

A Research Paper by



Montana Land Use Planning Strategies to Reduce Risk in the Wildland-Urban Interface



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Community Planning Assistance for Wildfire program.

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ABOUT THE COMMUNITY PLANNING ASSISTANCE FOR WILDFIRE PROGRAM

The [Community Planning Assistance for Wildfire](#) (CPAW) program works with communities to reduce wildfire risks through improved land use planning. It is supported through grants from the U.S. Forest Service, the LOR Foundation, and other private foundations.

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Cover Photo: A smoke column from the 2012 Pine Creek Fire rises over the Yellowstone River in Park County, Montana. Photo courtesy of Greg Coleman, Park County.

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I. EXECUTIVE SUMMARY

Across Montana—like most of the West—wildfires are getting bigger, lasting longer, and causing more damage to homes and property. This trend can only be expected to continue under a warmer, drier climate and as more homes are built in at-risk locations (known as the wildland-urban interface, or WUI).

Land use planning is an important tool to reducing risk, but few Montana counties have fully integrated wildfire into their land use planning programs. This report synthesizes the opportunities, challenges, and options for county governments, fire districts and fire service areas, and landowners to reduce risk to life and property in Montana.

Strategies Available to Montana Communities

Under Montana law, four general approaches are possible. Table 1 summarizes the role of each in helping manage development in the WUI. While every Montana jurisdiction must make its own determinations of how (and whether) to proactively address development in the WUI, protecting lives and property requires proactive, thoughtful integration of all four approaches, including:

- **Plans**, such as growth policies and neighborhood plans;
- **Land use regulations**, including subdivision regulations, zoning, building codes;
- **Revenue-generating strategies** such as impact fees and rural improvement districts; and
- **Voluntary measures**, including education, outreach, and incentives.

Montana can also learn from strategies being adopted by other states in the West, such as authorizing counties with the discretion to develop WUI codes, developing statewide risk mapping, and incentivizing regulations through funding strategies. Arizona, Colorado, and Utah have all adopted regulations that provide local governments with more authority and flexibility to manage land use challenges in the WUI.

Examples from local jurisdictions in Wyoming, Idaho, Colorado, Arizona, and other states can also provide guidance to Montana communities, demonstrating how to take proactive steps such as WUI codes, building codes, steep slope ordinances, landscaping plans, and risk assessments.

Challenges with Montana's Planning Framework

While many options exist for Montana communities, the state also faces several challenges in addressing development in the WUI with unnecessarily complex and confusing issues in statute and administrative rule. Artificial distinctions and overlap between subdivision regulations, zoning ordinances, and building codes can create challenges for local governments in creating and enforcing measures to protect life and property.

One of the main challenges with Montana's planning framework is the artificial distinction and overlap between what subdivision regulations, zoning ordinances, and building codes can address by statute and administrative rule. For example:

- Subdivision regulations can address the initial division of land, but can also include ongoing construction requirements and mitigation measures;
- Zoning regulations can address lot development, including vegetation maintenance over time; and
- Building codes address the design and construction of structures, but may also include the International Wildland-Urban Interface Code that addresses vegetation and other site conditions.

This framework is unnecessarily confusing, legally hazardous for local governments, and fails to consider the multi-faceted or holistic nature of addressing WUI development.

Ideally the Montana Legislature would grant wider-ranging legal authority to counties to address WUI development, like other Rocky Mountain states, where counties have broader authority to address WUI development and fire safety issues. That way, local governments could address WUI development in light of local circumstances.

Another option is for the legislature to permit local governments to include fire-protection-related building codes within county zoning statutes so structural fire protection issues don't have to be addressed through subdivision regulations and covenants where building codes are not in effect. However, the legislature has historically been reluctant to provide local governments with innovative options or tools to address land development issues, presumably because of distrust of government regulation. One hopes it will not take a disaster to alert our elected officials to the need for counties to develop a simpler and more comprehensive approach to addressing WUI development issues.

Conclusion

With less development in the WUI than some neighboring states, but enormous potential for future development, Montana has a rare opportunity to get ahead of growth before disaster strikes, and proactively apply land use planning strategies to manage development in our fire-prone landscapes. Cooperation and collaboration between the Legislature and Counties could help broaden the tools available and clarify ambiguities in current law to reduce wildfire risk in Montana.

**TABLE 1: MONTANA LAND USE PLANNING STRATEGIES TO REDUCE WILDFIRE RISK—
Plans, Land Use Regulations, Revenue Generating Strategies, and Voluntary Measures**

PLANS			
Plans are non-regulatory and non-binding, although sometimes required under state and federal law. Plans often help generate collaboration and create access to funding sources, in addition to helping set foundational goals and objectives for WUI development.			
Type	Description & Examples	Advantages	Disadvantages
Growth Policies	Provide the legal basis and rationale to create rules for WUI, but is not a regulatory document. <i>Examples: Lewis & Clark County and Missoula County</i>	<ul style="list-style-type: none"> • State law lays out a clear path for what a growth policy must contain, including an assessment of WUI issues and needs • Can be general or specific, as determined by the community • Provides an opportunity to discuss risks and improvement projects with federal and state officials, fire districts, and landowners • Provides the legal foundation for land use decisions and regulations 	<ul style="list-style-type: none"> • Does not have the weight of law (i.e., is not a regulatory document), but must be “substantially complied with”
Neighborhood Plans	Provides basis for planning development in specific areas, including WUI. <i>Example: Lewis & Clark County’s Helena Valley Neighborhood Plan</i>	<ul style="list-style-type: none"> • Can focus on specific geographic areas such as the WUI, and can focus on specific issues such as development in the WUI 	<ul style="list-style-type: none"> • Does not have the weight of law (i.e., is not a regulatory document), but must be “substantially complied with”
Community Wildfire Protection Plan (CWPP)	Collaborative plan for fuels mitigation and reducing structural ignitability; opens federal funding opportunities. <i>Example: Lincoln County</i>	<ul style="list-style-type: none"> • Developed collaboratively between local governments, fire districts, and state and federal agencies • Identifies fuels reduction priorities on federal and non-federal lands and helps decide how additional federal funds may be distributed • Expedited federal environmental and legal review 	<ul style="list-style-type: none"> • Must be updated regularly • It is a plan, not a regulation, so no consequences if the plan is not implemented
Pre-Disaster Mitigation Plan	Addresses wildfire alongside other hazards; helps maintain federal funding.	<ul style="list-style-type: none"> • Focuses on several hazards such as flood, fire, earthquake, hazardous materials, etc.—more “bang for the buck” • Maintains funding eligibility for federal disaster relief 	<ul style="list-style-type: none"> • Because of the widespread nature of the plan, it could focus less on WUI issues • It is a plan, not a regulation, so no consequences if the plan is not implemented

LAND USE REGULATIONS			
Montana law explicitly authorizes three types of regulations for WUI development. Regulations can be difficult to adopt in some Montana communities and can require additional capacity for permitting and enforcement, but are guaranteed ways to manage WUI development.			
Type	Description & Examples	Advantages	Disadvantages
Subdivision Regulations	<p>Cities and counties are required to have subdivision regulations, and are required to address hazards to health and safety, including wildfire. Construction techniques and mitigation measures can be required.</p> <p><i>Example: Lewis & Clark County</i></p>	<ul style="list-style-type: none"> • Can be used to set up new subdivisions in a fire-safe manner, with initial fuels mitigation, a safe road network, street signs, water supplies, etc. • Can include certain construction techniques to ensure homes are built in a fire-safe manner • Because every jurisdiction is required to adopt subdivision regulations, WUI issues in new subdivisions will be addressed to some degree 	<ul style="list-style-type: none"> • There is no regulatory mechanism to ensure water supplies and vegetation are maintained over time • Covenants, which may not be adhered to, are necessary to ensure the construction techniques are implemented • Not comprehensive—the requirements only apply to new subdivisions while WUI development issues also include existing lots and structures
Zoning	<p>Can be adopted by local governments, with great flexibility for how much detail to include. Can be designed to address specific areas of WUI.</p>	<ul style="list-style-type: none"> • Can be very detailed or relatively simple, as determined by local decision-makers • Equal treatment—the requirements could apply to all new development the WUI • The use of zoning to address public health and safety issues is well supported by state law and case law 	<ul style="list-style-type: none"> • Can be politically difficult to adopt zoning in rural Montana • Requires permit processes, staffing, and ongoing administration • County zoning cannot include items that are included in building codes (e.g., roofing materials, windows, vents, etc.)
Building Codes	<p>Can be adopted by local governments to regulate ignitability of structures. Administered through a permitting process.</p> <p><i>Example: Missoula County</i></p>	<ul style="list-style-type: none"> • Equal treatment—the requirements could apply to all new development • Address construction techniques such as roofing materials, windows, vents, etc. 	<ul style="list-style-type: none"> • Can be politically difficult to adopt building codes in rural Montana • Requires permit processes, staffing, and ongoing administration

