November 20, 2023

To the Ravalli County Community Wildfire Protection Plan (CWPP) Committee

E-mailed to Andrew Amidon, County Forester aamidon@rc.mt.gov and to: commissioners@rc.mt.gov

RE: Comments on the Draft Update Community Wildfire Protection Plan

To the Draft Committee and the County Commissioners,

Please consider these comments submitted by Friends of the Bitterroot and Wild Earth Guardians. Members of Friends of the Bitterroot (FOB) attended open houses in Darby and Hamilton concerning the draft update of the Community Wildfire Protection Plan (Draft). FOB submitted comments on July 27, 2023 concerning the information provided at the open houses. FOB had concerns and suggestions on the proposed plan, fire risk maps, and Wildland Urban Interface (WUI) map. Please incorporate those comments (attachment 1) into this comment and include them in the public record.

FOB applauds the creation of a plan to prevent home ignitions in the Bitterroot and protecting communities; however, the premise of the draft update of the Community Wildfire Protection Plan (Draft) is misguided. The Draft emphasizes wildland fuel reduction and includes a needlessly excessive WUI definition. Neither of these updates protect homes, prevent fire, or reduce smoke. In fact, they will increase fire and smoke in the Bitterroot and create conditions that could promote rapidly moving wildfires putting communities in jeopardy.

Proposed Fuel Reduction and Excessive WUI definition

Renowned fire scientist Jack Cohen found that, "SIAM modeling, crown fire experiments, and WUI fire case studies show that effective fuel modification for reducing potential WUI fire losses need only occur within a few tens of meters from a home, not hundreds of meters or more from a home. This research indicates that home losses can be effectively reduced by focusing mitigation efforts on the structure and its immediate surroundings (Cohen 1999)." Cohen started studying home ignitability while investigating the Pyramid Fire in California. He discovered after listening to dispatch tapes that homeowners were reporting burning homes in locations well ahead of the fire front. After the fire, he noted that burned down homes were surrounded by green trees. Years of research found that over 90% of home losses due to wildfires are caused by embers from fires, often miles ahead of the fire. Once one home catches fire, home to home ignitions cause the devastation. His research found that the Home Ignition Zone (HIZ), just 100 feet from homes is the crucial area for fuel reduction and the home itself must be built or retrofitted for fire resistance.

Cohen commented against the Montana Forest Action Plan (MFAP) from which the Draft used to compile risk assessments and prioritize treatment areas. Here is an excerpt from his comments on the MFAP (Attachment 2):

> Available science shows how community risk from high intensity wildfires is governed by home ignitions that are principally determined within the home ignition zone (HIZ), a

> home's ignition characteristics in relation to burning objects within 100 feet from a home (including flammable attachments). Thus, home ignition potential can be sufficiently reduced within the HIZ to prevent community destruction without having surrounding fuel treatments and controlling extreme wildfire. This provides an opportunity to **more effectively define wildfire community risk as a home ignition problem, not a wildfire control problem** (emphasis added).

Cohen's fire research found no reason to equate wildland fuel reduction with community protection. "The management of hazard and susceptibility is profoundly different for wildland resources compared to homes and collectively, the community. Wildland ecological resources are exposed to fire at landscape scales (thousands of acres). Ecological resources are adapted variably to fire; they developed and were sustained with fire as an ecological factor (Attachment 2)." Essentially fire in the forest is a good thing and the forest has adapted to fires throughout history. Even the heat from fires within 100 feet of homes does not have the capability to ignite the home, "Available science indicates that high intensity flame fronts more than 100 feet from a home's exterior wood materials is insufficient for ignition (Attachment 2)." As stated before, embers are the culprits for an initial home ignition before the homes themselves become ignition sources. Ember starts can be avoided with fire resistant structures, landscaping, and basic maintenance to remove flammable sources near homes. If all homes in a neighborhood are fire resistant, the chance of home to home ignitions are greatly reduced if not eliminated.

According to Cohen, fuel reduction more than 100 feet from homes is unnecessary. It should be separated from a plan to protect communities. Funds and protection efforts would be better spent on retrofitting homes and modifying landscaping within the HIZ. FOB recommends that fuel reduction outside the HIZ should be removed from this plan. Funding and community efforts should be concentrated on fire resistant homes and work within the HIZ. As Cohen states, "The recognition that communities independently burn due to internal, residential burning initiated during extreme wildfires is critical to effectively preventing WU fire disasters (Attachment 2)." Communities burn because homes are not fire-resistant and necessary work 100 feet around the homes is not completed or maintained. This approach would provide work for local loggers who are often left out of the running in bids for landscape scale logging projects. It would also create new employment opportunities for fire resistant landscaping, property maintenance, and home retrofitting.

