

Land Use Planning & Wildfire Forum

Presentations

Creating fire-adapted communities through better land use planning in the
wildland-urban interface



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From Planning to Action

Promoting Long-Term Change Through WUI Regulations

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Today

- Technical Considerations
- Typical CPAW Recommendations
- Community Examples
 1. Flagstaff, AZ (Paul Summerfelt)
 2. Boise, ID (Romeo Gervais)
 3. Chelan County, WA (Mike Kaputa)
- Break
- Panel and Audience Discussion

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Technical Considerations: “The WUI Code”

- Model Code
- Locally-developed WUI Code
- Topic-specific ordinances



Technical Considerations: Applicability



Technical Considerations: Administration

- Application Reviews & Referrals
- Code Enforcement
- Training
- Supportive Materials



Technical Considerations: Constraints

- State Codes/ Requirements
- Local Regulatory Conflicts



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CPAW Recommendation: Define the WUI

- Use a definition that considers the “true” extent of the WUI
 - Vegetation and the Built Environment
 - Radiant, Convective and Conductive (Embers) Heat Transfer
- Spatial identification and delineation of the WUI
 - RMRS: SILVIS Labs approach
 - Wildland-Urban Interface
 - Intermix
 - Wildland
- Extent of WUI Code application

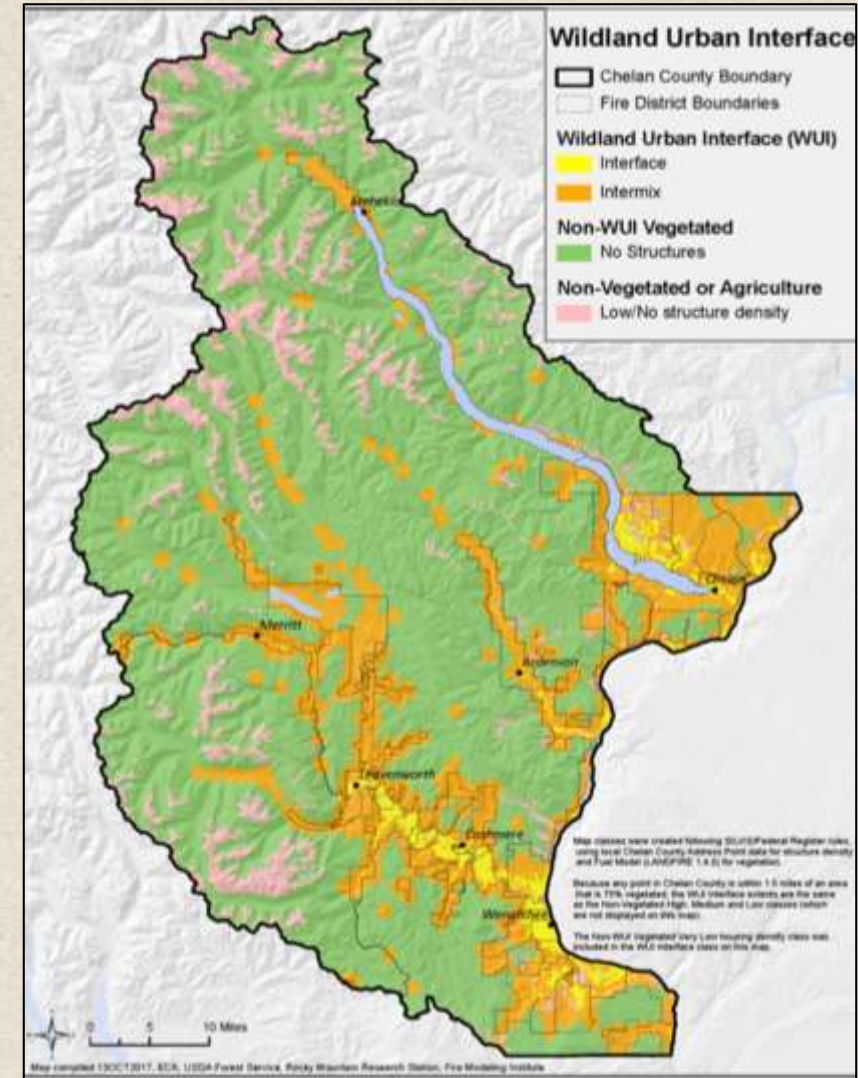
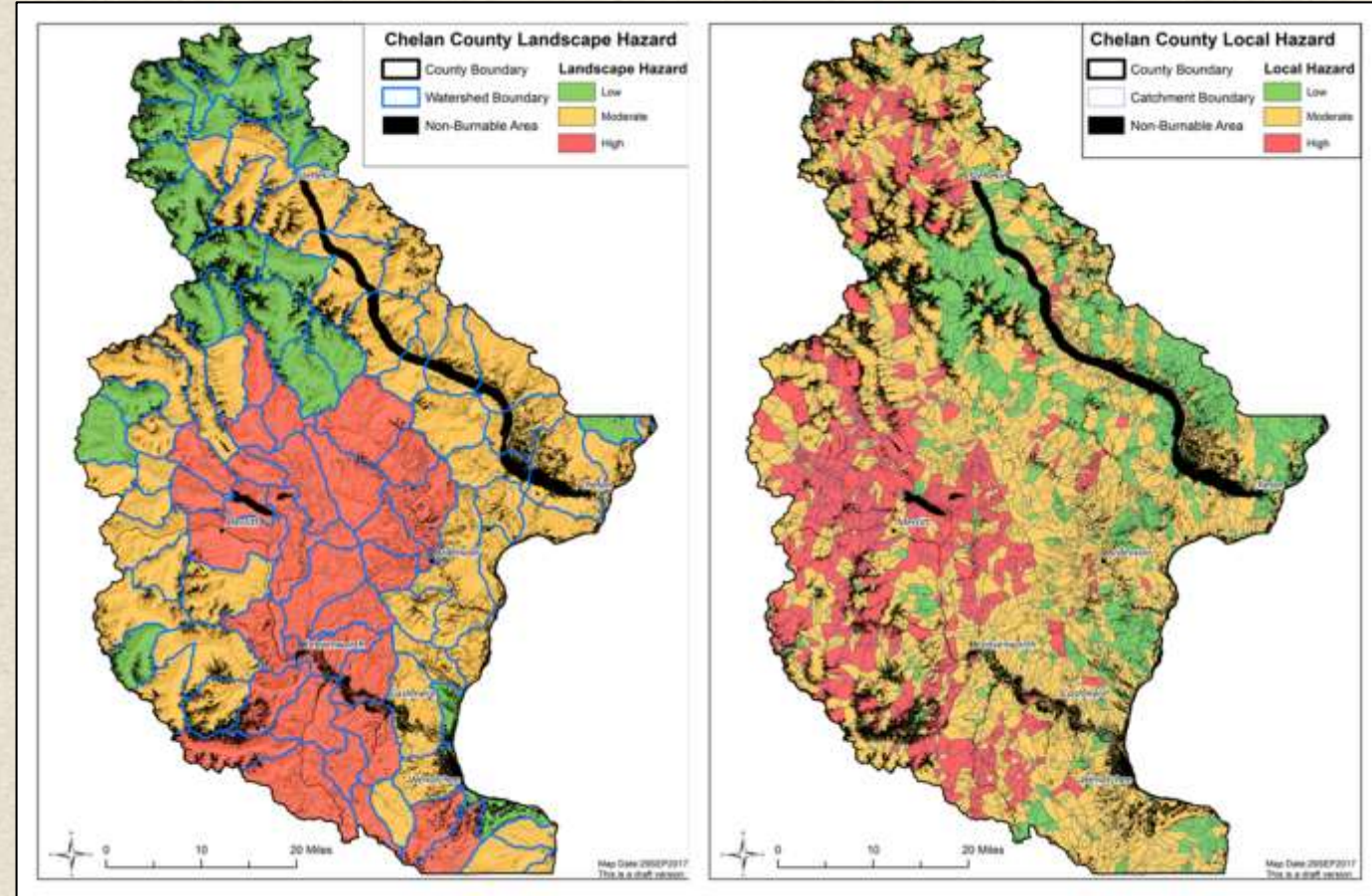


