

Addressing Community Wildfire Risk: A Review and Assessment of Local Regulatory and Planning Tools



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C L A R I O N

Overview of WUI and Zoning Study

Five Tasks

- **Task 1: Review of Literature**
- **Task 2: Regulatory Review and Categorization of WUI Tools**
- **Task 3: Facilitated Interviews**
- **Task 4: Regulatory Assessment and Development of Lessons Learned**
- **Task 5: Final Report**

Task 2: Categorization of WUI Tools

- **Community Scale**

- **Hazard Mapping (where does it apply?)**
 - Hazard assessment
 - Risk assessment
- **Applicability (what activities are covered?)**
 - New / existing development or uses

- **Neighborhood Scale**

- Site development
- Water supply
- Access

Task 2: Categorization of WUI Tools

• Individual Lot Scale

- Vegetation management (defensible space)
 - Zone Approach
 - Zone 1: 0' – 15'/30'
 - Zone 2: 30' – 70'/100'
 - Zone 3: To property line
 - Perimeter buffer (15' – 20')
 - Maintenance requirements
- Landscaping
 - Fire resistant , well watered

Task 2: Categorization of WUI Tools

• **Structure Scale**

- **Primary structure**

- Roof
- Siding
- Vents
- Soffits
- Decks

- **Accessory structures**

- Detached garages
- Sheds
- Fences
- Wood piles
- Gas tanks

Task 3: Interviews

Methodology

- **Identify approx. 12 communities based on the following factors:**
 - **Geographic diversity**
 - **Demographic diversity (large and small)**
 - **Regulatory diversity**
- **Interview key local officials (e.g., Fire Marshall, Planner, Building Official)**
- **Record and organize findings for final analysis**

List of Interview Communities

- **Southeast**

- North Port, FL
- Palm Coast, FL

- **Northwest**

- Clark County, WA
- Missoula, MT
- Bend, OR
- City of Boise, ID

- **California**

- City of Santa Barbara, CA
- City of Glendale, CA

- **Central Rocky Mountains**

- Boulder County, CO
- Utah County, UT

- **Southwest**

- Village of Ruidoso, NM
- Santa Fe County, NM
- City of Prescott, AZ

Responses to Interview Questions

- **Why did you adopt WUI standards?**

- State requirement (CA, OR, UT)
- Major Fire

- **How did the public process go?**

- Process easier when its mandated (no choice)
- Public outreach was key in a few communities (Prescott, AZ)
 - Landowners
 - Homebuilders/contractors / nurseries
 - New arrivals / second-home owners

Responses to Interview Questions

- **What WUI regulations did you use for guidance?**

- **Model Code (NFPA, ICC)**
 - **Minority adopt model code (and always with amendments)**
 - **Used model code as basis for WUI standards, but did not formally adopt model code (Boise, ID)**
- **Other community**
- **Locally created (Clarke County, WA)**

Responses to Interview Questions

1. What are most/least effective parts of your WUI regulations?

- **Most effective:**
 1. **Defensible space (vegetation)**
 2. **Roof (Class A/B)**
 3. **Public education / outreach**
- **Least Effective**
 - **Not much identified: General feeling that existing regulations are necessary (except: nuisance abatement)**

Responses to Interview Questions

- **Who administers WUI regulations?**

- **Primary: Fire Marshall in most communities so far.**
- **Secondary: Building Official (building permit)**
- **Tertiary: Planning Department (land use/subdivision permit)**

- **What is the review process?**

- **Development Review Committee Primary (initial comments)**
- **Preapplication conference**
- **Site inspections by Fire Marshall prior to final approval**
 - **Two-step or one-step process**

Responses to Interview Questions

- **Has enforcement of WUI regulations been a significant problem? If so, what has been the problem?**

- **No, regarding initial enforcement / compliance (e.g., new subdivisions and building permits)**
- **Yes, sometimes, regarding ongoing maintenance of vegetation**
 - **Nuisance abatement is primary tool (can be effective but time consuming)**

Responses to Interview Questions

- **Do you consider existing development or new development to be the greater problem?**
 - Existing development is bigger problem in most communities because:
 - There's more of it
 - Often served by nonconforming infrastructure (road access, water supply)
 - It's exempt from regulations
 - Addressing existing development is politically sensitive (exception: Ruidoso, NM)

