

## Granite Fuel Break Targeted Implementation Plan (TIP)

Figure 1, Granite Fuel Break TIP location



### **Background**

The project area includes former commercial timber area which was logged in the late 20<sup>th</sup> century. The land was developed into a subdivision and left to regenerate. Most stands were clear-cut or heavily cut when harvested, leaving an open landscape or unmerchantable trees. In areas where the stand had a moderate treatment, the regeneration has not been thinned. Now with increasing stand density, and homes within the stand, the fire hazard to life and property has increased.

Disease and insects have also reduced viability, or in severe cases, caused mortality in several trees. Pine beetle, spruce budworm, mistletoe, and root rot account for most of the reduced viability and tree mortality. Moderately cut areas have multi age class stands with an over population of young trees in the understory. Douglas fir are the dominate species, with high density and increased plant stress, creating an environment where spruce budworm is becoming a plant mortality issue.

The proposed Targeted Implementation Plan (TIP) area covers approximately 1,600 acres of private non-commercial forest land. Not all acres within the TIP area are suitable for the practices this TIP will propose. Each application for assistance will be evaluated during the prioritization process.

## Problem Statement

Increased stand densities due to past management activities without intermediate treatments has created an overstocked stand resulting in decreased forest health and increased fire risk. Removing unhealthy or disease/insect infested trees and decreasing stand density has proven to be a viable way to reduce wildfire hazards and improve forest plant productivity and health.

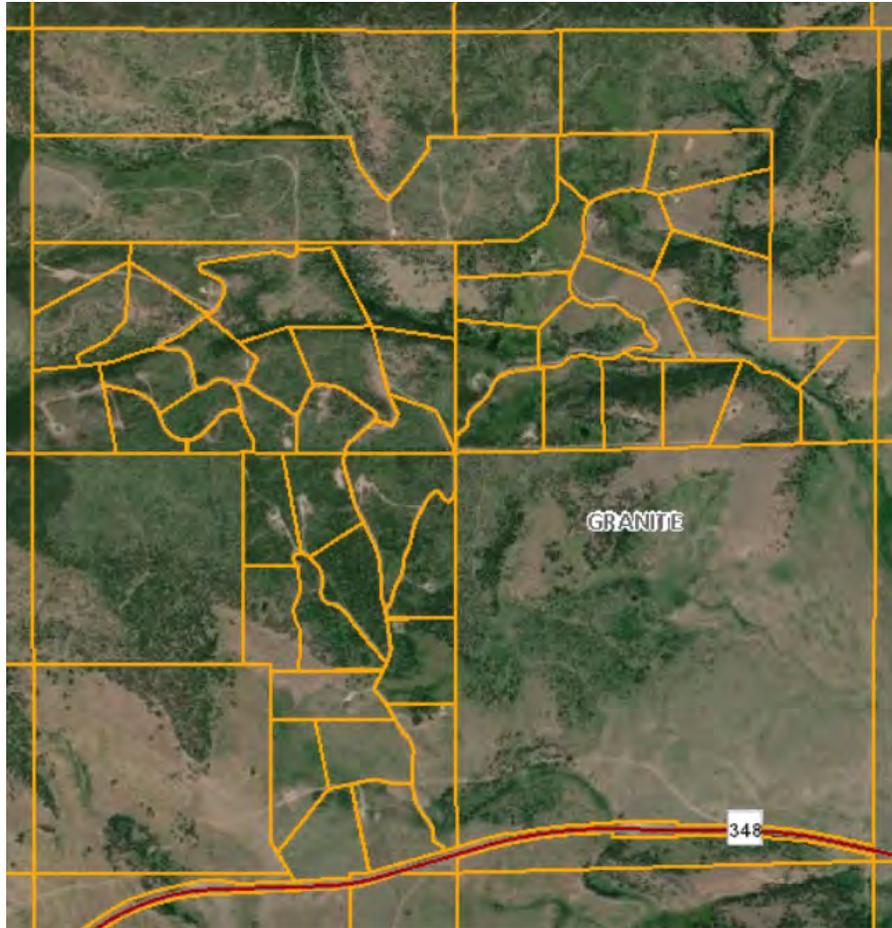
As identified in the Granite County Long Range Plan on page 21, wildfire hazard is a priority resource concern. A secondary resource concern for this TIP is degraded plant condition – plant productivity and health. Creating a defensible area has become a concern as more home developments become part of rural communities.