Cohen goes on to state that a plan that promotes wildland fuel reduction as a solution for home loss is inconsistent with the best available science. "I think this inconsistency primarily results from an institutionalized perspective, and thus paradigm of wildfire occurrence as the problem instead of the results of the wildfire, both ecological and community. The generally perceived relationship between extreme wildfire and community destruction is based on wildfire intensity and ignores the available science on how homes ignite and how WU fire disasters occur during extreme wildfires (Calkin 2014) (Attachment 2)." The Draft states, "Resource managers reduce the risk of wildfire damage to private property through fuel reduction projects on state and federal lands, establishing fuel breaks and buffers, wildfire suppression, and rapid response." Calkin 2014 is clear, "Increasing damages and management costs of wildfires (47, 48), combined with the inability of agencies charged with wildfire management to describe the return on investments from wildfire mitigation and suppression, suggests the **need to fundamentally**

review the current approach to managing wildfires—particularly when those fires threaten populated areas." The Draft favors the outdated approach to managing wildfires to the detriment of residents in the Bitterroot Valley.

The Draft claims to use the best available science, "By integrating the best available science, evaluating current conditions, and prioritizing projects, the 2024 CWPP is a user friendly, informative, and effective planning document for local leaders and communities (p 8)." Objective 1.5 promises that the Draft will, "Use the best available science to inform CWPP goals, objectives, and strategies (p A-1)." But Calkin 2014 shows that, "If our problem statement is defined as keeping wildfire out of the WUI, it is unobtainable, and large wildfires and residential disasters will continue, and likely increase. Fuel treatments do not stop fires." The Draft repeatedly focusses on the reduction of wildland fuels in the WUI as the way to protect communities. This does not use the best available science, it is not obtainable, and it is not the most efficient use of resources.

To protect homes and communities, we must begin with homes and communities. Calkin 2014 states:

> Starting with homes, their susceptibility is a direct function of their ignitability, which is dependent on the relatively small area of the HIZ. The HIZ is independent of fire behavior in the nearby wildlands, meaning that **proper care of the HIZ separates home losses from wildland fire behavior, regardless of the other elements of wildfire risk (fire behavior and its likelihood).** Therefore, the scope of mitigation responsibility must be centered on homeowners. WUI fire disasters cannot be prevented without homeowners actively creating and maintaining HIZs with low ignition potential (emphasis added).

As Calkin and Cohen clearly show, "The HIZ provides opportunities for effectively mitigating WUI fire risk without necessarily controlling wildfires (e.g., without eliminating or reducing the wildfire exposure probability). The WUI disaster sequence (Fig. 2) indicates that increasing ignition resistance would reduce the number of homes experiencing simultaneous ignition;

extreme wildfire conditions can exist that do not result in WUI fire disasters (Calkin 2014)."

