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Targeted Implementation Plan Summary

Wildfires and declining health of forestlands are a growing concern amongst citizens of western Montana and Ravalli County. Recent assessments of wildfire risks to communities emphasize a need for forest treatments within Ravalli County, specifically within the Wildland Urban Interface (WUI). Ravalli County has been identified as having the highest wildfire risk to homes in Montana as 90 percent of the homes built in the past 20 years are in high fire risk areas (Headwaters Economics 2018, DNRC 2020). Since the extreme wildfires of the early 2000's and the 2016 Roaring Lion fire, the focus on addressing fire risk in Ravalli County has increased. Landowners who live within the WUI are especially aware of these resource concerns and the need for treatment. Poor forest stand health, shifting species composition, and a buildup of hazardous fuels has significantly increased the fire risk for those who reside within the WUI.

Over the past five years, there has been a revitalization of efforts to implement forestry treatments on both public and private lands. The US Forest Service (USFS) has been committed to getting large scale forest health projects through National Environmental Policy Act (NEPA) with the objective of protecting private lands and reducing fire risk within the WUI. Likewise, the Montana Department of Natural Resources and Conservation (DNRC) has been proactive in collaboration with partners to complete forest health treatments on state lands and within the WUI. The Bitter Root Resource, Conservation and Development (RC&D) has experienced a surge in interest for their Hazardous Fuels Reduction program which focuses on fuel breaks and creating defendable space around structures. Landowner interest and partner collaboration has also been assisted through the recent effort of a community action group called Fire in the Root. This group focuses on wildfire preparedness through education, coordination, and communication. In addition, the Montana Forest Advisory Council completed the Montana Forest Action Plan (MFAP) in 2020 which focuses on strategies to achieve cross boundary forest restoration and management.

The overall goal and desired outcome for the Robbins Gulch Forest Health Targeted Implementation Plan (RGFH TIP) is to implement forest stand improvement treatments to improve forest health and reduce fire risk. The goal will be achieved through complementary approaches. First will be the continued outreach and education of landowners regarding forest health, wildfire risk, and the importance of forestry treatments. Secondly, the NRCS Hamilton Field Office (FO), RC&D, and DNRC will assist landowners in evaluating the condition of their forestland and identification of treatment opportunities. Hand in hand with the first and second approaches will be collaborative efforts with partners to provide additional education, treatment prescriptions, and cost share opportunities.

Geographic Focus

The FO and the Ravalli County Local Working Group (LWG) have implemented a strategy of addressing forest health and hazardous fuels on private lands by focusing outreach efforts to landowners within the WUI with an emphasis on those high priority areas as identified in the MFAP (2020). The MFAP includes assessments of forest conditions, identification of priority areas, and goals and strategies towards reducing wildfire risk. The *priority areas* were developed utilizing geospatial modeling and datasets to delineate areas of significant forest health issues and elevated fire risk. By focusing outreach efforts, the LWG has the objective of identifying ready, willing, and able landowners within these high priority areas.



The RGFH TIP was initiated by landowners concerned with fire risk and interested in implementing treatments. The focus area is located in the southern portion of Ravalli County approximately 30 miles south of Hamilton (Figure 1). The RGFH TIP footprint encompasses approximately 19,923 acres with the east and west boundaries of the Bitterroot National Forest. There are 535 parcels represented in the RGFH TIP boundary which are owned by approximately 337 different individuals/entities. Approximately 51% (10,134 acres) of the RGFH focus area occurs on private forestland and potentially warrants treatment. Additionally, 75% of the forested private land within the RGFH focus area occurs within the MFAP priority area and all the focus area occurs within the Tier 2 of the WUI (distance interval of 1.5 miles or less from structures) (Figure 2). The RGFH TIP will compliment partner efforts as the focus area is adjacent to an on-going fuels reduction project (Darby Lumber Lands Phase 2) that is occurring on USFS land directy east of the RGFH focus area. The RGFH TIP would increase cross-boundary treatments and achieve partners objectives of improving forest health and reducing wildfire risk within high priority areas.



