2021-2025

# Western Bull Mountains Catastrophic Wildfire Fuels Reduction

Targeted Implementation Plan

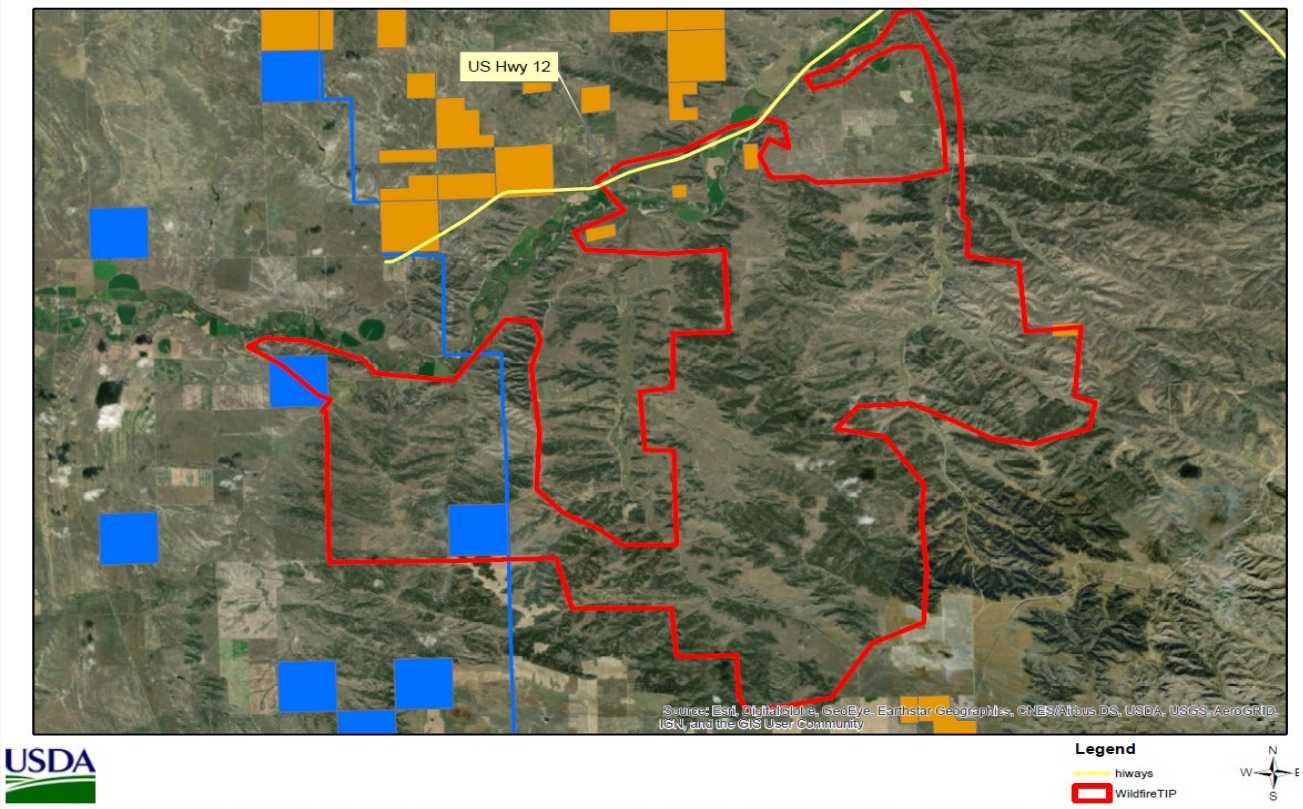
ROUNDUP FIELD OFFICE

## Overview/Background Information

The Bull Mountains sit across the southern edges of Musselshell and Golden Valley Counties. This area is home to a large number of livestock producers, as well as intermixed private residences and ranch headquarters. Privately held lands make up 93% of the area, state lands 6.5%, and BLM 0.5%. The majority of the woody vegetation within mountainous areas is Ponderosa Pine and Rocky Mountain Juniper. These areas have been greatly suppressed from fire and pose an imminent threat of stand replacing fires. Livestock producers run the greatest risk of loss from a wildfire disaster. Large agricultural operations are commonplace in the area. The likely catastrophic fire would detrimentally impact the grazing lands for these ranches, along with ranch headquarters and private residences. These operations are the lifeblood of the local community, and support much of the surrounding areas. These ranches depend on the availability of forage within the rough terrain of the Bull Mountains.