REVENUE GENERATING STRATEGIES			
Local governments have authority to develop funding to serve growth and generate public improvements. These can offset or supplement funding for wildfire protection and risk mitigation.			
Type	Description & Examples	Advantages	Disadvantages
Impact Fees	Charged by local governments to offset costs of capital improvements made necessary by new development. Can be used to support fire protection.	<ul style="list-style-type: none"> New development pays its portion of the costs of necessary capital improvements up front 	<ul style="list-style-type: none"> Can only be used for capital facilities with a life of 10 years or more; cannot be used for personnel or operations and maintenance costs Complex to develop and administer Fees can only be used to address impacts of new development, not to pay for existing needs
Rural Improvement Districts	Identifies public infrastructure improvements within a geographic area, with costs assessed on property taxes. Can be used for roads and water supplies. <i>Example: Lewis & Clark County</i>	<ul style="list-style-type: none"> Can be used to improve and maintain roads, water supplies, fire stations, etc., in a geographic area or district Apportions the costs among those who benefit Charges are collected with property taxes 	<ul style="list-style-type: none"> Can be complex to administer, especially if there are many ongoing RIDs Not comprehensive—only one district or improvement at a time
VOLUNTARY MEASURES			
Providing educational and cost-share (or other incentive) measures to private landowners can help reduce risk, but relies on willing landowner participation. Also requires capacity and dedicated resources.			
Type	Description & Examples	Advantages	Disadvantages
Education and Outreach	Providing educational opportunities to landowners, such as free property assessments and seminars can help landowners understand and mitigate risk. <i>Example: Lincoln County</i>	<ul style="list-style-type: none"> Landowners who participate are likely to take action to protect their properties WUI education information is readily available 	<ul style="list-style-type: none"> Not comprehensive—only a portion of WUI landowners may participate Labor intensive—vegetation must be managed on a regular basis to reduce risk
Incentives	Cost-sharing programs for reduction of hazardous fuels on private land can help educate landowners and fund mitigation strategies on private land.	<ul style="list-style-type: none"> Financial assistance to landowners Contains an education component 	<ul style="list-style-type: none"> Tax dollars to pay for incentives must come from grants or other programs

II. INTRODUCTION

Across the United States, wildfires are growing in size and frequency, with fire seasons often starting earlier and lasting longer. While fires provide important ecological functions, homes are being constructed in the wildland urban interface (WUI)—or the zone where structures and other human development intermingle with undeveloped wildland and vegetation—making it more dangerous, difficult, and expensive to protect lives and property.

In Montana, wildfires have burned nearly two million acres in the last five years, threatening lives, destroying dozens of homes, and costing millions of dollars. From 2000 through 2014, there were more than 240 large wildfires (>5,000 acres) [within ten miles of Montana communities](#), affecting more than 230,000 Montana residents. Wildland fires near our communities impact public health and safety, water quality, transportation infrastructure, regional economies, and quality of life.

A recent analysis of WUI areas in 2010 across the West found that in Montana around 9.4 percent of the WUI has homes as compared to a West-wide average of 17.7 percent. In Montana, around nine percent of all new homes are being [constructed in the WUI](#), and 31 percent of these are second homes. Protecting homes is the [most deadly and expensive](#) part of wildland firefighting.

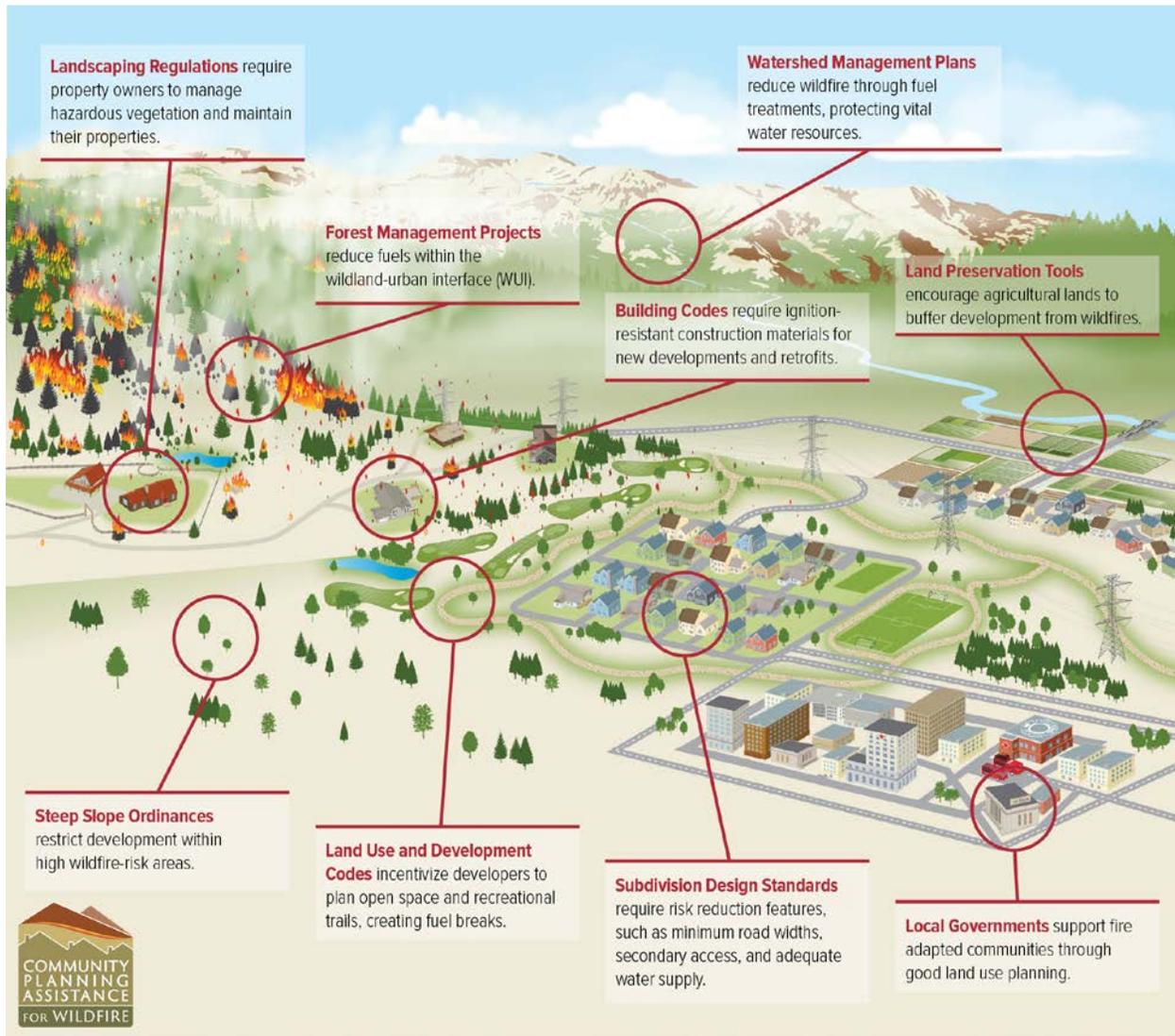
With 90 percent of Montana’s WUI unbuilt, Montanans have a unique opportunity to improve land use planning strategies to reduce risk. Designing land use planning practices in the WUI can take many forms, from watershed management plans to building codes, land preservation tools to design standards (Figure 1).

Few Montana counties, however, have integrated wildfire considerations into land use planning. In 2009, the Department of Natural Resources and Conservation developed [guidelines for development in the WUI](#), but these optional suggestions minimally address specific strategies for the built environment, and were not specifically designed for regulatory implementation. Montana’s regulatory framework is complex, and engaging a community in new land use planning strategies is compounded by the unique political and ecological landscape of the state’s 56 counties.

This report synthesizes opportunities and challenges to incorporating wildfire within Montana’s land use planning framework. The suite of options and examples from Montana communities are described, highlighting the opportunities and challenges.

This report was prepared as part of [Community Planning Assistance for Wildfire](#) (CPAW), a program of [Headwaters Economics](#) and [Wildfire Planning International](#), which works with communities to reduce wildfire risks through improved land use planning. This report was prepared at the request of [Park County, Montana](#)—a 2017 CPAW community.

Figure 1: Land Use Planning Tools to Reduce Wildfire Risk



III. OPTIONS AND OPPORTUNITIES FOR ADDRESSING WUI DEVELOPMENT WITHIN MONTANA’S LAND USE PLANNING FRAMEWORK

Under Montana’s land use planning framework there are many options and opportunities for county governments, fire districts and fire service areas, and landowners to reduce the risk to life and property as a result of development in the WUI. This section identifies specific plans, regulations, revenue generation strategies, and voluntary approaches that are being employed in Montana.

Plans

State and federal laws provide for a range of plans that can be used to address public safety and development in the WUI. The plans discussed in this section—growth policies, neighborhood plans, community wildfire protection plans, pre-disaster mitigation plans, and open space plans—each have specific roles and advantages.

Growth Policies

A growth policy is a long-range, comprehensive city or county community development plan. Under [Section 76-1-601](#) of Montana Code Annotated (MCA), growth policies must include:

- Maps and text describing characteristics and features of the jurisdictional area;
- Projections for land use, population, housing, economic conditions, local services, natural resources, and other community development needs;
- Goals and objectives for addressing local challenges;
- A description of policies, regulations and other measures to be implemented to achieve the goals and objectives, as well as a timeline for implementation;
- A strategy for the development, maintenance, and replacement of public infrastructure, including fire protection facilities;
- A statement of how the governing body will coordinate and cooperate with other jurisdictions; and
- A statement of how the governing body will define the primary review criteria for subdivisions found in [Section 76-3-608\(3\)\(a\), MCA](#), including effect on public health and safety.