Image credit: USDA Forest Service Rocky Mountain Research Station

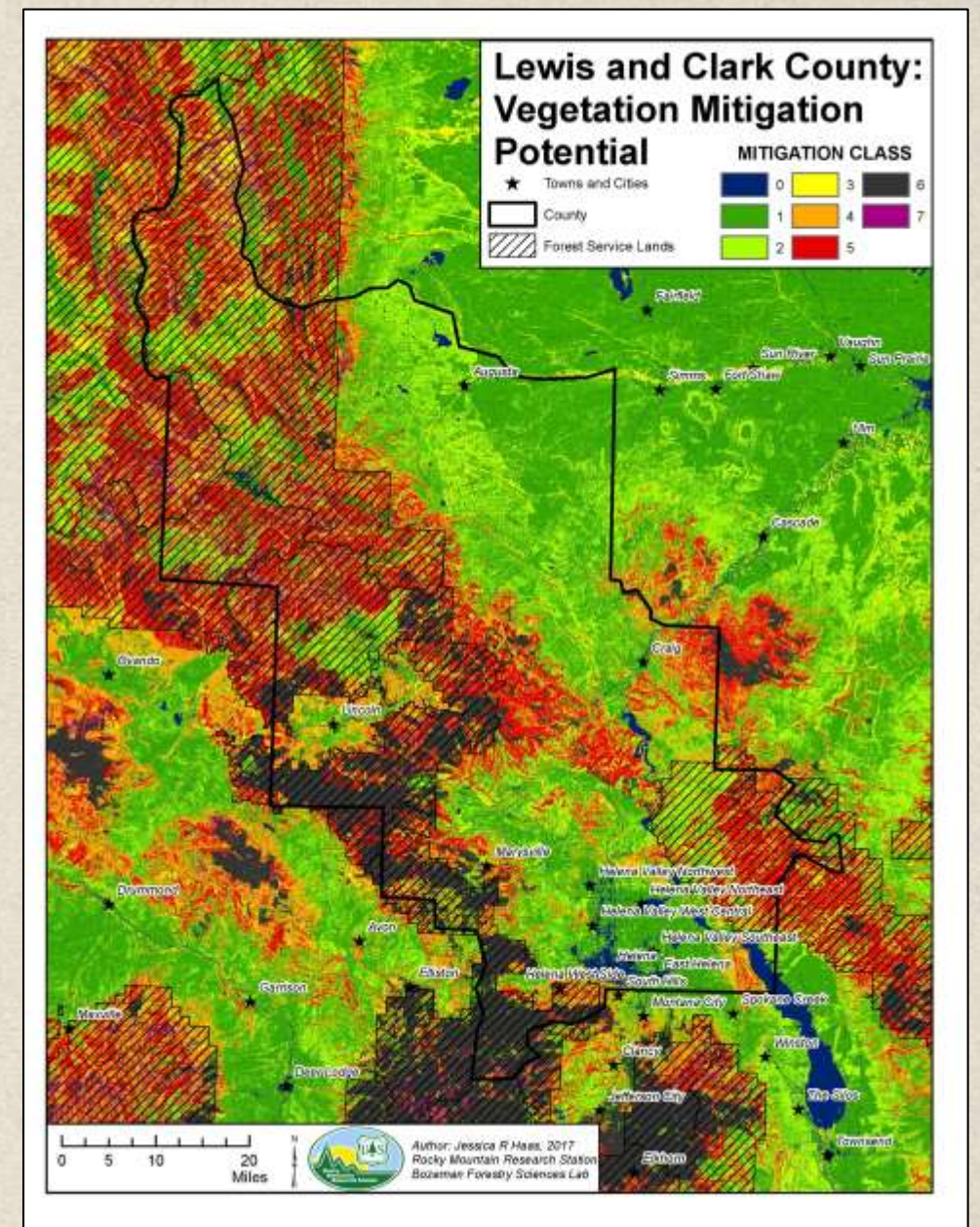
Hazard Assessment

- Landscape and Local Wildfire Hazard Assessments
 - Based on local conditions
 - Component in determining WUI Code hazard inputs
 - Influences WUI Code:
 - Defensible space
 - Ignition resistant construction



Mitigation Difficulty

- Relative general measure of expected parcel level mitigation
- Aligns with mitigation requirements of the WUI Code
 - Defensible Space
 - Ignition Resistance Construction
 - Slope Setbacks



Crosswalk

Table 7: Lewis and Clark County RMRS Mitigation Potential/ IWUIC Hazard Crosswalk

Table 603.2 WUI Area (2012 IWUIC)	Table 603.2 Minimum Required Defensible Space (site/slope adjustment required) ¹	RMRS Mitigation Potential equivalent with IWUIC Slope % category ² Table 502.1 (2012 IWUIC)			24.301.181(21) Minimum IR Construction		
Fuel Model ³		≤ 40	41-60	≥ 61	Non-Conform ⁴	Conform	1.5x Conform
Moderate hazard	30 ft.	1, 2, 3	1, 2, 3		IR2	IR3	Not required
High hazard	50 ft.			1, 2, 3	IR1	IR2	IR3
Extreme hazard	100 ft.	4, 5, 6, 7	4, 5, 6, 7	4, 5, 6, 7	IR1	IR1	IR2

Table Notes:

(1) “Distances are allowed to be increased due to site-specific analysis based on local conditions and the fire protection plan” (Figure 603.2- 2012 IWUIC)

(2) “When required by the code official, fuel classification shall be based on the historical fuel type for the area” (Table 502.1- IWUIC)

(3) **Non-conforming** indicates that the minimum slope-adjusted defensible space distances with appropriate mitigation cannot be achieved; as opposed to **conforming** in which the defensible space defensible space distances with appropriate mitigation can be achieved.

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The WUI Code in Action

City of Flagstaff, AZ

Paul Summerfelt,
Wildland Fire Management Officer
Flagstaff Fire Department



Overview

- Largest community in northern Arizona
- Largest ponderosa pine forest in western US
- Active, young, educated population (similar to Boulder, Bend)
- Wildfire is #1 threat – widespread impacts
 - Reoccurring, annual event



Type of Regulation

- 2006 ICC WUI Model Code
- 18-month adoption process
- The 4 “E”s
- Prescriptive & descriptive elements
- Result – *Flagstaff WUI Code*
- Supported by Building Code/CD
 - Applied and enforced by Fire Dept.