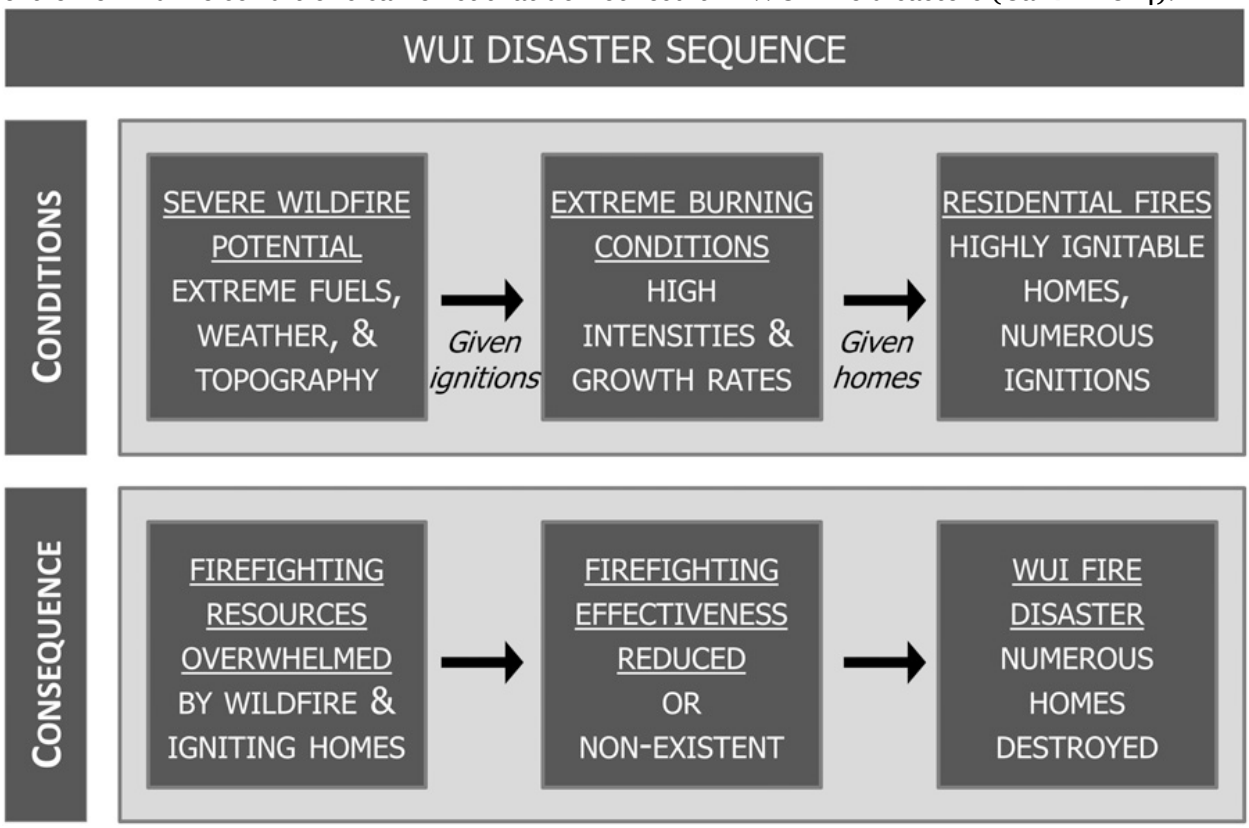


Figure 1: Calkin 2014 figure 2

Consider figure 1. This displays the sequence of the Roaring Lion Fire in 2016. The firefighters were not able to enter the area until conditions became less extreme. Had homes in the area been less ignitable, fewer homes would have been lost. A study initiated by the Bitterroot DNRC and conducted by Cohen found that only two homes of the 16 were ignited by heat from the fire. The rest were ignited by embers because the HIZ and the homes themselves had ignitable sources (Cohen 2016). Green trees surrounded the burned homes making it clear that it became a home-to-home ignition problem. "Research and analyses of WU fires, of which the Roaring Lion Fire examination is a part, have shown that home ignitions during extreme wildfires are primarily determined locally by a home's ignition characteristics in relation to the size and duration of flames within 100 feet of the home – the HIZ (Howard et al. 1973; Foote 1994; Cohen 2000a, b; Cohen and Stratton 2003; Cohen 2004; Cohen and Stratton 2008; Graham et al 2012) (Cohen 2016).

The Draft follows the current approach to wildfires, wildfire suppression and forest modification through extensive tree cutting including the removal of large, mature trees. This approach is failing to keep communities safe. The Draft should consider and follow the best available science, the expertise of the Rocky Mountain Research Center, and the research of Jack Cohen.

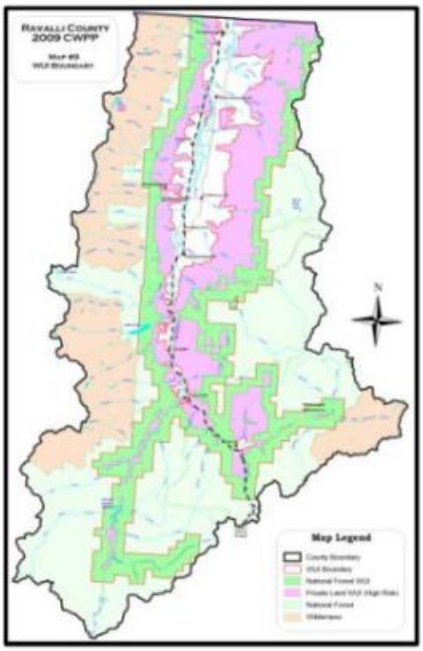
A recent Forest Service report evaluating research on fuel mitigation found scant evidence and numerous shortcomings in research supporting the efficacy of fuel mitigation to reduce fire and restore forests. Jain 2021 found that only 8% of the research evaluated landscape-scale fuel treatments. The review found few empirical studies that looked beyond the actual fuel mitigation units. Jain states, "additional research is needed in underrepresented ecosystems and underdeveloped topics including cost-benefit analysis, fuel treatment longevity, and interactions among fuel, topography, and climate that contribute toward influencing fuel treatment effectiveness (p 1)." Even this Forest Service study admits fuel treatments are not empirically proven effective especially on a landscape scale which is what this Draft promotes. The Bitterroot Front Project, The Mud Creek Project and the Eastside Project are all listed as action items. All are expensive, landscape scale projects that propose to protect communities from wildfire. Cohen's work and the HIZ mitigation he proposes have been proven effective. Why is the Draft focused on fuel mitigation, suppression, and an excessive WUI? Why are three current action items landscape scale fuel reduction projects?