A growth policy may cover all or part of a local government’s jurisdictional area. A local government is not required to adopt a growth policy.

In addition to the requirements listed above, under [Section 76-1-601\(3\)\(j\), MCA](#) growth policies must include an evaluation of the potential for fire and wildland fire in the jurisdictional area, including whether there is a need to:

- Delineate the wildland-urban interface; and
- Adopt regulations requiring:
 - Defensible space around structures;
 - Adequate ingress and egress to and from structures and developments to facilitate fire suppression activities; and
 - Adequate water supply for fire protection.

Growth Policy Best Practices 

Growth policies should include:

- Maps and text showing the location of the WUI in relation to existing and projected development;
- Goals and objectives related to safety for residents and firefighters;
- A discussion of whether regulations are needed to address defensible space, access and water supply requirements;
- Specific infrastructure improvements and programs needed for safe existing and future development; and
- An implementation plan that includes partners, funding sources, and a timeline for implementation.

Although state statutes require growth policies to include a discussion of the elements cited above, the extent to which a local government addresses these topics is at the full discretion of the governing body. [\[76-1-601\(2\), MCA\]](#)

☞ See the discussion of Missoula County on [page 24](#) for an example of how a growth policy can directly address goals and actions for the WUI.

An adopted growth policy is not a regulatory document and a governing body may not withhold, deny, or impose conditions on any land use approval or other authority to act based solely on compliance with a growth policy. [\[76-1-605\(2\), MCA\]](#)

Nevertheless, the governing body still must be guided by and give consideration to the general policy and pattern of development set out in the growth policy in the construction of public ways, public structures, and public utilities (e.g., water supplies); authorization or construction of public facilities (e.g., roads, fire stations); and in adoption of zoning regulations [\[76-1-605, MCA\]](#) and subdivision regulations [\[76-1-606, MCA\]](#). Additionally, growth policies are an integral part of WUI planning efforts because they provide the legal basis and rationale for creating rules to address safe WUI development.

Creating a growth policy, which typically includes input from local fire districts and state and federal fire protection agencies, can be a great way to open or strengthen lines of communication and establish common priorities for fuels mitigation, community infrastructure improvements, homeowner outreach, and other projects designed to increase fire safety.

Neighborhood Plans

A growth policy may include one or more neighborhood plans, which must be consistent with the growth policy. [\[76-1-601\(4\)\(a\), MCA\]](#) A neighborhood plan is defined as “a plan for a geographic area within the boundaries of the jurisdictional area (i.e., city or county) that addresses one or more of the elements of the growth policy in more detail.” Under the auspices of a neighborhood planning authority, cities and counties can adopt detailed plans for various issues including residential development in the WUI. Like growth policies, zoning regulations must substantially comply with neighborhood plans.

☞ See the discussion of Lewis and Clark County’s Helena Valley Area Plan on [page 22](#) for an example of how a neighborhood plan can strategically address WUI development.

Community Wildfire Protection Plans

[Community Wildfire Protection Plans](#) (CWPP) are intended to promote collaboration and local action by identifying and prioritizing hazardous fuels reduction and treatment projects on federal and non-federal lands to protect at-risk communities and essential infrastructure. These plans give local decision makers and interested non-governmental parties the ability to define the WUI based on local conditions, to assess risks, and to articulate fuels reduction and other priorities.

CWPPs must meet three criteria:

- Be developed collaboratively between local governments, local fire departments/districts, state agencies such as the Montana Department of Natural Resources and Conservation, and federal agencies such as the USDA Forest Service and Bureau of Land Management;
- Identify and prioritize fuel treatments to reduce hazardous fuel areas; and
- Recommend steps that homeowners and communities can take to reduce the ignitability of structures.

Community Wildfire Protection Plans are authorized under the federal Healthy Forests Restoration Act (HFRA) of 2003. This legislation allows federal agencies to give consideration to the priorities of local communities as those agencies develop and implement forest management and hazardous fuel reduction projects. The HFRA authorizes expedited environmental assessment, administrative appeals, and legal review for hazardous fuels projects on federal lands, and also [provides guidance](#) for how federal funds may be distributed for projects on non-federal lands.

To take advantage of these opportunities, communities must first develop a CWPP. These plans may take a variety of forms, addressing and clarifying priorities for community preparedness, hazard mitigation, wildfire response, protection of critical infrastructure, and structure protection in the WUI. The HFRA emphasizes the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects, and prioritizes treatment areas identified by communities in a CWPP. Many local jurisdictions in Montana have developed and regularly update CWPPs in conjunction with federal agencies. [Lincoln County's 2013 update](#) and [Lewis and Clark County's 2015 update](#) provide good examples.

 See the discussion of Lincoln County's CWPP on [page 21](#) for an example of how CWPPs can help develop action plans and ensure accountability.

Pre-Disaster Mitigation Plans

The Federal Emergency Management Agency (FEMA) maintains a [Pre-Disaster Mitigation Program](#) designed to assist states, U.S. territories, federally recognized tribes, and local communities in implementing a sustained pre-disaster hazard planning, mitigation, response and recovery program. The goal is to reduce overall risk to local populations and structures from future hazards such as flooding and wildfire while also reducing reliance on federal funding. This program awards planning and project grants and provides opportunities for raising public awareness about preventing future losses before disaster strikes. Mitigation planning and project implementation are used to break the cycle of disaster damage, reconstruction, and repeated damage.

Program grants are funded annually by congressional appropriations and are awarded on a nationally competitive basis. FEMA requires state, territorial, tribal, and local governments to develop and adopt hazard mitigation plans as a condition for receiving certain types of non-emergency assistance, including funding for mitigation projects. Many Montana communities have adopted and update these plans. Butte-Silver Bow and the Town of Walkerville's 2016 [Pre-Disaster Mitigation Plan](#) provides a thorough example. Pre-Disaster Mitigation Plans typically include an analysis and plan for addressing many types of hazards, including flooding and hazardous materials incidents in addition to wildland fire.

Open Space Planning

Missoula, Ravalli, Gallatin, and Lewis and Clark counties have adopted open space bond programs designed to conserve important natural resource lands and waters. The money to support these programs is approved by voters through ballot initiative and is typically used to purchase conservation easements from willing private landowners. Conservation easements are voluntary agreements between a land owner and a land trust (or government entity) that permanently limit uses on the land to protect conservation values. Conservation easements in Montana are typically used to protect agricultural lands and important wildlife habitat.

In Montana and elsewhere, conservation easements are not commonly used to explicitly reduce wildfire risk or limit development in the WUI. To be eligible for funding, a landowner typically submits an application to the county to place a conservation easement on his or her property. The application is

scored by a committee using several criteria, such as public access, soil productivity, and other factors. Lewis and Clark County’s Open Lands Program’s criteria include “*how the project could help address fire risk*,” though it does not appear this is currently weighed heavily in scoring applications for use of open space bond funds. However, this provides an opportunity to address WUI development under the right circumstances.

Land Use Regulations

Montana law expressly establishes three types of regulations that counties can use to regulate development in the WUI: subdivision, zoning, and building codes. Each is described below.

Subdivision Regulations

All cities and counties are required to adopt regulations governing the division of land. [76-3-501, MCA] Among other items, subdivision regulations must provide for “the avoidance of subdivisions that would involve unnecessary environmental degradation and danger of injury to health, safety, or welfare by reason of natural hazard, including but not limited to fire and wildland fire, or the lack of water, drainage, access, transportation, or other public services or that would necessitate an excessive expenditure of public funds for the supply of the services.” [76-3-501(9), MCA]

Montana Code Annotated Section 76-3-504(1)(e) requires subdivision regulations to “provide for the identification of areas that, because of natural or human-caused hazards, are unsuitable for subdivision development. The regulations must prohibit subdivisions in these areas unless the hazards can be eliminated or overcome by approved *construction techniques* or other *mitigation measures*...” [emphases added]:

- **Construction techniques.** Administrative Rules of Montana Sections 24.321.301 through 24.321.313 specify the construction techniques that may be included in subdivision regulations, such as making sure addresses are clearly visible from the primary access road, the use of fire-resistant roof design and construction materials, fire-resistant windows, vents, doors and gutters, as well as other items. This is a unique section of Montana subdivision law in that the legal authority for a local government to regulate the subdivision of land is often thought to be extinguished once the final plat is filed – this is when the division of land is complete, legal title to lots may be transferred, and when homes are typically built. In practice, how construction techniques are to be required on subdivided lots after a final plat is filed is not clear: the Montana Subdivision and Platting Act does not explicitly grant local governments without self-governing powers the authority to administer a post-final plat development permit system.¹ The most likely avenue is for a local government to condition preliminary plat approval upon recording covenants that address construction techniques as provided in the Administrative Rules cited above, and that are included in the local subdivision regulations. [Also see 76-3-306, MCA]

Subdivision Regulation Best Practices

Subdivision regulations should include:

- A site-specific risk assessment form for WUI developments that includes an analysis of physical characteristics (vegetation, slope, etc.), access, water supplies, and other factors that is filled out by a qualified third party;
- The construction techniques authorized by the Administrative Rules of Montana that may be applied as conditions of preliminary plat approval and implemented through covenants;
- Specific mitigation measures (secondary access, fuels reduction, etc.) designed to reduce risk from wildland fire that are to be implemented prior to final plat approval; and
- Design standards for roads, bridges, water supplies, home addressing, road signs, and other elements developed in consultation with local fire protection authorities.