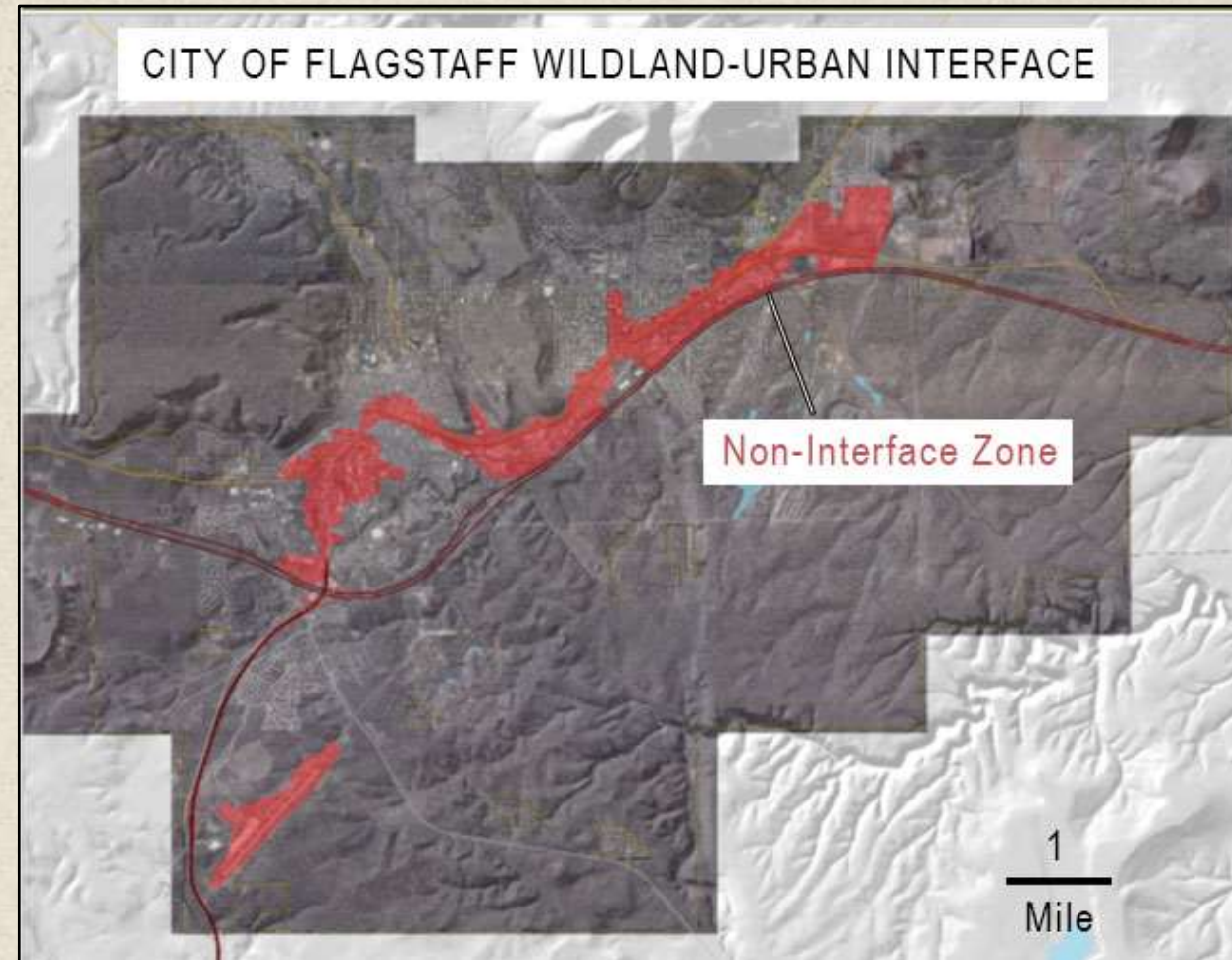
Catalyst for Adoption

- Disturbance events (Schultz Fire 2010)
- Collaborative partnership between science, land-management, political, and environmental interests
- Suppression alone was not the answer
- Zero opposition to adoption
- Actions – operational
- Time – community paradigm shift