Figure 1: Robbins Gulch Forest Health TIP focus area

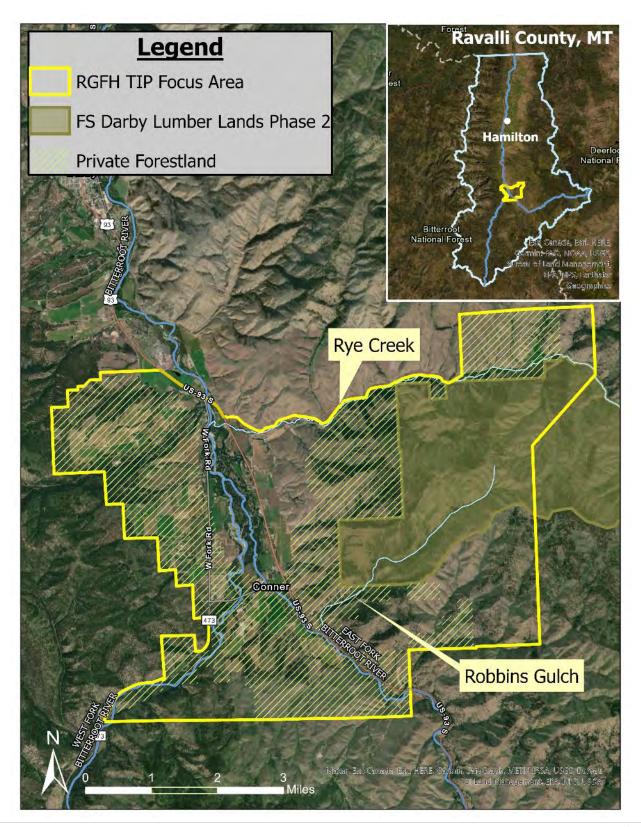
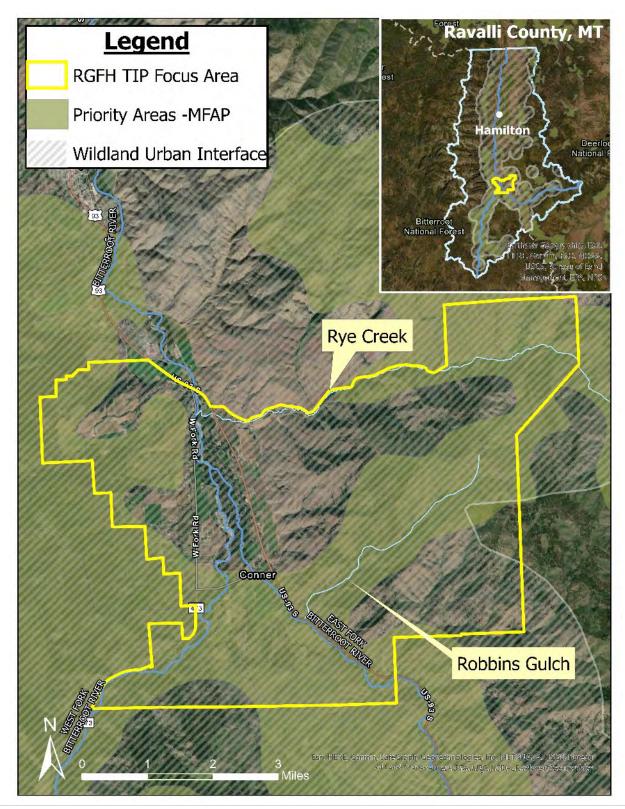




Figure 2: Priority areas and WUI within Robbins Gulch Forest Health TIP focus area





Resource Concerns

The priority resource concern in the RGFH focus area is **Wildfire Hazard from Biomass Accumulation.** Secondary resource concerns have been identified as *plant structure and composition* and *plant productivity and health*.

Above average wildfire activity, and an influx of new landowners within Ravalli County, have heightened efforts among partners and landowners towards reducing fuel loads and improving forest health. In 2018, the Headwaters Economics completed a report assessing counties with homes built within the high wildfire hazard areas. Ravalli county was identified by this report as having the highest number of homes built within this high-risk area. In addition, the report stated that more than 90% of all new homes being built in Ravalli County over the last two decades were built in high wildfire hazard areas. This is almost double the number of all other Montana counties combined (Headwaters Economics 2018). The 2020 Montana Fire Risk Assessment supported this finding by identifying Ravalli County as having the highest wildfire risk to structures in Montana (DNRC 2020). RGFH TIP partners are committed to addressing high wildfire risk and have focused efforts within priority areas as identified in the MFAP developed by the Montana Forest Advisory Council in 2020. The RGFH TIP is a phase in a long-term goal from Ravalli County partners to address high priority areas on private forestland.