The Draft must be consistent with the best available science. It should focus on the HIZ rather than an exaggerated and unnecessarily expansive WUI boundary. The HFRA definition of the WUI relates to high density communities. Since Ravalli County is a rural setting, the Draft considers a lower density threshold which in this case is any address in the county, "Any structure with an address point listed within the Montana Structures and Addresses geodatabase (Montana State Library 2023) located within Ravalli County was included within this WUI component (Draft p 17)." The Draft also uses potential, future homes in its risk assessment, "Risk to potential structures is also referred to as 'Hazard in Context' within the MWRA and represents an integration of wildfire likelihood and intensity with generalized consequences or responses to a home everywhere on the landscape should a fire occur (Draft p 20)."
The Draft uses two data sources for determining wildfire risk, "total wildfire risk (expected net value change (eNVC)) and risk to potential structures. These data layers serve to characterize wildfire risk of both current and potential assets and resources throughout Ravalli County (p 20)." This risk would look quite different if the County mandated all future structures to be wildfire resistant with HIZ appropriate landscaping. Risk would be further reduced if robust programs were created to retrofit existing homes and landscaping for fire resistance. Instead, the Draft prioritizes the implementation of fuel treatments miles from homes and merely "recommends" work in the HIZ.

HFRA recommends a 40-acre (1/4 mile) buffer around structures in communities. The Draft draws the WUI around all structures with an address regardless of density and adds a mile to that 40-acre buffer for a total of 1 ¼ miles. The Draft claims the extra mile, "will provide additional protection to structures and adjacent lands with increased fire risk resulting from ember spread due to wind (p 17)." Embers are not a risk to homes unless they encounter flammable materials. Cohen states, "Regardless from how far firebrands originate, they do not present an ignition exposure without directly contacting flammable structure materials. **Because fuel treatments do not stop wildfires, some degree of firebrand exposure during extreme wildfires are a given**. Firebrand susceptibility can be effectively managed with structure materials and building design along with the removal of flammable debris that eliminate many sustained ignitions (Emphasis added, Exhibit 1)." Embers can travel miles and are only problematic if the HIZ and home structure are not adequately addressed. The science

does not support the addition of one mile to the HFRA recommended 40-acre buffer around structures. Cohen states, “The recognition that communities independently burn due to internal, residential burning initiated during extreme wildfires is critical to effectively preventing WU fire disasters (exhibit 1).” The excessive 1 ¼ mile buffer around structures demonstrates that the Draft does not recognize that “communities independently burn due to internal, residential burning” and fails to follow the best available science.

The Draft draws a one-mile buffer around primary and secondary roads. This is excessive considering Cohen’s work and that pavement and even dirt roads are not flammable. During Stage Two Fire Restrictions, people are still allowed to smoke on dirt roads. The Infrastructure Act 40806 fuel break categorical exclusion calls for a mere 1000 feet total including the road. “SEC. 40806. Establishment Of Fuel Breaks in Forests and Other Wildland Vegetation Establishes a Categorical Exclusion for fuel breaks up to 1,000 feet in width.” If 1000 feet total creates a fuel break, why would it be necessary to create a mile buffer on either side of a road? FOB also questions why the remote Lost Horse Road, highway 38, Skalkaho-Rye, and Sleeping Child are included. The 2009 proposed CWPP map (see figure 2) does not include these roads in the WUI. The 2006 WUI map is non-existent. Although it is referenced in Appendix E as Population Density and WUI boundary, the only map available is the Population Density without a WUI boundary. Does the Granite County CWPP WUI include the remainder of highway 38? If not, this seems a poor evacuation route. Even if the buffer is continued in Granite County, it is still a slow, difficult and remote route for evacuation. Skalkaho-Rye and Sleeping Child are also not obvious evacuation routes. The areas around them are remote and not conducive to safe direct attack of fires. The nearby 2023 Hog Trough Fire was considered inaccessible to firefighters, as stated in this press release (https://www.fs.usda.gov/detail/bitterroot/news-events/?cid=FSEPRD1044929).



This map to the left shows the Wildland Urban Interface for Ravalli County as it was mapped in 2009. Refer to Map #9 in appendix E to view the WUI at a larger scale.

Figure 2: 2009 Map of the WUI, the larger map was not available.

Please explain why Lost Horse Road that mostly lies in a riparian area and follows a proposed Wild and Scenic River is included as egress. What is the usage for the campgrounds at the top of Lost Horse? The Draft states, "Egress roads represent the most likely route in the event of evacuation or access for fire suppression resources (p 18)." Is this the most likely route? Would alternative methods of evacuation be more efficient than driving 14 miles on a slow, winding, dirt road? The areas around this road that might burn would be too dangerous to reach for firefighters. For example, firefighters did not directly attack a fire in the talus at the top of the North Fork of Lost Horse Creek because they deemed the overland route in and out too difficult. Considering much of the buffer around Lost Horse Road is riparian, Research Natural Area, Recommended Wilderness, and Wilderness, how exactly would it be maintained as a buffer and how much would it cost?