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- **Mitigation measures.** Because one of the primary criteria for evaluating preliminary subdivision applications is the subdivision’s effect on public health and safety, local governments have discretion to require subdividers to take steps to mitigate potential impacts. Depending on site-specific conditions, this might mean reducing vegetative fuels on a property, providing a secondary access road, developing water supplies for fire protection, installing road turnouts or turnarounds, and other mitigation measures to reduce the threat of wildland fire. The intent is to prepare a subdivision for future lot development when the initial conditions within the subdivision are reasonably safe. These mitigation measures should be carried out prior to final plat filing.

Subdivision regulations typically include locally developed standards for roads, road signage, lot addressing, bridges and culverts, water supplies, and other public requirements. Under [76-3-510, MCA](#), local governments are authorized to require subdividers to pay or guarantee payment for part or all of the costs of extending capital facilities related to public health and safety, including roads and water supplies. The improvements must either be installed, or a payment guarantee must be in place, prior to final subdivision plat approval when lots can be sold and developed. Montana subdivision law also provides for coordination with agencies and service providers such as fire districts to assess and make recommendations on issues such as fire safety.

 See the discussion of Lewis and Clark County’s subdivision regulations on [page 23](#) for an example of how design standards can help address fire safety.

Zoning

Zoning is used to regulate development over time. Montana land use planning statutes authorize counties and municipalities to adopt zoning with the express purpose of providing for public health, safety, and general welfare. Zoning is optional, meaning local governments are not required to adopt it.

Zoning regulations range in detail and complexity: zoning may be highly prescriptive and detailed, regulating lot sizes, land uses, and a host of parameters—or zoning may be very simple, regulating only the density of development, for example, or a very limited range of parameters. Zoning has the weight of law, meaning land development must *strictly comply* with zoning rules and procedures as opposed to *substantially comply*, as with growth policies and neighborhood plans.

There are two main types of county zoning—Part 1 and Part 2:

- **Part 1** county zoning is also called “citizen initiated zoning” because it first requires a petition signed by at least 60 percent of the property owners within the district. Part 1 zoning must follow a “development pattern,” which is akin to a neighborhood plan for the area, and also must substantially comply with the growth policy. Boards of county commissioners adopt this type of zoning, which is administered by a county planning and zoning commission.
- **Part 2** county zoning must be made in accordance with the growth policy. Among the criteria for establishing Part 2 zoning, the regulations must be designed to secure safety from fire and other dangers, and promote the public health, safety, and general welfare [\[76-2-203, MCA\]](#). Boards of county commissioners adopt this type of zoning after review and recommendation by a planning board or zoning commission.

Under both Part 1 and Part 2 zoning, county governments may require permits as a prerequisite to construction and may enforce the regulations.

Counties and municipalities may also adopt interim zoning to address an emergency that involves public health, safety, morals, or general welfare. Interim zoning may be in effect for up to two years (counties)

or two-and-a-half years (cities) while the governing body investigates potential options and pursues a course of action to mitigate or remedy the emergency.

Zoning can be tailored specifically to address WUI issues. The City of Helena has adopted a wildland-urban interface overlay zone encompassing the entire city. In [City of Helena v. Svec](#), the Montana Supreme Court indicated a WUI zoning district is a valid use of zoning authority. However, the court found that zoning cannot be used to regulate building materials (such as roofing materials) that are expressly governed by state-adopted building codes. If a local government adopts zoning to address development in the WUI, it is necessary to avoid items that are included in building codes such as roofing materials, windows, and vents. Instead, zoning could be used to designate minimum lot sizes or densities in the WUI (with the potential for a density bonus where homes are located on portions of the property outside of the WUI), fuels reduction requirements, and other elements.

Building Codes

The Montana Legislature has authorized cities, towns, and counties to locally adopt and enforce those building codes that have been adopted by the Montana Department of Labor and Industry (DLI). [[50-60-301, MCA](#)] The Uniform Building Code, International Building Code, International Residential Code, and the Wildland-Urban Interface Code (with significant modifications) are adopted under [Title 24, Chapter 301](#) of the Administrative Rules of Montana and may be adopted by local governments. The Wildland-Urban Interface Code primarily addresses fire-resistant construction materials such as noncombustible roof coverings, walls, windows, vent coverings, and similar matters, but also includes a wide ranging appendix covering vegetation management and certain land use practices.

See the discussion of Missoula County's process on [page 25](#) for an example of how fire safety in structures can be addressed through the use of a building permit process.

Building codes are administered through a permit process. According to the Montana Department of Labor and Industry [website](#), only seven of Montana's 56 counties have adopted building codes² and none has adopted the WUI code. Why have so few counties adopted building codes or the WUI code? General resistance to regulation and personnel capacity issues are likely reasons.

Where local governments have not adopted building codes, DLI administers building codes (including the WUI code) for all commercial structures, plumbing and electrical permits for all structures, and also construction materials and techniques for residential structures consisting of five or more units. However, because much of the development in the WUI consists of single-family residential homes, DLI does not have authority to address fire-related construction issues in most instances.³

Revenue Generating Strategies

Montana's planning framework provides the authority for local governments to develop and implement impact fee programs to help fund capital improvements needed to serve growth, and also to adopt rural improvement districts as a way to generate revenue to fund public improvements within specific geographic districts. These strategies are described below.

Impact fees

Impact fees are charges that local governments may collect to offset the costs of providing capital improvements made necessary by new development. Montana Code Annotated Section [7-6-1601 through 7-6-1604](#) authorizes cities, towns, and counties to develop and administer impact fee programs. Impact fees may be used to cover the costs of providing additional water supplies, transportation improvements, fire protection facilities, and other items. Impact fees may be used to help pay for land and facilities with

a useful life of 10 years or more, but may not be used to help pay for personnel or operations and maintenance.

Developing and administering an impact fee program is fairly complex. Local governments are required to closely evaluate existing conditions and levels of service within a specific geographic area, forecast future needs, identify the capital improvements necessary to meet those needs, and establish a methodology and time period over which the governing body will assign the proportionate share of costs for expansion. In anticipation of growth, several Montana cities have adopted impact fees for fire protection. Only Gallatin County has adopted fire-protection-related impact fees but, for various reasons, the county plans to eliminate them in the near future.⁴

Rural Improvement Districts

Under [Title 7, Chapter 12, Part 21, MCA](#), local governments are authorized to establish rural improvement districts (RIDs) for the construction or maintenance of many types of improvements that will benefit properties within a geographic district, including land, structures, appliances, and hydrants for fire protection. Improvement costs are assessed on property taxes. Landowners have the right to protest and may void the establishment of or costs associated with the district if sufficient protest votes are received. An example is Lewis and Clark County, which currently uses RIDs to ensure all subdivision roads and water supplies are maintained over time.

Voluntary Measures

Voluntary approaches for reducing wildfire risk in the WUI tend to focus on providing education and incentive-based programs. In general, both approaches should work in concert with one another to realize wildfire mitigation on privately owned lands. Below are examples of commonly used education and incentive programs in Montana and the Rocky Mountain West.

Education and Outreach

In many cases landowners may not be aware of the risks associated with living in the WUI or they may perceive their risk to be lower than it is. Conversely, there are landowners who may have a perception of wildfire risk but they are hesitant to reduce hazardous fuel build-up. In any case, creating awareness of wildfire risk requires educating homeowners on the potential risk they face and providing guidance on what they can do to reduce that risk. This is especially important in areas with high concentrations of second homes where homeowners may be unfamiliar with the risks associated with wildfire.

Perhaps the best-known education program is the National Fire Protection Association's [Firewise USA™](#) program. Firewise provides resources to help communities and individuals take responsibility for preparing their neighborhoods and homes for wildfire. Many other education and outreach programs are available including [FireSafe Montana](#), [Fire Adapted Communities](#), the Montana Department of Natural Resource and Conservation's [Guidelines for Development within the Wildland-Urban Interface](#), and others.

In many locations across Montana, local fire districts offer free evaluations of private properties, meet with neighborhood associations, and provide free seminars on how to prepare homes and neighborhoods to reduce wildfire risks.

Incentives

Another common voluntary approach to reducing wildfire risk in the WUI is through incentive programs. One of the most widely used incentive programs in Montana (and the West) is cost-sharing grants for hazardous fuel reduction on private lands. These programs are generally administered by local conservation districts or fire districts and provide 50/50 cost share grants to private landowners and

communities seeking to reduce hazardous fuel build-up and/or create defensible space around structures. Cost-sharing grants have been used successfully by many communities in Montana.