The RGFH TIP is the result of an active collaboration between the Fire in the Root, RC&D, BCD, DNRC, the LWG, and the FO. The LWG and the FO have utilized the opportunity to collaborate with these partners and has prioritized addressing forest health and hazardous fuels on private lands (NRCS Ravalli County Long Range Plan, pgs 22, 30, 31).

The RGFH TIP was initiated through landowners contacting the FO and expressing concern towards fire risk and interest in implementing treatments. Through collaboration with partners, the RGFH focus area was delineated and public outreach efforts began. Through site visits and communication with landowners within the focus area, forest stand conditions were evaluated and able, eligible landowners were identified.

Site visits and forest stand assessments have revealed that much of the forestland within the focus area is comprised of overstocked ponderosa pine with Douglas-fir encroachment. Tree stands within the RGFH focus area have historically experienced frequent, low intensity wildfires characterized by low stem densities of shade-intolerant species such as ponderosa pine. Decades of fire suppression has allowed stem densities of shade-tolerant species to greatly increase. The high number of trees per acre has resulted in competitive stress through competition for growing space, water, nutrients, and sunlight. The health and vigor of these forests substantially decrease when trees are stressed from overcrowding. Trees that are stressed grow slower and have less vigor and resiliency. Competitive stress and poor tree vigor provide opportunities for disease and insects such as Douglas-fir dwarf mistletoe, Douglas-fir beetle and mountain pine beetle to establish and spread. This insect and disease caused mortality adds to the fuel load and makes fire suppression activities more difficult.



Goals and Objectives

The goals of the RGFH TIP are: continue with landowner outreach and education efforts regarding forest health, wildfire risk, and the importance of forestry treatments to address resource concerns; assist landowners in evaluating the condition of their forestland and identify treatment opportunities to address and improve forest health; and, collaborate with partners to provide education, forest management, treatment prescriptions, and cost share to these landowners who have significant resource concerns within the RGFH focus area. Below is an outline of how the objectives of the RGFH TIP will be achieved:

- 1) Outreach and education to landowners within the RGFH focus area will continue through the following approach:
 - a. The LWG sent a mailing to landowners within the RGFH focus area in August of 2021. This mailing provided information on the RGFH TIP effort and encouragement to reach out to the LWG and FO to learn more about assistance opportunities. If the TIP is selected, an additional mailer will be sent to RGFH focus area landowners by the LWG.
 - b. RGFH partners would also host an outreach and education meeting open to the public and landowners who have property within the RGFH focus area. The objective of the meeting would be to educate landowners on wildfire risk and forest health. Partners such as Fire in the Root, RC&D, BCD and NRCS would present information on assistance available with forest management plans, fire risk assessments, and cost-share programs available for forest health treatments.
 - c. Presentations and articles will be presented through the monthly Fire in the Root meetings and newsletters informing landowners of on-going forest related TIPs and the Montana Focused Conservation approach for identifying future TIP efforts.
- 2) On-site assessments and inventories of forest stands within the focus area to further landowner education regarding forest health and hazardous fuels. Inventories would identify issues with overstocking, insects or disease, and hazardous fuels.
 - a. The FO along with the RC&D and the DNRC will collaborate to complete inventory of forest stands and fire risk assessments.
 - b. Partners will provide landowners with information regarding financial assistance programs to implement treatments where appropriate.
- 3) Implementation of forest stand improvement treatments to improve forest health and decrease fuel loads and fire risk within the RGFH focus area:
 - a. The FO, RC&D and the DNRC will collaborate to develop Forest Management Plans (FMP) with silvicultural prescriptions for each participant with consideration for long-term forest health and resiliency.
 - b. Partners will assist landowners in identifying and applying for appropriate assistance programs (financial assistance and/or fire risk assessments).
 - c. The RC&D would be the primary financial assistance tool for implementing hazardous fuels reduction around structures (fuel breaks) and the NRCS Environmental Quality Incentives Program (EQIP) financial assistance will be the preferred program for addressing forest stand improvement treatments within forestlands outside of fuel breaks. DNRC would provide fire risk assessments where appropriate and the BCD's cost-share program could assist with additional conservation practices as needed.