FOB also questions a mile buffer around utilities, communications and critical infrastructure for the same reasons a mile buffer is excessive for homes and roads. It would be more cost efficient, more effective, and longer lasting to reduce flammability in the immediate areas rather than log the forest a mile around them.

According to the Draft, HFRA requires three things for a CWPP: collaboration, prioritized fuel reduction, and the treatment of structural ignitability (DOI and USDA 2004). However, to receive funding there are four requirements: Collaboration, Prioritized Fuel Reduction, Recommendations to Reduce Structure Ignitability, and Mutual agreement of final CWPP

contents by the applicable local government, the local fire departments, and the state entity responsible for forest management (Draft p 5)." It is unfortunate, that to receive funding, the most efficient and effective item, reducing structure ignitability, is just a recommendation. HFRA requires the state entity, the DNRC, to agree to the CWPP. It does not require the approval of the local Forest Service. HFRA is emphasizing fuel reduction around homes for which the State (the DNRC) is in charge. HFRA does not include the Forest Service which is in charge of fuel mitigation far from homes. The CWPP action items should emphasize fuel mitigations around homes especially in the HIZ, which the DNRC enacts and has grants to perform. Why is the Forest Service involved at all when Jack Cohen makes it clear that forest mitigation further than 100 feet from homes does not contribute to community protection?

FOB would like to see wildland fuel reduction eliminated from this plan. The science does not support it as a community protection. Many fuel treatments have occurred throughout the areas designated as high risk. Why have recent fuel treatments like the Como, Westside, and East Fork projects not reduced fire risk in these areas?

Science shows that reducing the canopy far from homes can exacerbate fire by creating dry conditions and allowing wind to move quickly through the forest. Bradley et al 2016 found that more logging created more severe fire activity. Opening the canopy allows the sun to back the forest floor creating dry conditions. These conditions would be exacerbated by drought, dry weather conditions, and heat from global warming. Atchley et al 2021 found, "Wind entrainment associated with large, sparse canopy patches resulted in both mean and localized wind speeds and faster fire spread. Furthermore, the turbulent wind conditions in large openings resulted in a disproportional increase in TKE [Turbulence Kinetic Energy] and crosswinds that maintain fire line width (p 9)." Davis and Stom 1996 in the Sierra Nevada Ecosystem Report (SNEP) state, "Timber harvest, through its effects on forest structure, local microclimate, and fuel accumulation, has increased fire severity more than any other recent human activity (p 5)." Canopy opening and road building associated with commercial logging destroys wildlife habitat and thus the ecosystem function.

The Draft blames fire suppression for the "buildup of fuels that has increased fire frequency and severity in modern times (p 13)." Please note that the photos used to demonstrate this in the Draft (figure 3) are described incorrectly. If one zooms in on the picture on the left that supposedly exemplifies pre-fire suppression conditions, one can see stumps. The photo on the left was taken after logging the area in 1909. It does not demonstrate historical conditions. The photo on the right was taken in 1989 after two logging operations, one in the 1950s and one in 1962 (See Smith and Arno 1999). A study by Nacify in 2006 found that the dense forests found on the Bitterroot National Forest (BNF) were the result of logging not fire suppression. Historical conditions included dense forests. Correct photos and descriptions should be used so as not to misguide the public.

Figure 3: Pictures found in the Draft to demonstrate historical conditions before fire exclusion.

The Draft focuses on fuel reduction and the three projects in the action plan focus on removing trees and reducing the canopy greatly. The Draft might be looking in the wrong place to reduce fuels. A recent New York Times article, *America's New Wildfire Risk Goes Beyond Forests*[1]. The article states, "Nearly two-thirds of the wildfires in the United States between 1990 and 2020 burned in grasslands and shrublands, the study found." The study found that since 1990, grassland and shrubland fires have burned more area than forest fires (see figure 4). The towns of Denton, Montana and Marshall, Colorado would agree. Focusing on the HIZ and structures rather than the myriad of fuels a mile or more from structures and roads, would prevent all types of fires including the grass fire that destroyed the town of Denton, Montana.