In Lewis and Clark, Broadwater, and Jefferson counties, the [Tri-County FireSafe Working Group](#) has operated a successful cost-share grant program since the 1990s. The program assists landowners in creating defensible space around homes in the WUI and has also undertaken subdivision-wide protection projects with private landowners. Several factors have contributed to the success of the Tri-County FireSafe Working Group's grant program, including:

- Dedicated staff to manage and champion the program;
- A marketing campaign including TV, print, and radio advertisements;
- Political support from elected officials;
- Availability of knowledgeable and qualified contractors;
- Coordination with local fire districts on outreach to homeowners and homeowner associations; and
- Site visits with homeowners to explain the importance of fuel reduction and working with them on preserving their interests with respect to maintaining privacy, view-sheds, shade, and heritage trees. For such a program to be successful it is critical that homeowners buy into the plan to reduce fuels on their properties.

¹ It may be possible for a local government with self-governing powers to enact a post-final plat development permit system. While nothing in the Montana Subdivision and Platting Act specifically authorizes a permit system, there is nothing explicitly prohibiting it, either. A local government with self-governing powers may exercise any authority not prohibited by the Montana Constitution, law, or the governments' charter. [\[Mont. Const. Art. XI §6\]](#)

² The counties are Anaconda/Deer Lodge, Butte-Silver Bow, Deer Lodge, Missoula, Pondera, Richland, and Toole.

³ Cook, David, Chief, Montana Department of Labor and Industry Building Codes Bureau, personal communication, May 17, 2017.

⁴ Johnson, Randy, Manager, Gallatin County Planning Department, personal communication, July 7, 2017.

IV. EVALUATION OF THE MONTANA PLANNING FRAMEWORK

Advantages and Disadvantages

In Montana, counties typically use subdivision regulations as the primary means to address development in the WUI. Subdivision regulations can be used to effectively prepare a new neighborhood for occupancy by requiring an initial assessment of site conditions and, when warranted, requiring vegetation clearing, development of adequate roads and water supplies, use of fire resistant construction techniques, and initial coordination with the local fire district.

Like all the options described in Chapter III, using subdivision regulations to address WUI development also has disadvantages. For example, after a water supply for the subdivision is installed, who will maintain it and make sure it is ready to go when a fire starts or spreads into the subdivision? Will there be a coordinated effort to manage vegetation along roads over time to make sure emergency responders can access the homes when necessary? If a homeowner association is charged with these tasks, is it realistic to expect they will be carried out? If not, is it simply the homeowners' problem or does the county have some role in protecting public health and safety? After all, when wildland fire happens, public tax dollars are spent on response. Would it be cheaper and more effective to focus on prevention?

Table 2 below lists advantages and disadvantages of each of the WUI planning options described in the previous chapter. It is not meant to be comprehensive, but provides a quick look at various options.

PLANS	ADVANTAGES	DISADVANTAGES
Growth Policies	State law lays out a clear path for what a growth policy must contain, including an assessment of WUI issues and needs	Does not have the weight of law (i.e., is not a regulatory document), but must be “substantially complied with”
	Can be general or specific, as determined by the community	
	Provides an opportunity to discuss risks and improvement projects with federal and state officials, fire districts, and landowners	
	Provides the legal foundation for land use decisions and regulations	
Neighborhood Plans	Can focus on specific geographic areas such as the WUI, and can focus on specific issues such as development in the WUI	Does not have the weight of law (i.e., is not a regulatory document), but must be “substantially complied with”
Community Wildfire Protection Plans	Developed collaboratively between local governments, fire districts, and state and federal agencies	Must be updated regularly
	Identifies fuels reduction priorities on federal and non-federal lands and helps decide how additional federal funds may be distributed	It is a plan, not a regulation, so no consequences if the plan is not implemented
	Expedited federal environmental and legal review	
Pre-Disaster Mitigation Plans	Focuses on several hazards such as flood, fire, earthquake, hazardous materials, etc.—more “bang for the buck”	Because of the widespread nature of the plan, it could focus less on WUI issues
	Maintains funding eligibility for federal disaster relief	It is a plan, not a regulation, so no consequences if the plan is not implemented

LAND USE REGULATIONS	ADVANTAGES	DISADVANTAGES
Subdivision Regulations	Can be used to set up new subdivisions in a fire-safe manner, with initial fuels mitigation, a safe road network, street signs, water supplies, etc.	There is no regulatory mechanism to ensure water supplies and vegetation are maintained over time
	Can include certain construction techniques to ensure homes are built in a fire-safe manner	Covenants, which may not be adhered to, are necessary to ensure the construction techniques are implemented
	Because every jurisdiction is required to adopt subdivision regulations, WUI issues in new subdivisions will be addressed to some degree	Not comprehensive—the requirements only apply to new subdivisions while WUI development issues also include existing lots and structures
Zoning	Can be very detailed or relatively simple, as determined by local decision-makers	Can be politically difficult to adopt zoning in rural Montana
	Equal treatment—the requirements could apply to all new development the WUI	Requires permit processes, staffing, and ongoing administration
	The use of zoning to address public health and safety issues is well supported by state law and case law	County zoning cannot include items that are included in building codes (e.g., roofing materials, windows, vents, etc.)
Building Codes	Equal treatment—the requirements could apply to all new development	Can be politically difficult to adopt building codes in rural Montana
	Address construction techniques such as roofing materials, windows, vents, etc.	Requires permit processes, staffing, and ongoing administration
REVENUE GENERATING STRATEGIES	ADVANTAGES	DISADVANTAGES
Impact Fees	New development pays its portion of the costs of necessary capital improvements up front	Can only be used for capital facilities with a life of 10 years or more; cannot be used for personnel or operations and maintenance costs
		Complex to develop and administer
		Fees can only be used to address impacts of new development, not to pay for existing needs
Rural Improvement Districts	Can be used to improve and maintain roads, water supplies, fire stations, etc., in a geographic area or district	Can be complex to administer, especially if there are many ongoing RIDs
	Apportions the costs among those who benefit	Not comprehensive—only one district or improvement at a time
	Charges are collected with property taxes	
VOLUNTARY MEASURES	ADVANTAGES	DISADVANTAGES
Education and Outreach	Landowners who participate are likely to take action to protect their properties	Not comprehensive—only a portion of WUI landowners may participate
	WUI education information is readily available	Labor intensive—vegetation must be managed on a regular basis to reduce risk
Incentives	Financial assistance to landowners	Tax dollars to pay for incentives must come from grants or other programs
	Contains an education component	

Comparisons with Other Rocky Mountain States

In the Rocky Mountain West, approaches to addressing development in the WUI differ from state to state and location to location. Like Montana, many local jurisdictions address development in the WUI through subdivision regulations in the form of standards for access, road design, and water supply.

As homes are lost to wildfire each year, cities and counties exposed to the threat of wildfire are increasingly looking to address wildfire preparedness in a more comprehensive way through hazard mapping, requirements for vegetation management on new development, and through zoning and building codes.

Following are some western examples of statewide legislation addressing the WUI, as well as examples from local jurisdictions that have embedded WUI requirements into their development review processes. In addition, several further resources can help Montana communities learn from actions being taken in other places. A [2016 report](#) profiled five urban areas in the West that are adopting innovative strategies. Communities participating in the [Community Planning Assistance for Wildfire](#) program (which is funded by the U.S. Forest Service and private foundations, and which funded this research) is working with 17 cities and counties in the West to provide customized recommendations and strategies to reduce wildfire risk through land use planning.

Examples of State Legislation

Arizona

Arizona does not have a statewide WUI code, nor does state law mandate local governments to adopt regulations that address development in the WUI. However, Arizona state law gives local governments the discretion to adopt model WUI codes from a “national or international organization or association for mitigating the hazard to life and property” [\[ARS 9-806\]](#), which several jurisdictions have used to adopt local WUI codes adapted from the International WUI code.

Colorado

Similar to Arizona, Colorado does not have a state WUI code or mandate for local governments to adopt WUI regulations. However, Colorado state law gives broad authority for local governments to plan for and regulate the use of land, specifically by “Regulating development and activities in hazardous areas...” [\[CRS 29-20-104\]](#). Additionally, Colorado state law directs local governments and utilities owning lands in the WUI to use mitigation measures to reduce the potential impact from wildfires. The Colorado State Forest Service has developed a statewide WUI map which provides risk ratings as well as fire intensity potential for the entire state. Several local jurisdictions have used this map to develop more locally refined maps that show low, moderate, high, and extreme wildfire hazard areas.

Utah

While Utah does have a state WUI code, it does not mandate local governments to adopt local WUI regulations. However, local jurisdictions are responsible for wildland fire costs in their jurisdiction if they do not enter into a cooperative agreement with the Utah Division of Forestry, Fire and State Lands and adopt a wildland fire ordinance based on minimum standards in the state’s WUI code. [\[UCA 65A-8-203\]](#) In this sense, Utah provides a strong financial incentive for local jurisdictions to adopt and enforce local WUI regulations.

Local Examples

Eagle County, Colorado

Eagle County, Colorado has had [wildfire regulations](#) in place since 2003, which provide standards for reducing the impacts of wildfire on human life and property and facilitating access by firefighters. Eagle

County's wildfire regulations apply to all new development, new construction, and additions to existing buildings.

In Eagle County, subdivision, planned unit development, and special use permit applications are required to include a vegetation management plan prepared by a natural resource professional with expertise in wildfire mitigation. The vegetation management plan is required to include a site analysis and map with the following elements:

- A map identifying timber stands, vegetation, and location of water resources for fire suppression;
- Wildfire mitigation actions – e.g., thinning, creation of fuel breaks, and/or vegetation removal; and
- A schedule identifying how wildfire mitigation will occur and the entities responsible for implementing the plan and maintaining improvements.