Alternatives

Alternative 1: The No Action alternative would result in forest health continuing to deteriorate. Forest health would continue to decline in the short and long term due to overstocking, insects, disease, and undesirable tree species. Forest fuels would likely continue to increase which would increase the susceptibility to extreme fire events.

Alternative 2: Alternative 2 would implement forestry and fuel break practices to address resource concerns. NRCS financial and technical assistance along with partner assistance would be utilized to address resources concerns. NRCS cost-share practices would include Fuel Break (383), Forest Stand Improvement (666), Woody Residue Treatment (384), Critical Area Planting (342), Tree and Shrub Establishment (612), and Herbaceous Weed Control (315). Landowners would gain knowledge of the site potential of their forest, its role in the landscape, and have a management direction to sustain benefits into the future. Short- and long-term benefits of forestry improvements would reduce the risk of extreme fire and improve forest health and productivity.

Alternative 3: (Preferred) Alternative 3 would implement forestry practices to address resource concerns. NRCS financial and technical assistance along with partner assistance would be utilized to address resources concerns. NRCS cost-share practices would include Forest Stand Improvement (666), Woody Residue Treatment (384), Critical Area Planting (342), Tree and Shrub Establishment (612), and Herbaceous Weed Control (315). Fuel break practices would be funded through TIP partner, RC&D. Landowners would gain knowledge of the site potential of their forest, its role in the landscape, and have a management direction to sustain benefits into the future. Short- and long-term benefits of forestry improvements would reduce the risk of extreme fire and improve forest health and productivity.

Proposed Solutions and Implementation

Implementation of the proposed approach and practices presented in the RGFH TIP will compliment an on-going effort from partners within Ravalli County to improve forest health and reduce fire risk within the WUI and priority areas (MFAP). Specific actions will depend on the silvicultural treatment recommended by technical experts which will be outlined in a site-specific Forest Management Plan. The resource concerns addressed through the implementation of NRCS conservation practices will complement work being done by partners and on adjacent public lands. The RGFH TIP will be implemented over a four-year period and will include NRCS practices as outlined below.

Selected Practices will include:

Forest Stand Improvement (666) – Used to address resource concerns through implementation of silvicultural treatments including: pre-commercial thinning within overstocked stands and sanitation harvests for stands with substantial insect and disease outbreaks.



Woody Residue Treatment (384) — Used as a supporting practice after the implementation of forestry treatments. This practice would aid with reduction or elimination of slash. Options will include piling and burning, chipping, shredding, and removal for utilization.

Critical Area Seeding (342) – This practice would be used, when necessary, to protect and restore areas of disturbance that may occur due to equipment or burning. While in ideal situations, implementation of forestry practices would occur when site conditions would minimize soil disturbance, however, there are often unforeseen factors and a multitude of variables that influence when treatments are implemented. Critical area seeding is an important practice to implement when unforeseen disturbance occurs to ensure soil is protected and erosion is minimized.

Tree and Shrub Establishment (612) – To be used on sites with significant insect or disease issues. Practice would be implemented after forestry practices are completed with the objective of increasing species diversity and resilience within the stand from future insect/disease issues.

Herbaceous Weed Control (315) — Used to treat noxious weed infestation that can occur with forestry activities. Treatment can include chemical or biological application.

A combination of these practices can be used throughout the project area according to the goals and objectives of each participant and their Forest Management Plan. Overall benefits from implementation of these practices will include a healthier and more productive forest, aligning with the participants Forest Management Plan.

Participants can also benefit by working with partner organizations to meet management goals. More specifically, the RC&D's Hazard Fuels Reduction program. This program offers both financial and technical assistance to create defensible space around home sites.

Implementation

This TIP will be implemented over four years. Partners have been active collaborators in development of the TIP and interest from potential program participants is strong. The FO will continue to work with partners to increase participation in the project. By completing preliminary outreach and working with partners, the NRCS has already developed a comprehensive list of potential program participants within the project area.