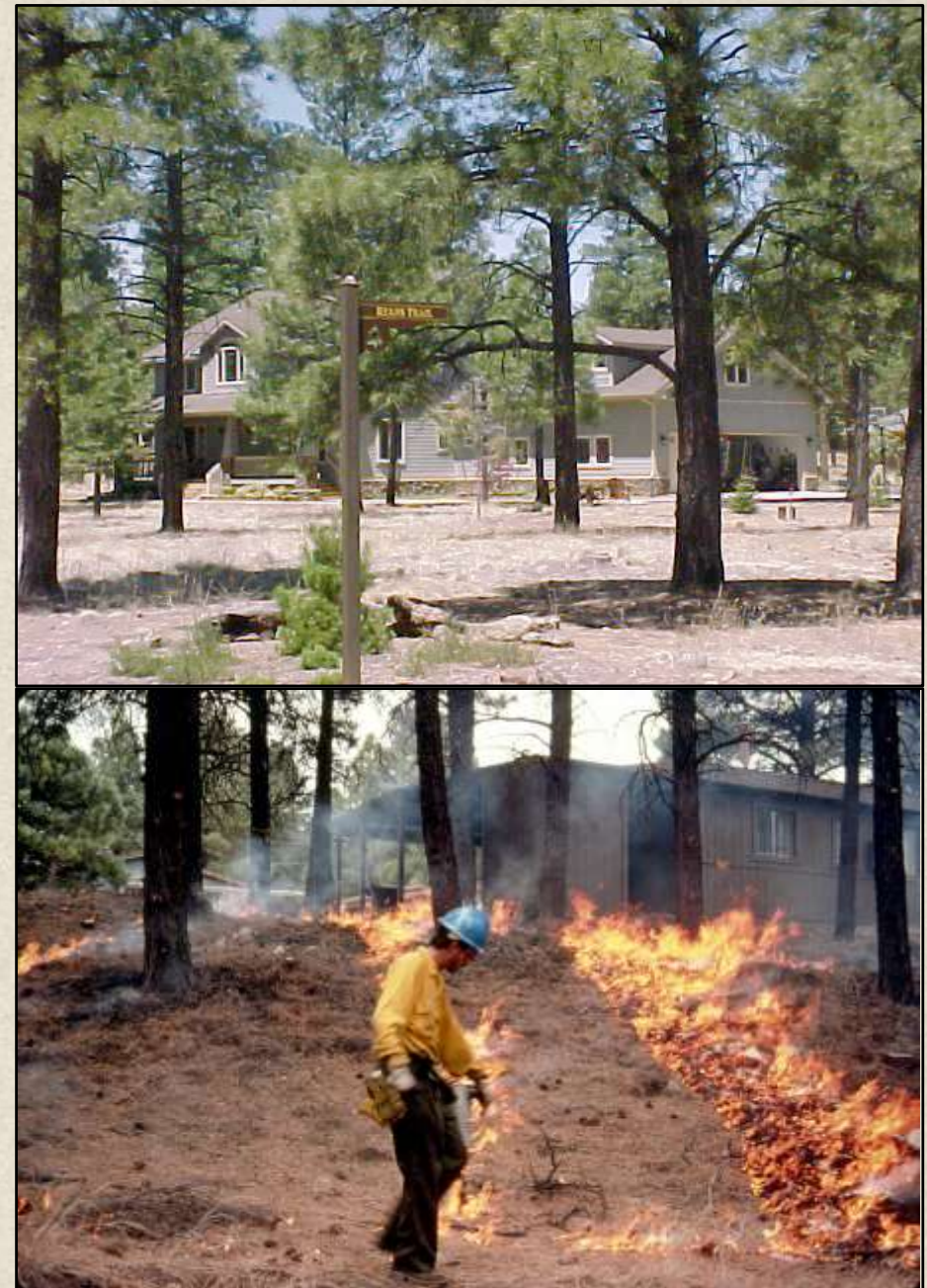
Unique Aspects

- Virtually entire community
- Building materials:
 - Flame spread rating (not fire resistive)
 - Exterior ignition-resistant material to match hazard severity (fuels & slope) and water supply (C or NC)
 - Cost neutral
- Vegetation Management:
 - Entire property is defensible zone
 - Vegetation work completed prior to combustible building materials on-site
 - New and older developments



Maintenance

- Have not updated or revised
- Property Maintenance – *personal responsibility*
 - Hazard tree, flammable weed/debris removal
 - Vegetation proximity to chimneys & roofs (≥ 10 ft)
- Rating: both periodic and complaint
 - Appendix C-1: Neighborhoods
 - Appendix C-2: Individual homes and properties
- Partnership with Fire Dept.



Advice for Other Communities

- Spend the time
- Reduce obstacles and allow options
- Critical partners: Fire Dept.
- Show how it facilitates and advances other issues (*Codes, Plans, Goals, Values*)
- Demonstrate what it looks like
- Capture the benefits



Resources

Website Links:

www.flagstaffaz.gov/wildlandfire

www.flagstaffwatershedprotection.org

www.gffp.org

www.4fri.org

Search: “WUI Code: How to Avoid the Agony”