[1] https://www.nytimes.com/2023/11/09/climate/forest-fires-grasslands.html?unlocked_article_code=1.90w.dL_y.vLzpRMLl_90H&smid=url-share

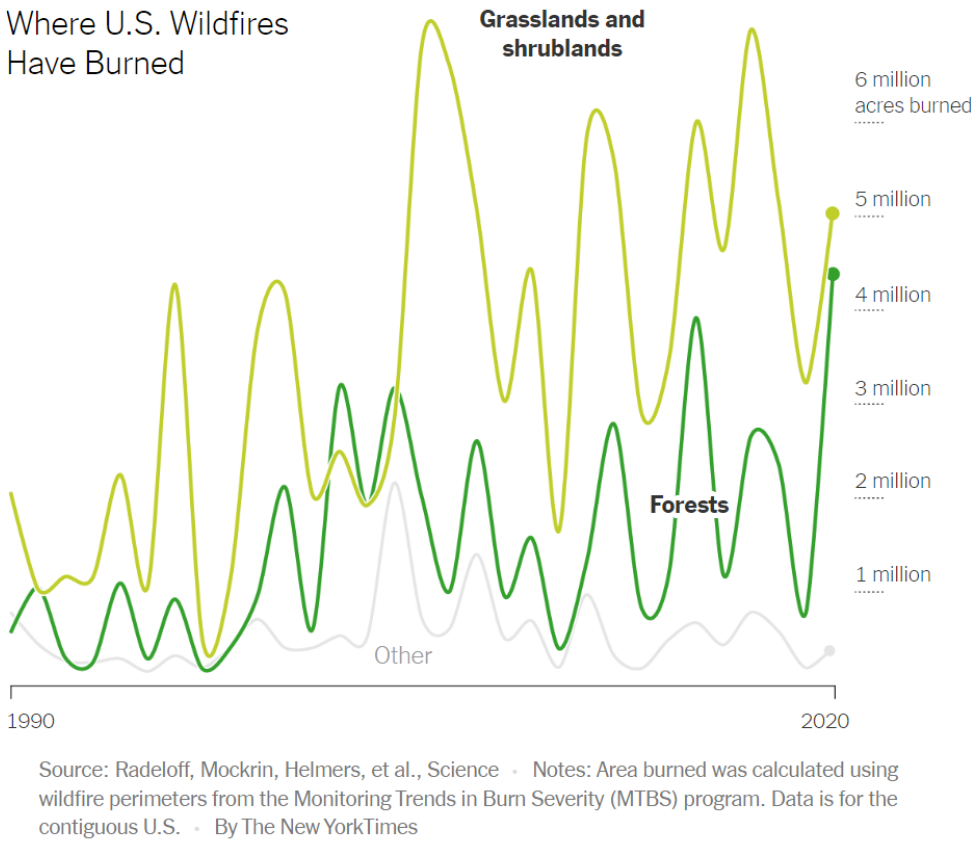


Figure 4: Chart from New York Times article: America's new wildfire risk goes beyond forest fires

The Draft must be more forthcoming about the consequences of a focus on landscape scale fuel treatments miles from homes and communities. The treatments will increase not reduce fires and smoke in the valley. Australian study Lindenmayer 2021 discovered, "Prescribed fuel reduction burning is not the same as ecological burning. For prescribed fuel reduction burning to reduce the spatial extent of unplanned fires, **very large increases in the total extent of area burned would be required** *[4].* Increasing the area of prescribed fuel reduction burning to this extent would represent **a fundamental shift in the frequency, intensity, and seasonality of fire regimes**, with major implications for managing biodiversity *[4,48,49] (emphasis added, p 10)."* The fuel treatments sanctioned and encouraged in the Draft will increase fire and smoke on the landscape. Residents of the valley will experience the normal fire and smoke season because, as fire scientists have made clear, fuel treatments do not stop fires. Then, for four or more months in the spring and fall, outside the fire season, they will experience more smoke. This sacrifice of healthy air makes little sense. The science is clear that, "Extreme fire weather that renders prescribed fuel reduction burning ineffective is also the condition when fires can be most destructive to infrastructure *[21].* Most house losses in bushfires have occurred on days when the Forest Fire Danger Index (FFDI) exceeded 50 (i.e.,

severe forest fire danger or higher) (ibid, p 5).” This does not just affect human health. “Inappropriate fire regimes have the potential to have wide-ranging adverse environmental impacts including reducing the resilience of forests that are normally fire-tolerant *[50]*, plant extinction *[49,51]*, animal extinction *[52,53]*, increased predation of small native mammals *[54]*, and loss of key habitat structure such as hollow-bearing trees *[55]* (ibid, p 5).”

Prescribed burning outside of fire season especially in the fall when stagnant air conditions are common, creates situations that trap the smoke in the valley. The BNF prescribed burning operations ignore times of high pressure and stagnant air alerts. A recent report compiled by FOB discovered that pile burning continued throughout a stagnant air advisory and during a strong high pressure where smoke was already trapped in the valley near Darby and Connor. See attachment 3 for the complete report. The Montana DEQ admitted that they monitored air with a single monitor in Hamilton, allowing the burning even as a purple air monitor in Darby read over 150.

The fire report from the Bitterroot Front Project claims, “Prescribed fire creates smoke, which can lead to reductions in air quality, However, the amount and duration of smoke are less than of a wildfire See figure 5.” This does not consider the cumulative effects of all prescribed fire and the regular fire season smoke.