Eagle County's wildfire regulations also include building requirements that apply to all new construction and additions in unincorporated areas that have a moderate, high, and extreme wildfire hazard rating. Before a building permit is issued, applicants are required to receive a site-specific wildfire hazard rating from the Colorado State Forest Service (CSFS), local fire department, or county staff. Depending on a site's wildfire hazard rating, creation of defensible space may be required ranging from 70 feet on flat sites up to 210 feet for sites located on slopes over 40 percent.

Prior to the issuance of a building permit, two site inspections are required: one to establish the required defensible space and identify vegetation to be removed or pruned and a second to verify that the defensible space requirements have been completed. Additionally, sites with a moderate, high, or extreme wildfire hazard rating are subject to additional requirements for roofing material, decking, soffits and siding. Before a certificate of occupancy is issued, a final site inspection is required to ensure all required wildfire mitigation measures have been completed.

As part of the development review process, applications are referred to CSFS for review. Depending on the wildfire hazard rating, CSFS provides comment on the potential effectiveness of mitigation measures in the vegetation management plan and provides additional recommendations as needed. The Eagle County governing body considers CSFS recommendations and applies them as conditions of approval at its discretion.

Douglas County, Colorado

Douglas County, Colorado address WUI development through its [zoning code and map](#). Douglas County uses a wildfire hazard overlay district as well as on-site inspections by county professional foresters to identify wildfire hazards on and around potential building sites. New development on sites located in the overlay district, or with a staff-identified hazard rating showing significant fire potential, must comply with the requirements in the wildfire hazard overlay district as well as Douglas County's wildfire mitigation standards. Requirements include the creation and maintenance of defensible space, road and driveway design standards, minimum requirements for emergency water supply, and building design standards for roofing, siding, and ventilation. In the event the county forester determines fuel mitigation work is necessary, a wildfire mitigation plan is required. The plan identifies vegetation type and fuel load and assesses slope and aspect to determine the potential for wildfire spread. Furthermore, the plan is required to include a prescription for reducing the potential wildfire hazard and intensity.

Douglas County also develops an annual fire risk assessment, education, and action plan to reduce risk of fire throughout the county. The county wildfire mitigation specialists also perform assessments and work with landowners free of charge to create fuels reduction plans for private properties. Douglas County's approach seems to be the gold standard for addressing development in the WUI because it is

comprehensive, including regulatory requirements and also education and assistance to private landowners.

Flagstaff, Arizona

The City of Flagstaff, Arizona has adopted innovative [strategies to reduce wildfire risk](#), several of which are profiled in a [2016 report](#) by Headwaters Economics. One strategy is a locally adopted WUI code based on the International WUI code with locally specific amendments. In amending the International WUI code to fit their local context, Flagstaff's WUI code prohibits all wood roofs (regardless of fire-rating); uses "*flame spread rating*" for exterior building materials instead of "*flame resistance rating*"; and requires defensible space for the *entire* property on sites with a moderate, high, or extreme hazard rating. Flagstaff's WUI code applies to all areas designated as interface zones on the city's WUI map, which includes most of the city. One of the key factors of success in Flagstaff's WUI code was that in the lead-up to the adoption of the WUI code, the Flagstaff Fire Department was proactive in ensuring a smooth adoption process by working with the Community Development Department to develop requirements for hazard mitigation on all properties prior to development, which helped provide a foundation for the WUI code. In addition, the Fire Department engaged in extensive stakeholder outreach with homebuilders, real estate and insurance agents, engineers, and others, with many of the comments received making it into the adopted WUI code.

In implementing the WUI code, Flagstaff uses the city-wide Forest Stewardship Plan and site-specific vegetation management plans as part of the permitting process. The Forest Stewardship Plan provides high-level guidance, at the city level, on forest treatments needed to protect the community from wildfire and restore forest health. At the site level, all new construction and subdivisions are required to receive a wildfire hazard severity assessment from the Flagstaff Fire Department prior to issuance of a permit. The hazard assessment takes into account access, topography, water availability, and vegetation.

Additionally, all applicants are required to submit a vegetation management plan that documents current wildfire hazards, prescription for defensible space, and a plan for ongoing maintenance. Site inspection and plan review is conducted by both the building and fire department staff.

Flagstaff also has a resource protection overlay zone that provides standards for protecting natural resources including floodplains, steep slopes, and forests, with one of the eight goals being to "*manage healthy and sustainable forests to reduce fire risk.*" To avoid conflict between leaving trees for resource protection and removing trees for reducing wildfire risk, Flagstaff's WUI code is applied before the resource protection standards, so that wildfire risk reduction is done prior to application of the resource protection standards.

Ada County, Idaho

Ada County is Idaho's most populous county; the City of Boise is the county seat. In response to development pressure in unincorporated areas of the county outside of Boise, Ada County adopted a WUI overlay district and accompanying regulations as part of the [zoning code and map](#). The regulations apply to all new subdivisions, new private roads, and new construction located in the WUI overlay.

Requirements for new construction include a 50-foot defensible space around habitable structures and ongoing maintenance of the defensible space. The regulations provide detailed requirements for what is allowed within the defensible space. For new private roads and driveways, adjacent vegetation is required to be cleared five feet on either side for driveways or the area of the travelled way plus five feet on either side for private roads. Additional new private roads are required to provide emergency vehicle turnouts at a maximum spacing of 700 feet. New subdivisions are required to have fire hazards and emergency access roads evaluated by a licensed professional engineer. The evaluating engineer is also required to

prepare a fire protection plan for the proposed subdivision consisting of an evaluation of fire hazard and fuel loading, requirements for roadway design, and requirements for fire-resistant construction.

Teton County, Wyoming

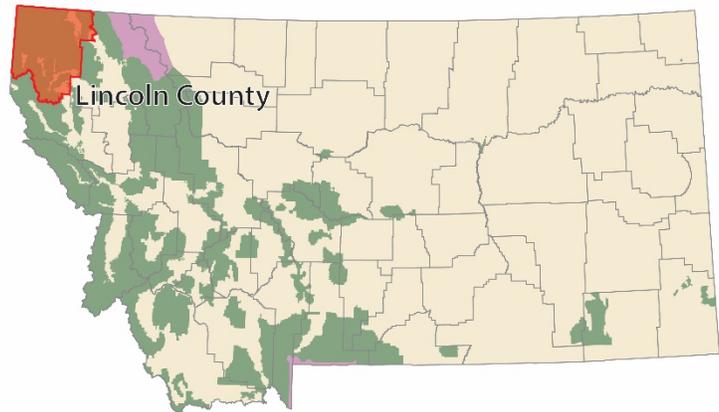
Teton County, Wyoming, home of the Town of Jackson, has adopted the international [WUI code](#), using it to address development in the WUI through the building code process. As part of the building permit application process, applicants must state whether the property is located in the WUI based on an online map available on Teton County's website. For properties in the WUI, applicants are required to fill out and submit a WUI review application to the County Fire Department. As part of the WUI review application, the fire department gives the property a fire hazard rating, which, in combination with the amount of defensible space that can be established and water availability, is used to calculate the ignition-resistant construction required for the structure. Once the fire hazard rating and ignition-resistant construction requirement is determined, the fire department sends a memo and score sheet to the applicant and building department for processing the building permit application.

V. INNOVATIVE EXAMPLES IN MONTANA

While most Montana counties rely on subdivision review to address WUI development issues, some counties have also taken other innovative approaches. Below are examples from Lincoln, Lewis and Clark, and Missoula counties.

Lincoln County

Lincoln County is situated in a heavily forested area that is dominated by national, state, and corporate timberlands. The county has sufficient precipitation to develop an abundance of fuels and has significant fire history, with forest fire being a regular part of the landscape. To address risks associated with WUI development, Lincoln County uses a combination of planning, regulations, and public education and outreach.



Community Wildfire Protection Plan

Lincoln County has a FireSafe Council consisting of federal, state, and local partners that has developed and updates a CWPP. The [2013 CWPP update](#) includes a map and definition of the WUI, identifies community values at risk (public and firefighter safety, wildlife habitat, recreational facilities, etc.), and prioritizes fuels reduction projects based on potential fire severity maps. A unique element of the 2013 CWPP is it provides an honest evaluation of whether the original (2005) CWPP goals and objectives were met, describing reasons why some were and some were not. The 2013 CWPP also provides an action plan and assigns responsibilities to address updated goals and objectives.

Lincoln County Subdivision Regulations

Under [Lincoln County's Subdivision Regulations](#), all proposed subdivisions in unincorporated areas must undergo a fire risk assessment conducted by a county forester prior to preliminary plat review. The county forester applies a rating of low, moderate, or high risk to each subdivision based on several factors including historical ignition patterns, physical condition of the site and surroundings, fire suppression capabilities available in the area, road access, and available water resources for fire suppression. The county forester then provides recommendations used by the county planners and governing body during subdivision review. When mitigation measures like fuels reduction and water supplies are required, the forester conducts a final inspection to ensure the measures were appropriately implemented prior to final plat filing. The design and improvement standards of the subdivision regulations include safety measures such as secondary access, water supply specifications, and other items. Additionally, Lincoln County typically requires private covenants and road and water supply maintenance agreements that cannot be altered without county approval, as well as WUI guidelines published by the National Fire Protection Association that are appended to the subdivision covenants.