Within the last 30 years, 23 major wildfire events have happened within this plan's geographic boundary, with countless smaller fires. The century long fire suppression, corresponding with significant conifer (Ponderosa pine, Rocky Mountain juniper) encroachment, has set the scene for a perfect combination of topography, fuels, and limited accessibility in an area particularly susceptible to fire damage. The likelihood of a catastrophic fire is no longer an "if" scenario but rather a "when".

The Natural Resources Conservation Service (NRCS), in collaboration with the Local Working Group and other partners, has identified forestlands, and the volatile fuels within, as the top resource concern in the work area. Agricultural producers in the local working group are invested in seeing a shift in the conifer-encroached Bull Mountains management as a whole. All perspectives are pushing for a proactive, inclusive approach, knowing that a reactive approach could be devastating to the counties. This Targeted Implementation Plan (TIP) was developed in response to the recognition of the need to improve the resiliency of our forestlands, while protecting the landscape from likely catastrophic wildfires. This TIP's goal is to significantly mitigate the imminent threat of catastrophic wildfire within the project boundary.



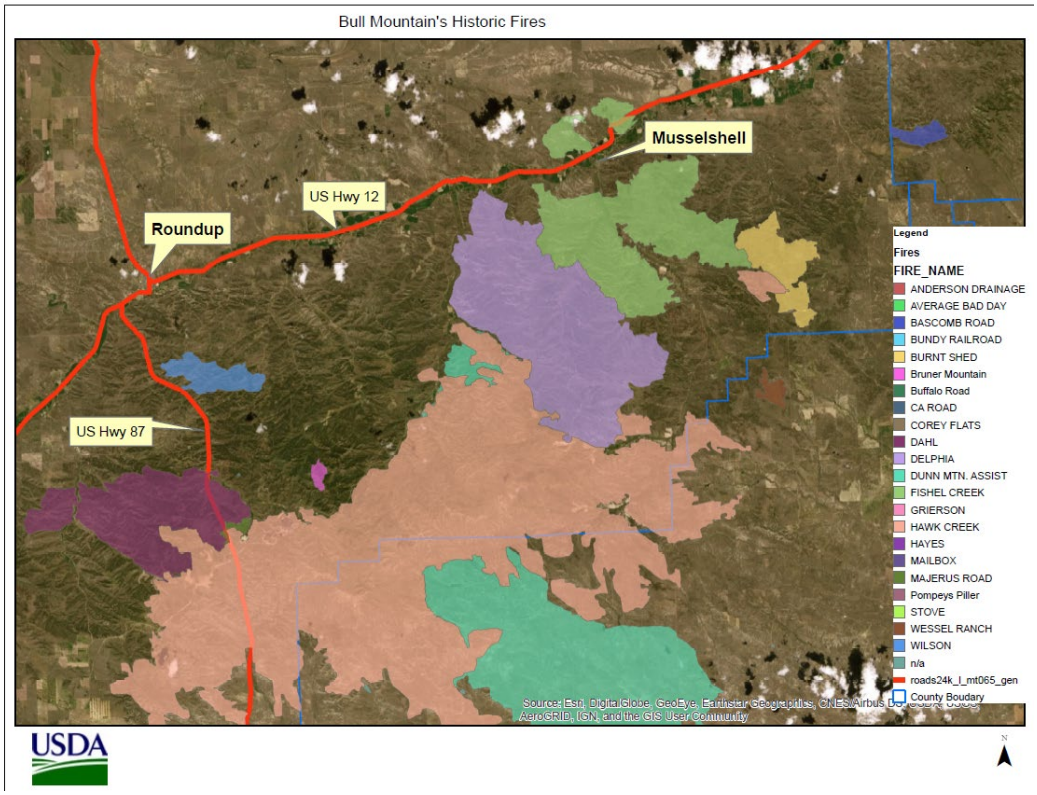

*Targeted Implementation Plan (TIP) Boundary*

## Problem Statement

Wildfires are a natural part of the forest ecological cycle. However, for more than a century people have made a concerted effort to fight fires, effectively taking fire off the landscape. This has resulted in a significant change in the encroachment and densities of our forests. Forests are now much more densely stocked, with densities as high as 11,000 trees/ac, making them less adapted to major fire events. A Ponderosa forest is considered fully stocked at 250 trees/ac. This proper density is almost nonexistent in the target area unless the stand was recently burned or thinned. Because of the buildup of fuels, paired with previous droughts and dramatically higher temperatures, fires have become significantly more intense. These fire events often become stand replacing events and pose significant risk to people, livestock, infrastructure, and public safety. Encroachment of conifers into traditional rangeland also expands the extent of these wildfire events. The Bull Mountains have long been identified by DNRC, BLM, local fire councils, and residents as an at-risk area. This is because of limited transportation evacuation routes, critical infrastructure, and development such that ranching operations and homes exist throughout the area. Due to continuing development, subdivision, and conifer encroachment into previously tree-less areas, fire impacts on property is significant. This can be illustrated by the Lodgepole Complex Fire, which burned over 270,000 acres in eastern Montana, damaging millions of dollars in property, and incurring $6 million in firefighting costs. While this fire did occur outside of this TIP boundary, it serves as an example of the potential negative impact within a similar landscape and region. The issue is further complicated by non-industrial private forest owners having little money to treat these forests appropriately.
Fire frequency in this Ponderosa pine forest system would be approximately 30 years. Fire suppression and lack of fuels treatment has exponentially increased the danger and damage caused by fires in decedent, unmanaged forests.