Reducing forest fuel loads while also reducing disease and insect risk are a priority for the landowners within this subdivision. However, treatment of timber stands on small tracts is labor intensive and generally low or no profit for contractors. Like most ecosystems, forests are in a constant state of change. Often management actions are driven by economics rather than conservation. Consequently, there is a need for practices such as intermediate treatments that improve conditions but incur costs rather than make a profit. The proposed Natural Resources Conservation Service (NRCS) conservation practices for this TIP are Fuel Break (383) and Herbaceous Weed Treatment (315). The desired future condition is healthy forests with reduced fire risk to homes and structures in the TIP area, Figure 2 & 3.

Figure 2, Proposed TIP Area



Figure 3, Individual Subdivision Tracts as Identified by MT Cadastral



## Goals and Objectives

1. Improve wildfire resiliency through decreased fuel loads.
  - Develop forest management plans for treated areas within the subdivision with consideration for a wildfire defensible area for homes.
2. Reduce stand density, improve forest health, and increase resistance to insects and disease.
  - Complete 400 acres of forest management practices over a 3-year period.
  - Identify and prioritize any insect or disease outbreaks that may have a negative effect on forest health.
3. Treat disturbed areas to reduce existing noxious weed populations and prevent new populations from establishing and creating fine fuels.

## Alternatives

**Alternative 1:** No action will increase wildfire risks with loss of structure and increased fuel loads. Forest health will continue to decline in the short and long term due to overstocking, insects, disease, and undesirable species.

**Alternative 2:** (Preferred) Implement practices to address resource concerns. Fuel Break (383) and Herbaceous Weed Treatment (315) will be used to address excess fuels. Fuel Break for Structures and Fuel Break for Forested can be used to decrease wildfire risk. It is anticipated these treatments will provide both short and long-term improvements to the identified resource concerns.

**Alternative 3:** Implement practices to address resource concerns. Forest Stand Improvement (666) intermediate silvicultural treatment, Woody Residue Treatment (384) pile and burn, and Herbaceous Weed Treatment (315) will be used to address excess fuels, inadequate structure and composition, and undesirable health and productivity concerns. This alternative has some advantages but the pressing need for this TIP is to reduce wildfire risks to structures. It is anticipated these treatments will provide both short and long-term improvements to the identified resource concerns.

### **Proposed Solutions, Actions, and Outcomes**

The forest type is consistent across the project area with little change in aspect, elevation, and slope. NRCS will develop a forest management plan for the treated stands and prescribe treatments to meet the desired outcomes. The plans will be developed in cooperation with the Philipsburg Field Office, Deer Lodge Field Office, and Missoula Area forester and/or the MT DNRC forester. Potential goals of the plan: reduce wildfire hazards, reduced stand densities, decrease susceptibility to disease and insect outbreaks, increase tree spacing for improved vigor, and provide financial assistance to defer associated costs. This approach gives NRCS the best chance to achieve a measurable outcome. NRCS will utilize program participants who have expressed interest in the TIP to help communicate with community members and hopefully increase participation.

Measurable outcomes will be determined by treatments meeting NRCS designs and specifications as described in the forest management plan and prescription determined by the NRCS job sheet. There are approximately 32 homes/cabins (with additional outbuildings) and about 7 miles of main road in the subdivision. In consultation with the Montana DNRC Service Forester a preliminary estimation pretreatment of 50 tons per acre fuel load was determined. The post treatment goal is to reduce fuel loads to 10-15 tons per acre to provide a more defensible space near buildings and egress routes. Treated acres will be mapped using GPS for the extent of treatment. Photo plots are planned as a visual determination of treatment success and to support future TIP projects. A site-specific inventory will be completed to establish a base-line point of treatment and for comparison during post treatment evaluation.

The general public will benefit from this project because proactive treatment of wildfire hazards near structures and communities is likely to be more cost effective than fighting fire in these areas. Proactively protecting life and property has additional social benefits and facilitates strong communities.

Unhealthy and overstocked forests have a higher probability of burning. Excessive ladder fuels will ignite the tree canopy causing a hotter fire, releasing additional carbon into the air. One of the fundamental causes attributed to climate change is adding additional carbon into the atmosphere. The short-term risks of forest fires include increased health risks, acute for firefighters and chronic for local populations. In the long-term, there may be net gains to sequestered carbon and reduced negative influence to climate change through the implementation of this project. This Fuel Break TIP seeks to reduce fire risk and decrease the possibility of additional carbon emissions.

Selected Practices will Include:

**Fuel Break** (383) will be used to accomplish the stated goal of reducing wildfire risks to homes and structures. Additional acres can be contracted with Fuel Break - Forested for areas along roads and federal boundaries that have received minimal or no treatment for many years.

**Herbaceous Weed Treatment** (315) acres are estimated at 20% of total project acres to cover disturbed areas which may need noxious weed treatment.