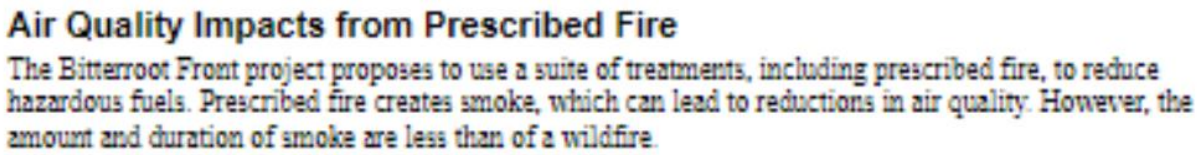


figure 5: screenshot from fire specialist report, Bitterroot Front Project

FOB compiled the acres of prescribed burning required to complete proposed and ongoing projects.

- Eastside project: 4500 acres per year
- Bitterroot Front: 138,280 acres, plus maintenance
- Mud Creek: 40,360 acres, plus maintenance
- Gold Butterfly: 4854 acres, plus maintenance
- Thunder Mountain: 466 acres, plus maintenance
- Lick Creek: 111 acres, plus maintenance
- Rye Creek fuel break: 1886 acres, plus maintenance
- Sleeping Child fuel break: 2130 acres, plus maintenance
- Soda Baker fuel break: 2378 acres, plus maintenance
- Sula fuel break: 3000 acres, plus maintenance

Total acres over the next 10 years would be 238,465, almost 24,000 acres each year. This is three times the size of the Roaring Lion Fire of 2016. This does not include smoke from forest fires during the fire season, smoke from fires in Washington, Oregon, California, and Canada. It does not include maintenance burning for the projects listed and maintenance burning on older

projects including but not limited to: Bass Creek, Piquett Creek, Lower West Fork, Teepee Ecoburn, Stevi West Central, Como, Westside, Trapper Bunkhouse, Threemile, Bass Creek, School Point Ecoburn, Upper Nez Perce Ecoburn, Cameron Blue Ecoburn, East Fork Project, and Three Saddles.

Logging trucks introduce copious amounts of road dust into the air further reducing air quality. Gold Butterfly, a 50,000-acre project would require 12,000 – 14,000 truck trips along a single dirt road near homes. Piquett Creek, a mere 3000-acre project, required 450 truckloads or 900 trips creating dust in the air near homes. The Bitterroot Front project is 144,000 acres and proposes 55,000 acres of commercial logging. Project documentation has not revealed the number of trucks required to complete this project. Particles and harmful silica dust from landscape scale logging operations must be considered a health risk. As fire scientists have concluded, these landscape scale projects do not stop fires and do not protect communities. Why risk human health to pursue prescribed burning miles from homes when prioritizing the HIZ is the most efficient and the least impactful to human health?

Cohen and fire scientists have concluded, as did Lindenmayer 2021, "To reduce infrastructure loss, the most effective use of prescribed fire may be to apply it to the immediate proximity of assets *[31,32]*. This is because the density of embers and amount of radiant heat, which are the principal causes of house loss, are greatest close to the fuel source (p 8)." The Draft should focus on the HIZ. This would put fuel reduction projects on a much smaller scale, reduce smoke and dust, and create a more effective and efficient home loss prevention plan. Piles around homes could be chipped and used as mulch or composted rather than burning, further reducing smoke to reduce health risks.

One of the requirements for a CWPP is collaboration. However, the public was mostly left out of the planning process. The Fire in the Root Council that was originally created to compile the CWPP was given only one spot on the panel. FOB questions why the BNF is involved on the panel when HFRA only requires the DNRC, the "state entity responsible for forest management." The DNRC funds private land fuel reduction projects in the HIZ which fire scientists have shown to be the most effective along with projects for fire resistant homes. There are no fire scientists on the panel. This is a grave omission. The panel also lacks forest ecologists. Most of the panelists are reliant on Federal, State, and County funding for their positions. This is concerning since this funding is often associated with fulfilling timber mandates. Insurance companies are also missing from the panel.

As Benjamin Franklin said, "An ounce of prevention is worth a pound of cure," First and foremost, the Draft should focus on fire prevention. This is not evident in the Draft. The items that would most efficiently protect communities are merely recommendations and not funded. Please review our list of preventative measures in previous comments pages 1 and 2 and consider them as part of these comments.

Three county commissioners are members of the panel, yet no zoning requirements or ordinances are in the plan to ensure all new homes built in the valley are fire resistant with fire resistant landscaping. New subdivisions should be required to establish and maintain a green buffer around the cluster of homes. This should be an action item in the Draft. Commissioners should also actively pursue funding for home retrofitting and HIZ work. The newly hired

forester should be focused on HIZ work on private lands rather than logging projects with the Forest Service like the recently resurrected Trapper Bunkhouse project.