Responses to Interview Questions

- **Does your community have significant areas of public land within or surrounding it and, if so, how does this affect your community's WUI efforts?**

- **Variety of responses:**
 - **Some communities have very active and organized communication (Prescott, AZ; Ruidoso, NM)**
 - **Other have little consistent interaction (Clark County, WA; Utah county, UT)**

Responses to Interview Questions

- **Do you think your WUI regulations go far enough in addressing the wildfire hazard in your community or do you hope to see major amendments in the future?**

- **While more can always be done, many felt their current WUI regulations are generally sufficient.**
- **Some said that if they had more money, they would put it toward more public education and outreach rather than more fire trucks or regulations.**

General Themes from Interviews So Far

1. Most communities generally happy with technical aspects of WUI standards. They work.
2. Public education and non-regulatory programs that provide direct assistance to homeowners (e.g., debris pickup) are keys to overall effectiveness of WUI regulations.
3. Initial enforcement is usually not a problem, but on-going maintenance of defensible space is labor and cost intensive.
4. WUI regulations are usually administered and enforced by the Fire Marshall (most effective, too).
 - But, Fire Marshalls often not trained for enforcement duty, plus compromises public image
5. Flexibility and incremental change are best course

What More Could We Do?

Premise:

1. Most WUI codes address the construction of individual buildings or layout of new developments
 - Mostly focused on creation of “defensible space”
 - Most do not focus on opportunities to reduce fire risk in existing developments
2. There are additional opportunities to reduce WUI risks through closer collaboration between land use planners and fire officials that are not tied to the adoption of model codes

The Planning (as opposed to Fire) Toolbelt

- Zoning
- Subdivision
- Site Planning / Design Review
- Growth Management
- State-specific Legislation
- Development Agreements
- Enforcement



Potential Approaches

Zoning

- Base zone districts
- Overlay zone districts
 - High fire risk areas can be mapped, and risk mitigation standards applied in those areas
 - State level maps can be used, even if resolution is not as high as you want
 - Clarify that the official map is the higher resolution web version (not the one printed in the paper code)
 - Add a process to question or change the map if you think it is wrong



Potential Approaches

Zoning

- Fire Hazard Overlay standards
 - Defensible space
 - Roof materials, vents, building requirements
 - Source of fire suppression water
 - Wider access road standards / lower grades

- Many other tools to implement these tools, but zoning gives potential buyers better notice than post-purchase reviews.



Potential Approaches

Zoning

- Permitted Uses and Use-Specific Standards
 - Uses that are “permitted” in some use categories can be made “conditional” in WUI,
 - Any use can be subject to “use-specific standards” that apply automatically – without a hearing – and those can be tied to location in a WUI areas,
 - Assembly
 - Uses involving fuels or hazardous materials

Potential Approaches

Zoning

- Development (Design / Quality) Standards
 - Landscaping, tree preservation, parking, access / connectivity, management/ maintenance
 - Different standards can be drafted to apply in fire hazard areas
 - Different types and amounts of **landscaping / defensible space**
 - Exceptions to **tree preservation** requirements
 - Additional **access** requirements
 - Higher duties to maintain and **manage** vegetation

Potential Approaches

Zoning

- While zoning has traditionally been more focused on initial project design, modern codes are placing increased emphasis on management and maintenance

- Examples

- Landscaping / tree replacement
- Stormwater facility management
- Lighting / glare
- Transportation Demand Management (TDM)
- Community amenities through HOAs
- Sustainability focus will push further



Potential Approaches

Zoning

- Incentives can be used when data or political will for a regulation is missing
- In rural (WUI) areas one key incentive is house size (not density)
- Example:
 - Basic house permitted is small
 - Larger house sizes require more fire-resistant construction, or location to ensure defensible space from accessory structures, or better access, or sprinklering of home



Potential Approaches

Subdivision

- The power to divide land for purposes of sale or development
 - Much more important in suburbs and rural areas (including WUI areas) than mature cities
- Generally a separate power granted to local governments
- Generally has strong language on public safety, access, utilities
- Can be linked to comprehensive plan goals