Public Education and Outreach

Several Lincoln County communities have become recognized as Firewise Communities™, with residents working with federal, state, and local entities and private foresters to use cost-matching grants to reduce fuels within and surrounding their private properties. Local and federal officials have hosted public education programs to provide free information to residents, including schoolchildren. The Lincoln County FireSafe Council also provides homeowner resources on its [website](#). Additionally, the county

forester and other officials perform free risk ratings for property owners, which resulted in 955 assessments and 1,618 acres of fuels reduction work between 2001 and 2013.

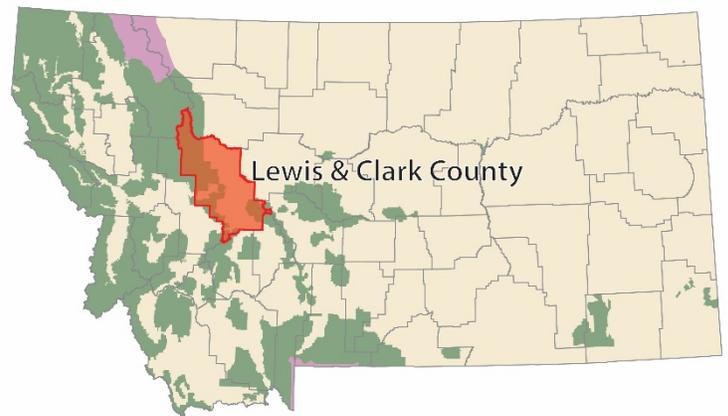
Lewis and Clark County

Lewis and Clark County has taken a multi-pronged approach to addressing development in the WUI that includes plans, regulations, and RIDs.

Lewis and Clark County Growth Policy

The [2004 Lewis and Clark County Growth Policy](#) recognizes the county is situated in a fire-prone ecosystem and so the document contains several goals and policies related to WUI issues. The goals and policies contain four main emphases:

- Capacity building (additional training, equipment, facilities, personnel);
- Intergovernmental and interagency cooperation;
- Code development and enforcement; and
- Public outreach.



The growth policy identifies six geographic planning areas and includes locally-specific actions to be taken in those areas. The fire-related actions include ensuring adequate fire protection, expanding existing fire districts, finding additional volunteer firefighters, and purchasing more equipment. The growth policy also includes a fuel hazard rating map that is used during subdivision review.

Helena Valley Area Plan

The Helena Valley contains 95 percent of the county’s population and has experienced 98 percent of the development activity over the past decades. Over the next two decades about 10,000 more people are projected to move into the valley, requiring roughly 4,000 more housing units. Lewis and Clark County has struggled to manage growth, so in 2014 county officials began taking a more detailed look into community development needs. The result is the two-volume [Helena Valley Area Plan \(HVAP\)](#), which was adopted in 2016 as a neighborhood plan component of the county’s growth policy.

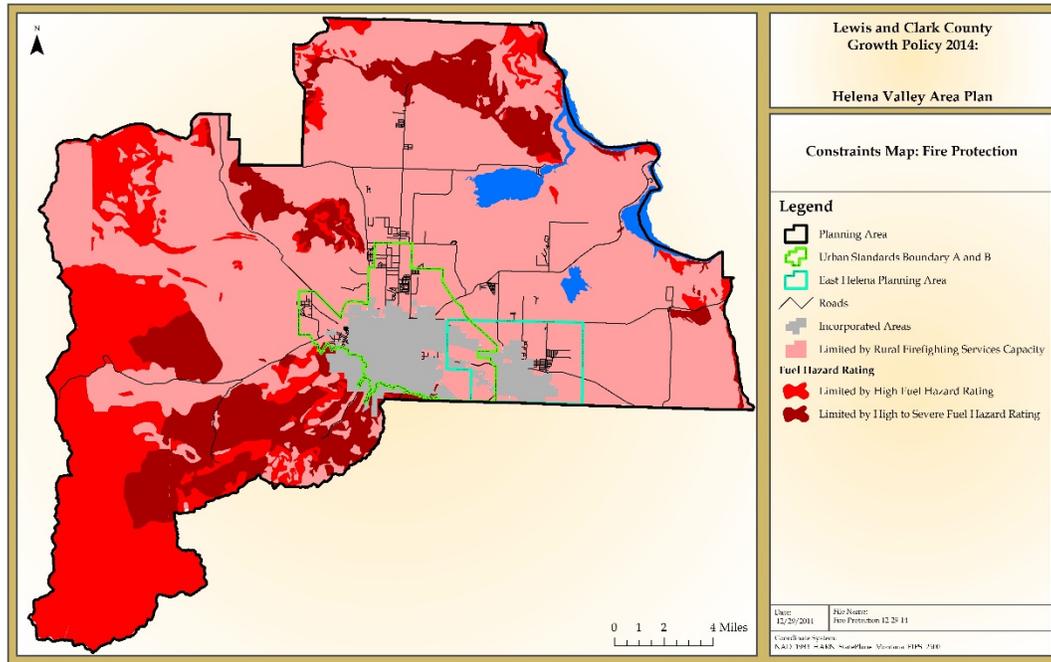
The HVAP uses a constraints-based approach to planning, eliminating certain areas from consideration for intensive development due to natural or human-caused limitations. The constraints are water availability, wastewater management, roads, fire protection, and flooding. Summarizing the wildland fire-related issues, the HVAP states, “Fuel hazards in specific areas are considered high to severe. Managing fuels on private lands is largely left to the individual landowner, but the cost of fighting fires is a burden that must be supported financially by the public. As more development occurs in these areas of high fuel hazards, the cost of fighting fires, the likelihood of fires, and the risks to life and property will increase.”

To address fire protection and WUI issues in the rural portion of the planning area, the HVAP calls for the following combination of approaches:

- Adopt zoning that limits development density (minimum lot size of one unit per 10 acres with cluster development option);
- Adopt a larger minimum lot size for high-hazard areas (minimum lot size of one unit per 20 acres possibly with cluster development option);

- Adopt WUI overlay zoning to address all development (not only new subdivisions) through a permit process;
- Research steps to becoming a Firewise Community™ and bring some of these principles into the zoning program;
- Work with the Tri-County FireSafe Working group and its local affiliates to integrate the rural growth management program with regional fire protection efforts; and
- Develop a plan for regional water sources for fire protection.

As of August 2017, implementation of the HVAP is only beginning, but the political will to implement the plan appears to be strong.



Subdivision Regulations

[The Lewis and Clark County Subdivision Regulations](#) are the primary means used to regulate development in Lewis and Clark County. The design and improvement standards in Chapter XLS and the fire protection standards in Appendix K are most relevant to a discussion of fire safety issues.

The design and improvement standards include specific requirements for building sites, roads and road maintenance, culverts, water supplies, and other matters. Several components of the design standards are intended to address fire safety issues such as:

- Building sites are not allowed on slopes greater than 30 percent or in severe fire hazard areas;
- The maximum length of road ending in a cul-de-sac or hammerhead turnaround is typically 700 feet (depending on topography, fuels, and future development potential adjacent to the site);
- Each major subdivision (six or more lots) and subsequent minor subdivision must have at least two access routes unless the road is 700 feet or less and is not determined to be a safety threat;
- Subdivision roads are maintained through a public RID;
- Standard street signs are required and all lots are addressed; and
- Utilities must be placed underground.

The fire protection standards in Appendix K require:

- A fire protection plan;
- Water supply for fire protection (volume dependent on lot sizes and number of homes) with a perpetual access easement;
- The subdivider to establish or join an RID that ensures continual operation, annual testing and maintenance of water supply and fire protection features, and annual assessments;
- Two accesses for all major and subsequent minor subdivisions;
- A vegetation management plan and potential fuels modifications; and
- Possible fire protection covenants to be filed with the final subdivision plat.

Lewis and Clark County typically requires roads and road signs, water supplies, and other improvements to be installed and fuels modified by the subdivider (depending on conditions) prior to final plat filing. That means new subdivisions should have a reasonable level of initial fire safety, but ongoing fuel buildup monitoring and maintenance is left up to the lot owners. As the HVAP discusses, this approach is limited in terms of effectiveness for several reasons including the fact that ongoing fuels maintenance is not necessarily practiced.

Rural Improvement Districts

Lewis and Clark County relies on RIDs to maintain subdivision roads and water supply systems; currently almost 100 RIDs are under county management. Under county policy, more than one subdivision can be served by a single emergency water supply, with maintenance costs and responsibilities apportioned throughout the district. The management of RIDs is well established and undergoes regular improvement. For example, an engineering firm has been compiling standard water supply specifications and typical maintenance costs that can be used to develop water supplies and fairly apportion costs in a standard manner across districts. The county is also in the process of separating out fire protection components from road maintenance components to more fairly apportion costs among beneficiaries.

Missoula County

Like many counties in Montana, Missoula County has chosen to address WUI development issues through a combination of approaches that includes long-range planning and subdivision regulations. Unlike most counties, Missoula County has also adopted building codes that in part address structural fire safety issues. Because the use of subdivision regulations to address WUI development issues has been detailed in previous sections, this section will focus on Missoula County's more unique approaches with long-range planning and building codes.