**Partnerships**

The Granite Fuel Break TIP consists of the following partners:

- Natural Resources Conservation Service – Philipsburg Field Office, responsible for forest management plan development, contract development, and contract management. Currently, NRCS is the only source for funding of this TIP.
- Montana DNRC, anticipate writing a forest management plan for the participants
- Montana State University Extension – Home Fire Risk Education
- Black Pine and Marshall Ridge Homeowners Association, outreach efforts to landowners
- Granite Conservation District, assistance with local work group and outreach efforts

Granite Conservation District and the NRCS Philipsburg Field Office has a longstanding partnership coordinating on conservation efforts.

**Implementation**

The Granite Fuel Break TIP will be implemented over the course of three years. Forty-five landowners in the project area have been contacted by letter and ten have responded positively to the proposal and would like to move forward with this type of project. The Black Pine and Marshall Ridge Homeowners Association has also responded and presented this proposal at their February 2021 meeting. Additional outreach is needed to contact all landowners in the project area. By completing the preliminary outreach NRCS has already developed a list of potential participants within the project area.

NRCS anticipates contracting approximately 400 acres of fuel break treatment between 2022 and 2024, as shown in Table 2.

Table 2. Anticipated NRCS Deliverables

Activities	2022	2023	2024	Total
Fuel Break (NRCS-383)	100 ac	200 ac	100 ac	400 ac
Herbaceous Weed Treatment, Chemical Ground Application (NRCS-315)	20 ac	40 ac	20 ac	80 ac

Budget projections are based on Fuel Break Structure at \$1,139.59 per acre (Fuel Break Forested would be contracted at \$783 per acre). Herbaceous Weed Treatment acres are estimated at 20% of total project acres to cover disturbed areas which may need treatment at \$41.96 per acre as stated in the NRCS EQIP 2021 cost list shown in Table 3. Actual costs may vary from year to year based on changes to the cost list and whether Fuel Break Structure or Fuel Break Forested were utilized.

Table 3. NRCS Budget Projections for an estimated 25 contracts

CONTRIBUTIONS	2022	2023	2024	TOTAL
NRCS EQIP FA	\$114,798	\$229,596	\$114,798	\$459,192

Table 4. NRCS Estimated Technical Assistance Hours

Expected NRCS Technical Assistance Hours per 20 contracted acres			
Task	Hours Travel	Hours Work	Hours/Activity/Contract
I&E	1.0	5.0	6.0
Plan Development		5.0	5.0
Contract Development		10.0	10.0
Implementation	1.0	6.0	7.0
Certification	2.0	12.0	14.0
Contract Maintenance		12.0	12.0
<b>Total</b>	4.0	50.0	54.0

### Prioritization and Ranking

Screening tools and ranking questions will be used to prioritize forested acres within the project area. Ranking questions will be developed with the assistance of the NRCS forester. Some consideration should be given to anticipated outcomes, the current level of disease or insect infestation, and effect on wildfire potential.

#### Application Prioritization Tool:

1. Has the applicant had an NRCS program contract terminated since January 1, 2018; or does the applicant have an existing contract that has been determined to be in noncompliance and currently under an active NRCS-CPA-153?
  - o Yes – Application is a LOW priority and will not be ranked.
  - o No – Continue to question 2
2. Is the proposed conservation treatment within the geographic boundaries of this TIP?
  - o No – Application is a LOW priority and will not be ranked.
  - o Yes – Continue to question 3
3. Does the application meet the intent of the TIP, and is for practices currently offered in the TIP that will treat the identified resource concern?
  - o Yes – Application is a HIGH priority and will be ranked.
  - o No – Application is a LOW priority and will not be ranked.

#### Local Ranking Questions:

1. Are the planned practices within ¼ mile of a primary residence where it will reduce wildfire potential?
2. Are the treated acres on slopes less than or equal to 25%?
3. Do the proposed acres have three or more disease/insects present in the stand?

## **Progress Evaluation and Monitoring**

Evaluation and monitoring will take place on an annual basis for three years post treatment. NRCS will analyze interest levels, implementation rates, and staff availability to plan and direct workload. Resource inventories will be completed before and after each contract or treatment to document improvements, including acreage, stocking rate, and method of treatment. Each NRCS project will be overseen by field office staff with certifications being made upon completion of practices meeting NRCS standards and specifications. NRCS will work with willing project participants to showcase land treatments to other landowners to encourage more wide-spread adoption. Further monitoring will take place to ensure treatments are having the desired outcomes in subsequent years. Treated acres will be mapped using GPS for extent of treatment. Photo plots are planned as a visual determination of treatment success and to support future TIP projects. 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.

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