Potential Approaches

Subdivision

- Example:** Weld County, CO zoning for 160 acre minimum lot size while allowing 35 acre lots
- Example:** Larimer County, CO denial of subdivision that met platting requirements and minimum lot sizes for zone district, but failed to meet “consistency with comprehensive plan language” strong and detailed enough to serve as a regulation

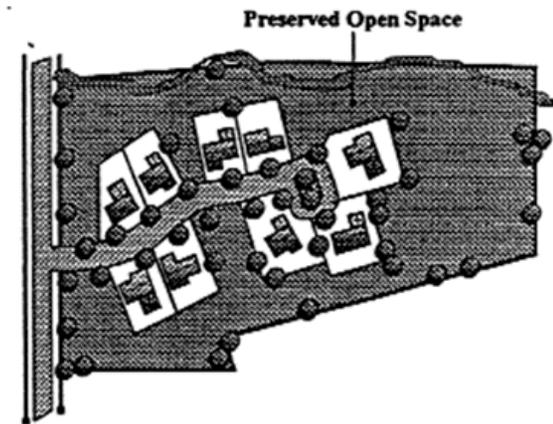


Potential Approaches

Subdivision

•Current trends

- Early land inventory (to avoid sensitive areas)
- Mandatory clustering in rural areas (could be used to avoid fire hazards)
- Conservation subdivisions (additional house size or uses in return for protection of more undeveloped land)
- “New Communities” standards (large projects have more flexibility to avoid hazardous areas through planning)
- Lot orientation for solar access



Potential Approaches

Subdivision

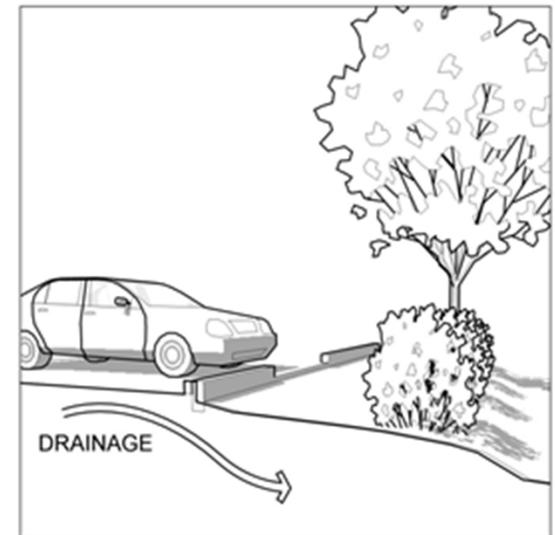
- Many regulations that could (and maybe should) appear in zoning can also be imposed through subdivision
 - Development density bonuses
 - Sensitive lands protection
 - Steep slope avoidance / development standards
 - Edge landscape buffers for new development
 - Wildlife habitat protection



Potential Approaches

Site Planning / Design Review

- Even when zoning is not being changed and land is not being divided, many communities require “site plan review”.
 - Review to ensure that circulation, parking, and access points are safe, landscaping actually buffers, lighting won't glare, etc.
 - Site planning could be expanded to address fire risk avoidance



Curb cuts for stormwater drainage

Potential Approaches

Development Agreements

- Cities and counties increasingly use development agreements to tie down issues of site design, phasing, infrastructure construction, or site management that are not addressed in zoning or subdivision
 - Site maintenance – and funding for maintenance – provisions are common
- Opportunity to ensure that:
 - Maintenance provisions address defensible space
 - Existing accessory structures are relocated or roofs replaced within a fixed period of time
 - Condition new structure approval on old structure removal

Potential Approaches

Enforcement

- Almost all zoning enforcement is complaint-driven
- But when complaints are made inspectors do have authority to cite for other violations observed
 - Cross- train to inspect for defensible space maintenance or unauthorized accessory structures



Summary

1. Lots of different legal tools that allow broader cooperation between planning / zoning / building / fire officials
2. Potential “win-win” opportunities
 - Fire officials can link fire regulations to more carrots and sticks
 - Planning / zoning gain credibility of fire officials to improve risk prevention
3. Some planning / zoning tools increase leverage to upgrade existing properties, which is a key fire risk challenge