The Central Bull Mountains Catastrophic Wildfire Fuels Reduction TIP has been received extremely well. Five producers received contracts in the initial sign-up period, resulting in over 500 acres of fuels reduction work obligated. All five producers requested additional applications for subsequent years to do more work within the TIP boundary. Additionally, ten more producers have expressed interest within this area.
The outreach campaign administered by Lower Musselshell Conservation District (LMCD), (detailed later within the TIP) has been so successful that producers from outside of the TIP boundary have expressed serious interest. Four producers have currently applied, with ten others showing sincere interest. The four current applications alone could put the project at, or near, its overall goal. This is the cause for writing an additional fuels reduction TIP running simultaneously. Contractors and equipment are available within the area as a result of our existing TIP and previous EQIP efforts.

The primary resource concern for this Targeted Implementation Plan is Wildfire hazard from biomass accumulation.




*Historic Bull Mountain Fires*

## Goals and Objectives

This project will enhance conservation connectivity between previous NRCS projects (see Partnerships) and partners and link them with future efforts that are identified in the Musselshell County Long Range Plan. Resource objectives will mirror those of past projects, but will focus on implementing them on a landscape scale:

1. Reduce hazardous fuels in priority areas to minimize potential negative impacts from wildfire.
   a. Complete 5,330 acres of forest management practices over an estimated 5-year period, leveraging partnership contributions, along with NRCS funding.

2. Improve forest health, resiliency to insects and diseases, and overall productivity.
   a. Develop forest management plans for each program participant with consideration for stand diversity, age class retention, optimal stand densities, encroachment, and overall health.
   b. Identify and prioritize any areas for insect or disease or overstocking that may have a catastrophic effect on forest health with the potential to create additional fuel loads.

3. Increase wildfire preparedness through education and outreach activities.
   a. Partner with DNRC, Musselshell Fire Council, BLM, and LMCD to facilitate forester visits, forest management plan development, and fire risk assessments on homes and properties for program participation.
   b. Promote landowner participation in forest stewardship workshops hosted by DNRC, BLM, LMCD or MSU Extension.

## Alternatives

Alternative 1: No action will result in a failure to address the identified resource concerns leaving landscape and structures with little defensibility against wildfire. Forest health will continue to decline in the short and long term due to overstocking, disease, insects, undesirable species, and encroachment into rangelands. In addition, noxious weeds will continue to increase in the short and long term. Catastrophic wildfire is a likely outcome.

Alternative 2: (Preferred) Implement a small suite of practices to address the identified resource concerns. Forest Stand Improvement (666), and Woody Residue Treatment (384) will be the primary practices employed to address plant structure and composition, plant health and productivity, and wildfire hazard from biomass accumulation. Brush Management (314) will be a supporting practice, available to be utilized in site specific situations. Herbaceous Weed Control (315) will be the practice used to treat the plant pest pressure resource concern, especially post forest stand treatment, but partners and producers will be completing this practice without NRCS financial assistance. The threat of catastrophic wildfire will be significantly mitigated.

