-	-	X		
Water Supply	X	X	-	-	X		
Community Vegetation / Fuels	Х	Х	Х	Х	х		
Open Space and Parks	X	-	-	-	X		
Utilities		X	-	-	X		
Siting and Location Considerations	Х	Х	-	-	х		
<b>Guidance on Mitigation To</b>	ols (X = topic is addressed)						
Hazard and Risk Assessments	Х	-	Х	Х	х		
WUI Definition	X	-	X	X	-		
Land Use Codes and Regulations	X	-	-	-	х		
WUI Standards	Х	-	Х	X	X		
WUI Codes and Regulations	Х	-	Х	Х	Х		
Building / Fire Codes and Regulations	Х	-	Х	Х	Х		
Comprehensive Plans	Х	-	-	-	X		
Other Land Use and Community Plans	Х	-	-	-	Х		

TABLE 3: Comparison of National WUI Mitigation Guidance for Homes and Communities								
	Planning the WUI	Home Builder's Guide	Hazard Mitigation Methodology	WUI Standards / Field Guide	WUI Virtual Handbook			
Hazard Mitigation Plans	X	-	-	X	X			
Community Wildfire Protection Plans	Х			X	Х			
Other Considerations								
Benefits of Guidance	National publication written by planners and fire experts that integrates land use planning and wildfire mitigation best practices for the WUI.	FEMA has previously recommended that Hazard Mitigation Grant Program (HMGP) applicants consult P-737 design guidance for defensible space and ignition-resistant construction projects.	Helps address challenges for existing communities with solutions that helps minimize costs for mitigation.	Written in accessible language for a range of mitigation expertise levels.	Newly released edition provides a comprehensive approach to wildfire mitigation with many considerations for new and existing neighborhoods and communities.			
Potential Limitations	May require a general understanding of land use planning tools and frameworks to maximize guidance.	Materials are dated and may not incorporate latest advances in understanding WUI ignitions.	Some aspects of the methodology are highly technical and may be inaccessible to some audiences; WUI densities may not align with local jurisdictional definitions of land use densities and lead to some confusion.	Standards are compiled based on other sources but some references to NFPA standards and the IWUIC are dated.	Some aspects of guidance are highly technical and may be inaccessible to audiences with less familiarity of the WUI and mitigation concepts.			

## **Key Findings**

An analysis of the three matrices (Tables 1, 2, 3) reveals the following key findings:

- 1. Some terms are inconsistently defined or applied. There is a range of use of key terms related to wildfire mitigation which could lead to confusion or result in potential conflicts during implementation. For example:
  - Some terms that already have widely accepted definitions are being re-defined with completely different meanings.
  - Other terms may be misapplied, such as "Firewise" which is the name of a national recognition program but a not a descriptive mitigation outcome.
  - The terms hazard and risk are used differently depending on the resource and who is defining or using the term.
  - The terms standards and codes are used differently depending on the source.
  - In addition, some guidance or technical standards (e.g., NIST, IBHS) introduce new mitigation terms or concepts that are not used elsewhere. If not well understood by the user, this could further increase confusion or inhibit effective implementation.
- 2. There are gaps in what is being regulated in Washington. These gaps occur at different scales and regarding potential vulnerabilities. For example, the State WUI Code does not include many portions of the IWUIC; as a result, there are no state minimum requirements for important mitigation topics such as water supply, access and egress and defensible space. This increases reliance on local jurisdictions to supplement the State code with local ordinances and rely on voluntary efforts, both of which could result in inconsistencies in the application of wildfire risk reduction requirements across the State.
- 3. No single code, standard, program, or guidance achieves all desired mitigation outcomes. Each of the categories and types of code, standard, program, or resources analyzed has potential benefits but also limitations. For example, some programs excel in home hardening standards but do not address larger parcels which require more tailored vegetation management to address hazardous fuels in Zone 3. In addition, some codes and standards may have robust requirements for assessing the Structure Ignition Zone but do not apply to the neighborhood scale, or do not incorporate flexibility for local conditions. Relying on one approach (code, program, guidance) will not result in comprehensive outcomes for mitigation requirements.
- 4. Some mitigation codes, standards, programs, or guidance could result in potential conflicts with other state and local requirements. Some mitigation requirements may not be appropriate for the entire state. For example, prescriptive requirements for defensible space—such as the elimination of all vegetation in the first five feet including mature trees, specific tree spacing distances, or neighborhood scale vegetation management that does not require the expertise of a trained professional—may conflict with climate risk reduction, tree