Contact



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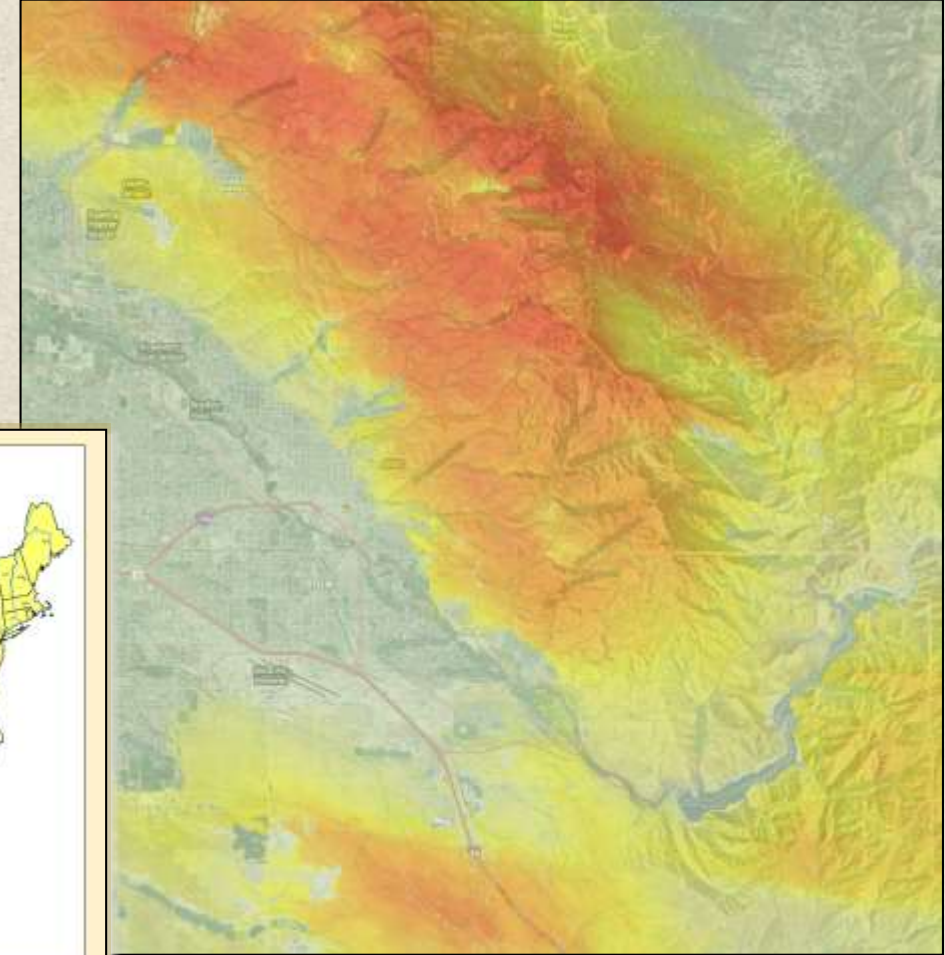
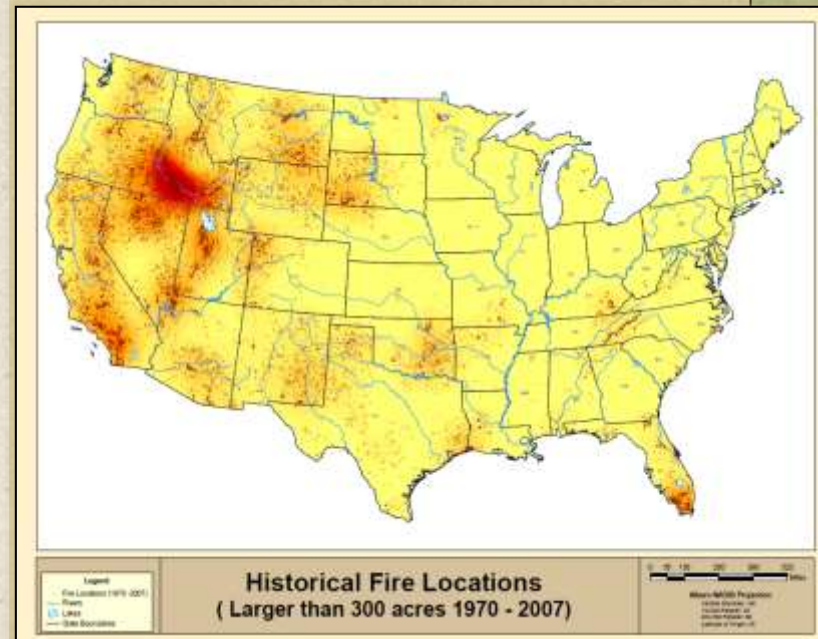
The WUI Code in Action

City of Boise, ID

Romeo Gervais,
Deputy Chief Fire Marshal
Boise Fire Department

Why the WUI Code in Boise?

- Intermix/Interface
- Sagebrush-Steppe Ecosystem
- Foothills/Rangelands



Overview of Type of Regulation

- City Code based on the IWUIC
- Construction Regulations
 - Building
 - Defensible Space
- Ignition Source Control
 - Fireworks – Open Fires
- Fire Safety Plan
 - Planning



Reasons for Updating

- Current WUI Research
 - Code adopted in 2010
- Consistency in Code Provisions
- WUI Zone Delineations
- Improved Safety



Recommendations Provided by CPAW

- Reconcile City Code Chapters 46/49 by Adopting the ICC WUI Code
- Qualified professionals to perform site-specific assessments and evaluate submittal timing
- Clarify prohibited plant list to support D-Space regulations



Next Steps

- Rewriting WUI Code
- Revising Existing WUI Areas
- Plant Lists
- Model CCRs



Advice for Other Communities

- Consider maintenance of defensible space
- Time is money – supply chains
- Decking, soffits and vents



Contact



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Deputy Chief - Fire Marshal
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The WUI Code in Action