Alternatives will be analyzed in compliance with the National Environmental Policy Act (NEPA). All practices chosen for implementation will be evaluated regarding NEPA requirements. Special consideration will be given for practices effecting species of concern, such as Canada Lynx or Sage Grouse, in order to meet all federal regulations and NRCS policy requirements. Any cultural resources present will be identified and avoided during planning and implementation of practices involving federal action.

## Proposed Solutions and Actions

The solution to these major resource challenges is to take a comprehensive approach, which engages private landowners, leverages partnerships, and utilizes a productive suite of practices to address the resource concerns to achieve desirable results. Due to the scale and size of the problem, this approach gives us the most potential of achieving a positive, measurable outcome. We will utilize the work that has been done by BLM, DNRC, and local fire councils to identify areas with the greatest risk levels related to wildfire vulnerability and severity. With the help of our listed partners, NRCS rolled out a targeted outreach campaign, beginning in October of 2019, which generated interest and awareness of the program. We will also take advantage of current program participants, individuals who have previously expressed interest, and new applicants we receive as a result of our targeted outreach. Specific actions will depend on the treatment recommendation by technical experts, based on the field conditions, which will be outlined in the conservation plan and site-specific management plan.

*These practices will include:*

**Forest Stand Improvement** (666) may be used to thin existing stands of conifers as well as other silviculture treatments. Most of this work will be completed by NRCS with the potential for partnering with DNRC through their “Good Neighbor Authority” and BLM through their landscape programs on land adjoining parcels they manage.

**Woody Residue Treatment** (384) will involve reduction or elimination of slash generated from the above activities. Operations will include piling and burning, chipping, or removal for utilization (firewood, pulp, wood straw, ect). Most of this work will be done through NRCS funding, with potential for partnering from DNRC, BLM, and other sources.

**Brush Management** (314) will be used to aid in protection and defensibility of structures, strategic points, or ingress/egress routes for first responders. Brush management use will be less common than the other priority practices but can be used as a tool in the appropriate, strategic locations. Brush management will be utilized to re-open historic meadows and aide in defensible space during catastrophic wildfire events.

**Herbaceous Weed Control** (315) will be utilized to treat noxious weeds that are likely to occur after implementation of forestry activities. NRCS will not be providing cost assistance with these applications through this TIP. This is an opportunity for landowners and identified partners to provide their contributions to the implementation of this project. NRCS will, however, report progress on the implementation of herbaceous weed control.

*Photo point before, after, and 2 years after treatment.*

The following Table A provides specific targeted acreages for individual practices implemented over a 5-year period, as previously defined by the Musselshell/Golden Valley Long Range Plan:

*Table A. NRCS Deliverable Goals (in acres)*

| Activity | 2021 | 2022 | 2023 | 2024 | 2025 | Total |
|---|---|---|---|---|---|---|
| **Forest Stand Improvement** | 500 | 500 | 750 | 2,000 | 750 | 4,500 |
| **Woody Residue Treatment** | 500 | 500 | 750 | 2,000 | 750 | 4,500 |
| **Brush Management** | 0 | 170 | 330 | 330 | 0 | 830 |
| **Weed Control (partner/individual)** | 500 | 500 | 750 | 750 | 500 | 3,000 |

Within this TIP boundary, approximately 46,500 acres are forested. All practices included, NRCS plans to treat approximately 9,830 acres. This treatment total represents 21% of the treatable resource concern within the larger TIP boundary. This treatment addresses the primary resource concern and allows for additional and follow-up treatments to be accomplished by individuals and partners.

## Partnerships

Partners to this project, as identified at this time, include:

- USDA – Natural Resources Conservation Service (NRCS)
- Montana Department of Natural Resources (DNRC) – 50 hours
- Lower Musselshell CD (LMCD) – 500 hours
- Musselshell County Fire Council – 5 hrs
- Musselshell County (Commissioners) – 2 hrs
- Musselshell County Weed District – 30 hrs
- Musselshell Watershed Coalition – 60 hrs

This project capitalizes on many current partnerships while forging new, long term relationships. Many projects have already been completed or are underway within the project area. This TIP ties directly into the work that is being done or that is ready for implementation. Some of these efforts are DNRC "good neighbor authority" thinning projects on and around state lands, BLM thinning and burning projects, and previously implemented NRCS projects.