Missoula County Growth Policy

[Missoula County's 2016 Growth Policy](#) update addresses issues surrounding WUI development head on by stating: "Trends over the last 20 years have shown increased frequency and intensity of wildfires and increased costs to control wildfires and protect structures. This trend is likely to continue. It is estimated that wildfire activity will double in the Rocky Mountains by 2050 due to the effects of climate change including altered vegetation and less precipitation. There is also increased development pressure in fire hazard areas. These trends indicate that additional money, equipment, water supplies and personnel for

the protection of lives and property are likely to be needed.” To address this issue, the growth policy contains a WUI map and several goals, objectives, and actions including:

- Discourage development in hazardous areas and areas where public and emergency responder safety is compromised;
- Explore zoning regulations to guide growth to appropriate locations (outside of hazard areas);
- When development in hazardous areas does occur, take appropriate measures to limit safety risks and ensure emergency personnel have sufficient resources to respond safely and effectively;
- Adopt development regulations that require the best possible hazardous mitigation techniques, including Firewise™ construction, multiple accesses, etc.;
- Provide information to landowners regarding development in hazardous areas (evacuation plans, Firewise™ development practices, etc.). Explore the possibility of providing risk disclosure statements; and
- Support efforts such as cost sharing to help landowners reduce fuels and take measures to make their properties more resilient to hazards.

Risk and Development Area Mapping

Missoula County is currently updating its CWPP. As part of the update, the county and its partners have developed a wildfire risk map that includes both predicted fire severity and fire frequency to provide a more complete view of wildfire risk. The map identifies wildfire risk in three different modeled environments (wildland, intermix, and interface), which differ in regard to the presence of structures, roads, and other infrastructure as well as the availability of vegetation. The wildland encompasses areas with limited development such as national forest lands. The intermix is the area where development is present amidst vegetated areas. Finally, the interface includes heavily populated, unincorporated areas of the county. The intermix and interface environments make up the traditionally defined WUI. While the intent of the map is to assist county planning efforts by focusing on the intermix and interface environments, mapping of the wildland environment allows for analysis of where wildfires are likely to occur (and spread) outside of the WUI. By mapping these different environments, Missoula County has a county-wide view of wildfire risk.

At the same time, Missoula County also created a map that models areas of the county that may see increased development pressure in the future. The model is not a predictor of the rate and scale of development, but rather where development is likely to occur. By using these two maps in concert, Missoula County will be able to identify areas where wildfire risk and development potential is high, thereby enabling the county to be proactive in its approach to addressing wildfire mitigation in the WUI.

Building Codes

Missoula County is one of the few counties in Montana to have adopted structural building codes and to issue building permits. Missoula County operates an electronic, internal permit routing system in which the public works department routes permit applications to the planning and environmental health departments as well as the county fire department or rural fire district, depending on where the structure is located. Building permits are not issued until the zoning and any possible land use restrictions are reviewed, and may include specific fire protection requirements such as conditions of plat approval if the lot was created through subdivision, and any zoning requirements if located in a zoned area. Issuance of a building permit usually takes about two weeks. It is important to note that the building permit covers the structure itself, as opposed to defensible space and other issues located outside of the structure, which may be covered by subdivision conditions or zoning.⁵

⁵ Bell, Deborah Evison, Programs Manager, Missoula County Public Works Building and Development, personal communication, May 1, 2017.

VI. PUTTING IT ALL TOGETHER IN THE WILDLAND-URBAN INTERFACE

While every jurisdiction must make its own determinations regarding how (or whether) to proactively address development in the WUI, a combination of approaches – plans, regulations, possibly revenue-generating strategies, and voluntary approaches – seems to be the ideal way to address this increasingly important public safety issue. According to [A Review of State and Local Regulation for Wildfire Mitigation](#), “It is clear that administrators favor a more comprehensive approach to reducing risk that entails implementing legal requirements while also offering specific instruction and assistance to property owners.”⁶

So how would a combination of approaches really work under Montana’s current planning and regulatory framework? The different mechanisms could work together as described below:

Plans

As described in Chapter III, a growth policy and/or neighborhood plan is an excellent way to identify WUI issues; call out specific policies, goals and objectives, infrastructure improvements and programs needed for safe development; and to provide the rationale and legal basis for rules intended to address WUI development. CWPPs and Pre-Disaster Mitigation Plans also provide effective ways to identify critical community infrastructure and fuels reduction priorities and to galvanize support of partnering agencies and the public. They also make communities eligible for funding for fuels reduction and disaster assistance. When the planning process includes concerted efforts to reach out to stakeholder groups, the plans will help to open and maintain communication lines among governments and agencies and are likely to result in important public safety projects.

Land Use Regulations

Subdivision Regulations

Subdivision regulations address the actual division of land or creation of new lots. Subdivision regulations in the WUI are most appropriately used to ensure:

- Site specific conditions are assessed to gauge hazards and to guide initial risk reduction efforts;
- Vegetative fuels are reduced to provide a baseline level of safety within the subdivision and fire breaks are cleared around the subdivision prior to final plat approval;
- Each lot has a suitable building site (e.g., not located on a steep west- or south-facing slope) that can be made accessible to fire fighters;
- The subdivision and each lot within the subdivision have primary and secondary access built to appropriate standards for construction materials, width, grade and vegetation clearance;
- The subdivision road(s) have non-flammable identification signs;
- A sufficient water supply is available; and
- A mechanism is in place to maintain roads, water supplies, and potentially maintain fuels over time.⁷

As noted in [MCA Section 76-3-504](#), subdivision regulations can also include certain construction techniques that have been developed by the Montana Department of Labor and Industry. These construction techniques include requirements for smoke detectors, roof, eave and soffit construction, gutters, windows and doors, and other matters. As of August 2017, no Montana counties are known to have incorporated these construction techniques into the subdivision regulations.

Zoning and/or Building Codes

Zoning and building codes address the development of lots and structures and are implemented through a permit system, which typically includes an initial permit prior to development followed by a certificate of

compliance or certificate of occupancy designed to ensure the required measures have been taken. Zoning can be used to ensure:

- Lots (existing and new) are developed with defensible spaces around structures;
- Structures are built on suitable sites;
- Driveways are built to appropriate standards (width, grade, vegetation clearance) and with areas for emergency responders to turn around if the driveways exceed a certain length; and
- Vegetation management and other fire protection and safety measures are maintained over time.

In addition to providing standards for structural soundness and durability, building codes can be used to ensure structures are built with fire-resistant roofing materials, windows, doors, decking and other materials and designs as adopted in a building code or WUI code adopted by the Montana Department of Labor and Industry.

Revenue Generating Strategies

Impact fees can be used to generate revenue to purchase capital improvements needed to support growth. RIDs can be used to ensure roads and water supplies are maintained within certain geographic areas, and can also be used for other capital facilities. However, both of these strategies require fairly sophisticated administrative capabilities.

Voluntary Measures

Public education and cost-sharing efforts are also important to address ongoing conditions in the WUI. The efforts are typically led by professional foresters employed by local, state, or federal government or by volunteer local fire protection authorities. Examples of education and outreach efforts include:

- Fire protection officials meeting with landowner groups;
- Distribution of materials related to Firewise building and maintenance practices;
- Cost-sharing assistance to landowners for fuels treatments; and
- Demonstration projects.

Distinct Challenges with Montana’s Planning Framework

Montana counties have several arrows in their quivers when it comes to addressing WUI development. However, distinct challenges remain. One of the main challenges with Montana’s planning framework is the artificial distinction and overlap between what subdivision regulations, zoning ordinances, and building codes can address by statute and administrative rule. For example:

- Subdivision regulations can address the initial division of land, but can also include ongoing construction requirements and mitigation measures;
- Zoning regulations can address lot development, including vegetation maintenance over time; and
- Building codes address the design and construction of structures, but may also include the International Wildland-Urban Interface Code that addresses vegetation and other site conditions.

This framework is unnecessarily confusing, legally hazardous for local governments, and fails to consider the multi-faceted or holistic nature of addressing WUI development.

Ideally the Montana Legislature would grant wider-ranging legal authority to counties to address WUI development along the lines of the authority granted in the State of Colorado (discussed in [Chapter IV](#)), where counties have broader authority to address WUI development and fire safety issues. That way, local governments could address WUI development in light of local circumstances.

Another option is for the legislature to permit local governments to include fire-protection-related building codes within county zoning statutes so structural fire protection issues don’t have to be addressed

through subdivision regulations and covenants where building codes are not in effect. However, the legislature has historically been reluctant to provide local governments with innovative options or tools to address land development issues, presumably because of distrust of government regulation. One hopes it will not take a disaster to alert our elected officials to the need for counties to develop a simpler and more comprehensive approach to addressing WUI development issues.

⁶ Haines, Terry K.; Renner, Cheryl R.; Reams, Margaret A. 2008. A review of state and local regulation for wildfire mitigation. *The Economics of Forest Disturbances; Wildfires, Storms, and Invasive Species*, 273-293

⁷ Covenants can be required through the subdivision approval process to address road and water system maintenance as well as to support ongoing mitigation measures and construction practices, but whether the covenants will be enforced over time is a potential weakness.