According to the Draft, the only County Subdivision Regulations are to "establish standards for access, roadway fuel treatments, and require developers to prepare a high fire hazard area management plan, completed by a professional forester or other person with accreditation (Ravalli County 2012) (p 23)." The Draft clearly states, "Updating policies and regulations like building and subdivision codes can ensure fire resilience for future development (p 23)." But there are no action items to establish policies and regulations like building and subdivision codes to establish them. The Draft only provides, "Steps that homeowners can take to become more fire adapted include reducing the ignition potential of their home and the 100-200 feet of area surrounding it, called the Home Ignition Zone (HIZ). This involves home hardening (using ignition resistant construction materials and techniques) (p 23)." The Draft does not require them or provide funding. Once one home in a community ignites, it then ignites neighboring homes. All new home construction must be required to be fire resistant with appropriate HIZ landscaping and a time limit for retrofitting existing homes should be in place. The Draft should work with insurance companies to create incentives for home retrofitting and actively acquire funding for homeowners to complete this work. Fire scientists have made it clear that fire resistant homes and a properly developed HIZ are the most effective way to reduce home loss. This should take a starring role in the Draft, but it does not.

The Draft states, "Although there is not currently a grant program available to assist individual homeowners with home hardening, local governments can utilize grant funds to support the development of programs that serve this purpose (p 24)." This should be a prioritized action item. Home owners need financial support to make homes fire resistant and this should be a top priority for the CWPP.

The County should also actively pursue funding to assist home owners with the increased fire insurance rates that will result from this Draft because it lacks strong efforts and mandates to create fire resistant homes and perform work in the HIZ.

While the draft discloses, "Human caused ignitions start the majority of wildfires in Ravalli County, especially in the WUI. In 2023, 62% of wildfires in Ravalli County were human caused. (p 13)." There is little in the way of concrete measures for prevention of human cause ignitions. The action items to reduce human caused ignitions in the Draft are the following:

> **Objective 2.3 Reduce human-caused ignitions.**
> *Strategy 2.3.1 Work with utility companies to reduce ignition risk and identify opportunities for mitigation*
> *Strategy 2.3.2 Improve and maintain public communication to reduce human-caused ignitions*
> *Strategy 2.3.3 Provide training and resources for utilizing prescribed fire on private Lands*

There is no strategy for limiting campfires which caused the Roaring Lion Fire, no recommendations for the use of fireworks, and no strategies for reducing illegal off-road travel on federal and state managed lands. The Draft does not consider the miles of roads proposed both temporary and permanent that will be constructed or re-constructed in BNF logging and

burning projects included as actions items. How will these additional roads increase the risk of human caused ignitions?

The Draft should require the BNF to put stage one fire restrictions in place as soon as fire danger becomes very high. When it is extreme, stage two fire restriction should automatically go into place and be enforced. In the summer of 2022, extreme danger was in place for 11 days, before stage two fire restrictions were put in place. This equated to eleven days of unnecessary fire risk to communities. Fireworks are also a problem not addressed in the Draft. They are banned from the BNF, but it is not enforced. Banning them altogether in the County or reducing the number of days they can be used would greatly reduce fire starts in the future. The Draft should also ask the BNF to stringently enforce off-road violations. Off-roading on dry vegetation is a recipe for disaster, but blazing new trails off forest service roads and illegally using closed roads is rampant on the forest. The Draft must put more emphasis on reducing human caused ignitions that make up 62% of fire starts in the valley.

The Draft states, "The Ravalli County Community Wildfire Protection Plan (CWPP) is a living document that is periodically updated as new information becomes available (p 1)." On page 29, the Draft repeats, "The 2024 CWPP is designed to function as a living document with updates occurring as-needed." The CWPP should not be changed or updated without public process. The Draft promises to fully update the plan every five years which should include full public process. It should not change before then without full public process.

Under emergency response, the Draft calls for, "*Strategy 3.4.1 Develop an evacuation plan that identifies evacuation routes, reception/distribution areas, shelter locations, staging areas, and access control points."* This is a good strategy, but it must also include established places for livestock and pets during an evacuation. It should also include a robust plan to work with neighborhoods to develop neighborhood evacuation plans.

The Draft states that it is updating the WUI boundary from the 2006 and the 2009 CWPP but high-resolution maps of these original WUI boundaries are not available. It would be informative for the public to see what is being updated.

In conclusion, the Draft would be more consistent with the best available science and would more effectively reduce home loss from wildfire by focusing on the home and moving outward. All funding should be directed to what is empirically proven to be the most effective methods for protecting communities.

Sincerely,

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Three attachments:
Attachment 1: Previous FOB comments on CWPP
Attachment 2: Jack Cohen Comments on the Montana Forest Plan
Attachment 3: FOB report on prescribed burning during stagnant air advisory and high pressure

References:

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