These partnerships use targeted outreach to bring technical and financial assistance to private landowners and have seen overwhelming interest since 2017. LMCD, partnering with DNRC and BLM, have initiated a mailing campaign, provided a series of informational workshops and outreach events, and provided forester visits to write plans for management practices. These outreach and forester visits are planned to continue as needed. LMCD also sponsored a producer outreach meeting to inform local landowners about forestry and fuels management practices. These meetings yielded over 50 interested producers and included information from BLM and DNRC partners speakers.

LMCD was so committed to addressing this resource concern that, in the winter of 2018, they hired a staff forester to write fuels treatment plans and defensible space plans. These funds were administered with assistance from BLM, Snowy Mountain Development Corporation, and National Association of Conservation Districts. Over ten fuels treatment plans have been written, and approximately 50 acres of home defensible space has been implemented over the last two years. These investments approach $100,000 during this two year period. This has paired well with previous NRCS landscape scale investments. In the past ten years, NRCS has applied 4,500 acres of fuels treatment, with an investment of $1.38 million. These past NRCS investments, along with numerous past and current partner investments, would be expanded upon through the implementation of this project.

Support for this project will also be provided by local Fire Departments. The Musselshell County Fire Council has also pledged assistance for implementation of this project. They are actively seeking funding to purchase the needed equipment to implement the prescribed fuels reductions and are working with BLM and State Lands partners to identify areas that would be beneficial for prescribed burning. The local Fire Departments will also help identify potential problem areas, or areas that might be of special significance for ingress/egress or fire protection.

*Photo point before and after forest stand improvement treatment.*

## Implementation

The Roundup NRCS Field Office, along with the listed partners, has an extensive history of working with rangeland and forest landowners. This history has led to a vast track record of successful implementation.

This project will occur over a five-year period, beginning in 2021. Conservation planning has been done, and will continue to be done, by the NRCS field office staff, along with cooperating partners. Previous planning or site-specific recommendations that have been made from partners will be utilized, providing that the recommendations meet NRCS standards and specifications.

First year participants will be selected from previously submitted applications, along with new signups during the open application period. Additional application periods will create additional opportunities for producers and for TIP funding success. In future years, interest will be generated using several implementation strategies including target mailings, referrals from partners, NRCS outreach, and producer word of mouth.

Budget projections are based on the 2020 cost list items for the above estimated acre goals. Actual costs may vary from year to year based on changes in the cost list, practices selected, and overall programmatic interest. Future budget projections have been estimated based on practice implementation history, current interest pool, and Field Office engagement with landowners.

*Table X. NRCS Estimated Budget*

| Contributions | 2021 | 2022 | 2023 | 2024 | 2025 | 5 yr Total |
|---|---|---|---|---|---|---|
| EQIP FA | $425,000 | $475,000 | $733,000 | $1,785,000 | $635,000 | $4,053,000 |


*Photo point before and after treatment.*

## Progress Evaluation and Monitoring

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 including acreages, stocking rates, condition percent, species percent, average diameter, timing and method of slash treatment, wildlife mitigation measures, photo documentation, and producer expenditure documentation. Each project will be overseen by field office staff with certifications being made upon completion, contingent on practices meeting NRCS standards and specifications. Progress will be recorded in Conservation Desktop, or other appropriate databases. 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. Follow-up treatments can then be determined if deemed necessary at that time.

TIP outcomes will be measured in acres treated, as well as percentage of the resource concern treated. The TIP area encompasses approximately 46,500 acres, of which approximately 15,000 acres are treatable (areas of proper soil, slope, and not open space). With the treatment goal of 5,330 acres, the TIP will address approximately 35% of the treatable resource concern. This TIP will also demonstrate a sustainable conservation practice to other landowners and operators and will bring equipment and contractors into the area to complete practices. This will lead to additional acres being treated and increase the overall percentage of resource concern addressed.

## Ranking

These additional ranking questions will allow the field office to further prioritize the pool of applications to ensure the proposed projects are meeting the project's stated objectives:

1. Are the acres proposed for treatment within 1,000 feet of any completed forest thinning or fuels reduction projects that have been completed in the last 5 years?
2. Are the acres proposed for treatment within 1,000 feet of a "stand replacing" fire that occurred within the last 15 years?
3. Are the acres proposed for treatment adjacent to primary ingress/egress routes (state highways, county roads, paved or unpaved) that would be critical to residents or first responders in the event of a wildfire?
4. Are the acres proposed for treatment adjacent to publicly controlled land, specifically State of Montana or Bureau of Land Management where the opportunity for partner assistance would enhance practices in the application?