Chelan County, WA

Mike Kaputa,

Director

Department of Natural Resources

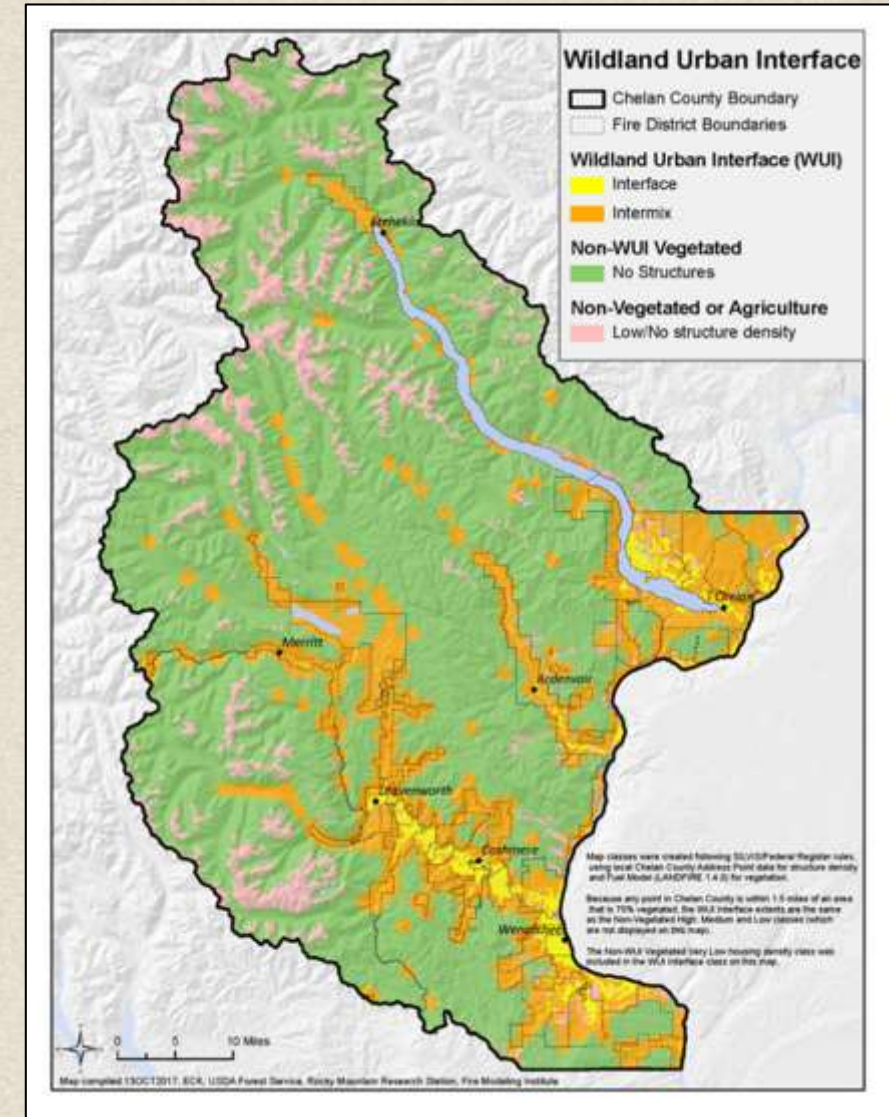
Why the WUI Code in Chelan County?

- Current fire protection standards are inadequate
- Increase public and first responder safety
- Establish a long-term strategy to address insurance