Bitter Root's RC&D Hazard Fuels Reduction program is already in place and will focus their work within the project area adjacent to structures for home defensibility, whereas NRCS will focus their efforts on forest health outside of the fuel break area.

The DNRC Service Forester and Fire in the Root will be assisting with outreach and completing fire risk assessments as needed. The DNRC Service Forester is also available to assist with writing Forest Management Plans as needed for landowners.

FO staff will be responsible for accepting applications, conducting field work to gather necessary information, writing silvicultural prescriptions, developing and administering contracts, and certification and payment.



Several variables were considered when estimating the NRCS deliverables and acres potentially treated through NRCS Farm Bill programs. Previous outreach efforts and site visits have been critical in identifying committed landowners and treatment appropriate acres. Landowner parcel size and landowner eligibility for Farm Bill programs within the RGFH focus area is representative of Ravalli County. Parcel size is a combination of larger parcels (>1,000 acres) which are surrounded by smaller, subdivided parcels (<40 acres). Based on previous technical assistance provided, the FO is aware that a significant portion of the larger parcels are owned by landowners who are not eligible for Farm Bill programs. Through continued outreach and technical service landowner eligibility will be assessed. Acreage estimates for the purpose of the RGFH TIP assume that ineligibility is consistent with previous determinations. All landowners, regardless of eligibility status, would receive technical assistance from the NRCS and partners.

Table 1. NRCS Deliverables

Activities	2023	2024	2025	2026	Total
Forest Stand Improvement (CPS-666)	200 ac	350 ac	350 ac	200 ac	1,100 acres
Woody Residue Treatment (CPS-384)	200 ac	350 ac	350 ac	200 ac	1,100 acres
Critical Area Seeding (CPS-342)	20 ac	35 ac	35 ac	20 ac	110 acres
Herbaceous Weed Control (CPS-315)	20 ac	35 ac	35 ac	20 ac	110 acres
Tree and Shrub Establishment (CPS-612)	400	600	600	400	2,000 Trees

Actual costs may vary from year to year based on changes to the cost list and individual practices selected. Future budget projections have been conservatively estimated using anticipated producer interest, average property sizes, and engagement with landowners to date.

Table 2. NRCS Budget Projections

CONTRIBUTIONS	2023	2024	2025	2026	TOTAL
NRCS EQIP FA	\$250,000	\$435,000	\$435,000	\$250,000	\$1,370,000

Partnerships

The Robbins Gulch Forest Health TIP consists of the following partners:

- Ravalli County Local Working Group
- Fire in the Root community action group
- Bitter Root Resource, Conservation and Development
- Bitterroot Conservation District
- Montana Department of Natural Resources & Conservation



Ravalli County Local Working Group (LWG) is an active collaboration of local agricultural producers, nonindustrial private forest landowners, representatives from local natural resource interest groups and government agencies who meet regularly to identify goals in natural resource management and collaborate efforts. The LWG has identified improving forest health and reducing hazardous fuel loads within the WUI as a priority and has been identifying focus areas based on planned projects on state and federal lands and high priority areas as identified in the MFAP. In the winter of 2020, the FO received several phone calls from landowners within the RGFH focus area who were concerned with the fire risk on both the federal and private forestland. Their primary goal is to get assistance with forest thinning projects to reduce fuels, improve forest health and compliment ongoing fuels reduction projects occurring on adjacent FS lands (Darby Lumber Lands Phase 2). The LWG and the FO began reaching out to partner groups to assess the need and potential opportunities for partnering on this TIP effort. RC&D, Fire in the Root, and the BCD supported the effort and committed to partnering. In response to the overwhelming support for the RGFH TIP effort, the LWG group decided to send a letter to landowners within the RGFH focus area informing them of the RGFH TIP effort. The LWG and the BCD have also committed to sending an additional letter to landowners within the RGFH focus area and hosting a public meeting in the event the TIP is approved.

Fire in the Root is a locally led community action group that focuses on wildfire preparedness through education, coordination, and communication. The Fire in the Root effort plays an important role in Ravalli County in community coordination and public outreach on topics and projects that focus on reduction of hazardous fuels, forest health and wildfire preparedness. Fire in the Root has agreed to be a partner on the RGFH TIP and will assist with public outreach and education by providing information on their website and at their monthly meetings regarding the RGFH TIP opportunity.