- preservation, or conservation goals. Without flexibility in application, conflicts may be exacerbated.
- 5. There are differences in the level interaction with trained professionals. Depending on the mitigation category and type, there are differences with the level of interaction with trained professionals. Some mitigation programs call for self-assessment with follow up verification; others have guidance on assessments but do not require a trained professional to conduct the assessment but have strict requirements; and others have full engagement between a trained professional and a property owner but are completely voluntary. Initiatives with complete reliance on property owner self-reliance with little involvement of trained professionals typically have a low success rate.
- 6. There is a limited understanding of success with some programs, requirements, or guidance. There are several programs or resources that have recently been developed or launched—many of them highlighted in this report. In addition, some codes, standards, or other programs and resources have been available for a given length of time, but the metrics may not have been appropriate for measuring effectiveness risk reduction, and usage has not been consistently tracked to understand measurable outcomes. As a result, it can be difficult to determine the success of each category and type unless clear data is available on the tool's results.

## **Appendix A: Key Terms and Definitions**

**Act:** a bill adopted by the Legislature. <u>Source: Washington State Legislature Glossary of Legislative Terms</u>

**Best Practice:** commercial or professional procedures that are accepted or prescribed as being correct or most effective. *Source: Oxford Languages Dictionary* 

**Certification:** a set of required actions based on a defined set of criteria that results in a consistent outcome, typically with an inspection or verification process to confirm achieved results. Examples include IBHS Wildfire Prepared Home.

**Code:** a set of regulations, rules, and guidelines established by a recognized authority or government agency. In the context of engineering, construction, and related industries, a code (often referred to as a building code or safety code) is designed to ensure the safety, integrity, and functionality of buildings, structures, systems, and processes. They typically define minimum requirements for design, construction, maintenance, and use of buildings or facilities. Codes are legally enforceable, meaning that compliance with them is mandatory, and failure to adhere to the code may result in penalties or restrictions. *Source: University of Louisville William F. Ekstrom Library* 

**Model Code:** Codes developed by the model code organizations and adopted by reference. <u>Source: RCW 19.27.015 Definitions.</u> National code-adopting organizations include the International Code Council and National Fire Protection Association. Examples of model codes include NFPA 1: Fire Code, NFPA 101: Life Safety Code, ICC International Building Code, ICC International Residential Code, ICC International Wildland-Urban Interface Code.

**NFPA Standard:** An NFPA Standard, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the NFPA Manuals of Style. When used in a generic sense, such as in the phrase "standards development process" or "standards development activities," the term "standards" includes all NFPA Standards, including Codes, Standards, Recommended Practices, and Guides. *Source: NFPA 1140* 

**Recognition Program:** a set of required actions based on a defined set of criteria that results in a consistent outcome, typically with an inspection or verification process to confirm achieved results. Examples include Firewise USA.

**Recommendation:** a suggestion or proposal as to the best course of action, especially one put forward by an authoritative body. *Source: Oxford Languages Dictionary* 

**Standard (general):** a document or specification developed by a recognized standard-setting organization. Standards are voluntary guidelines that establish a consistent and accepted approach to processes, products, services, or systems. Unlike codes, compliance with standards may not be legally mandated, but adherence to standards is often seen as a mark of quality, safety, and best practices. <u>Source: University of Louisville William F. Ekstrom Library</u>.

**State Laws:** legal framework that governs a state. In Washington, state laws are bills passed by the elected representatives (State Legislature) and signed by the Governor or passed by voters during elections; the <u>Revised Code of Washington</u> (RCW) is a list of all current state laws. <u>Source:</u> <u>Washington State Legislature State Laws and Rules</u>

**State Rules (or Regulations):** created by state agencies based on the authority they receive from state laws. The <u>Washington Administrative Code</u> (WAC) is a list of all current state rules, arranged by subject or agency. <u>Source: Washington State Legislature State Laws and Rules</u>.

**Statute:** a law enacted by the Legislature. <u>Source: Washington State Legislature Glossary of</u> Legislative Terms