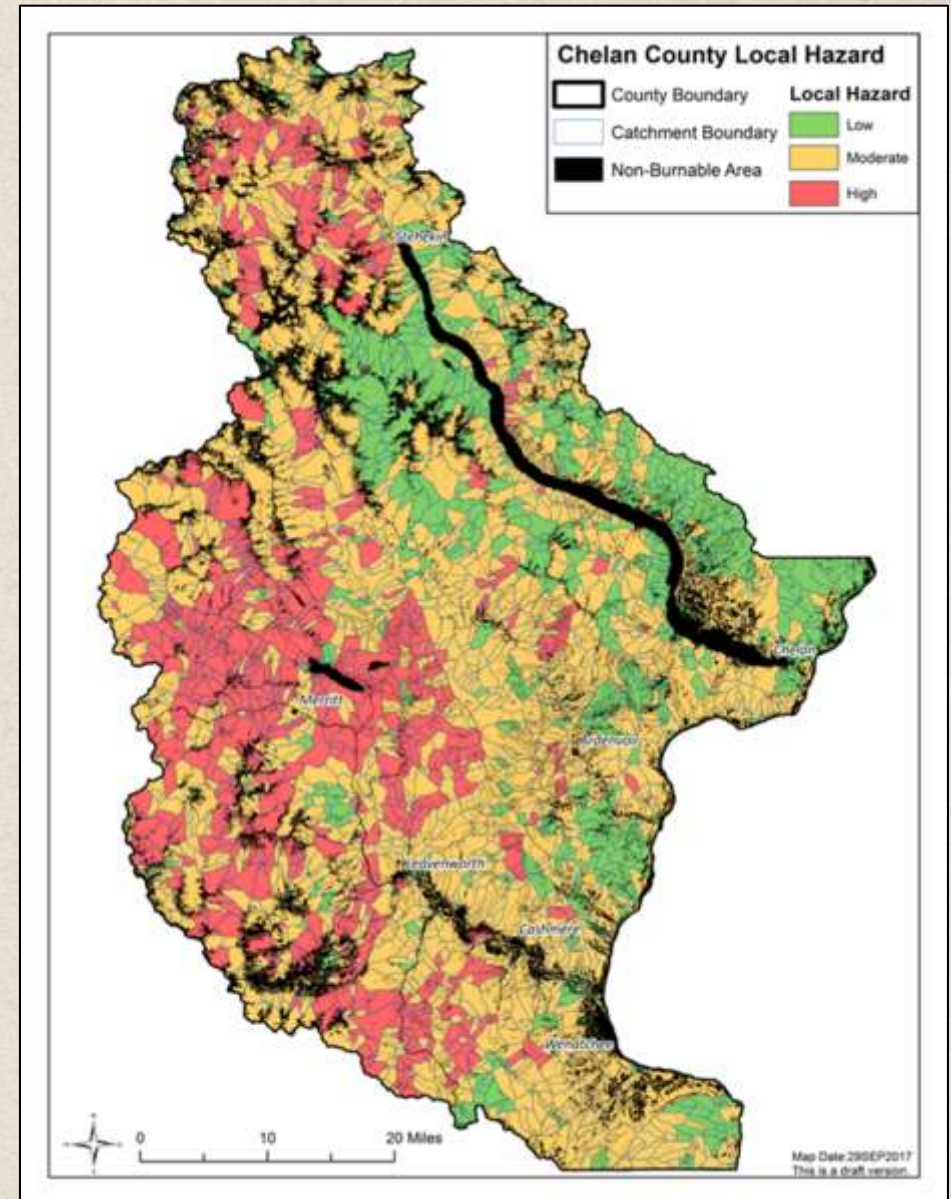
Recommendations Provided by CPAW

- Define the Wildland-Urban Interface (WUI) and implement a WUI Risk Assessment Program
- Adopt a Wildland-Urban Interface Code
- Update the Comprehensive Plan to support Wildfire Implementation Policies



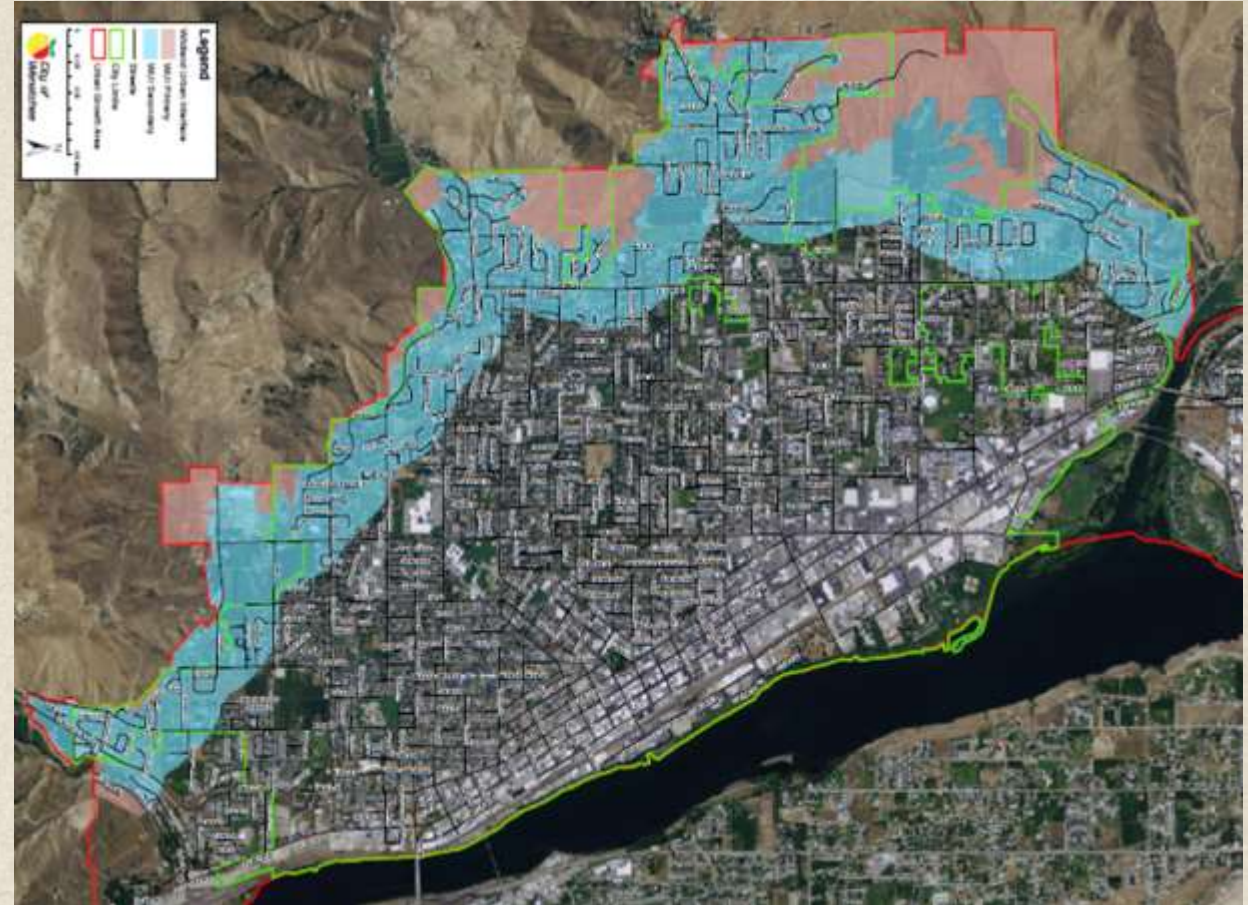
Process for Adoption

- Determine best code for fire and life safety
- Identify implementation burden and strategies
- Coordinate with other local governments
- Mix it all together



WUI Code Options

- International Code Council (IWUIC) 2018
- WA State Building Code Appendix N
- Customized approach



Challenges

- Implementation burden
 - County administration
 - Increased building costs
- Code consistency across jurisdictions
- Stakeholder engagement



Next Steps

- Develop code
 - Consider input from all sectors
 - Compile final code proposal
- Recommend to county commission



Advice for Other Communities

- Identify leadership at local level
- Find good technical assistance
- Use existing relationships



Contact



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