Bitter Root Resource, Conservation and Development (RC&D) is a committed partner in the RGFH TIP. RC&D will continue to contribute to outreach and education to landowners within the RGFH focus area and will provide technical and financial assistance to landowners who are interested in implementing structure protection and fuels reduction practices. RC&D will focus their work within the project area adjacent to structures for home defensibility whereas NRCS will focus their efforts on forest health outside of the fuel break area.

Bitterroot Conservation District (BCD) has a long history working with the NRCS in Ravalli County to promote conservation and restoration projects. BCD has agreed to assist with outreach and education for the RGFH TIP. If the RGFH TIP gets approved, the BCD will work with the LWG to send a letter to landowners within the RGFH focus area informing them of the TIP opportunity. The BCD has also agreed to assist the LWG and partners in hosting a public meeting informing landowners of assistance opportunities. In addition, the BCD has a cost share program that would be available to landowners to compliment this TIP effort. Applications submitted to the BCD program would receive additional ranking points for working with RGFH TIP partners.

Montana Department of Natural Resources & Conservation (DNRC)'s Service Forester and Fire in the Root Coordinator are critical partners in public outreach for the RGFH TIP. In addition to assisting with outreach and education, they will be providing fire risk assessments to landowners within the RGFH focus area. The Service Forester is an important component in referring clients to the NRCS, writing Forest Management Plans, and information exchange.



Table 3. Summary of Partner Contributions

Partner Contributions

Ravalli County Local Work Group

Outreach letters and hosting public meeting

Outreach through website posting and newsletter

Bitter Root RC&D

Outreach and cost share for fuel break practices

Bitterroot Conservation District Outreach and cost share program

Montana DNRC Outreach, fire risk assessments, forest plans

Ranking Questions

Ranking questions will be used to prioritize projects based upon conservation benefit and the feasibility for the project to be completed in the scheduled timeframe to ensure the proposed projects meet our objectives.

Ranking Questions

- **1.** Does the application include planned Forest Stand Improvement (666) acres that occur within *priority areas* as identified by the Montana Forest Action Plan?
- **2.** Does the application include proposed Forest Stand Improvement (666) acres that occur within the Wildland Urban Interface?
- **3.** Does the application include Forest Stand Improvement acres in conjunction with implementation of fuel break practices?
- **4.** Are the planned acres of Forest Stand Improvement (666) located adjacent to properties on which previously completed forest thinning activities have taken place within the last 5-years (private, industrial, state, or federal lands all apply)?
- **5.** Are the planned acres of Forest Stand Improvement (666) located within a ½ mile to properties on which previously completed forest thinning activities have taken place within the last 5-years (private, industrial, state, or federal lands all apply)?

Outcomes

The overall goal and desired outcome for the RGFH TIP is to implement forest stand improvement treatments within the RGFH focus area to improve forest health and reduce wildfire risk. Therefore, success will be measured based on acres of forest stand improvement treatments within the WUI and priority areas (MFAP). It is anticipated that through implementation of the RGFH TIP, approximately 20% of the priority areas within the TIP boundary will be treated with the Forest Stand Improvement practice. The acres treated as a result of this TIP will compliment Forest Service treatments adjacent to the TIP boundary and will result in improved forest health and a reduction in wildfire risk within this region of the Bitterroot Valley.



The effectiveness and extent of completed practices will be evaluated annually by NRCS and partners. Inventories will be completed before and after each treatment to document improvements and include acreages, stocking rates (trees per acre), forest stand condition, species composition, average diameter, and photo points. Pre- and post-treatment photos will be used to show stand improvements. Each treatment area will have at least one georeferenced pre- and post-treatment photo point. Each project will be overseen by FO staff with certifications being made upon completion, contingent on practices meeting NRCS standards and specifications. Monitoring will be conducted periodically to ensure outcome longevity and address any unforeseen complications that may arise due to natural disturbances or land use changes. Vegetation and/or fire behavior modeling could be a tool used to evaluate the impacts of completed treatments when modeling software is available at the field office level.

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