

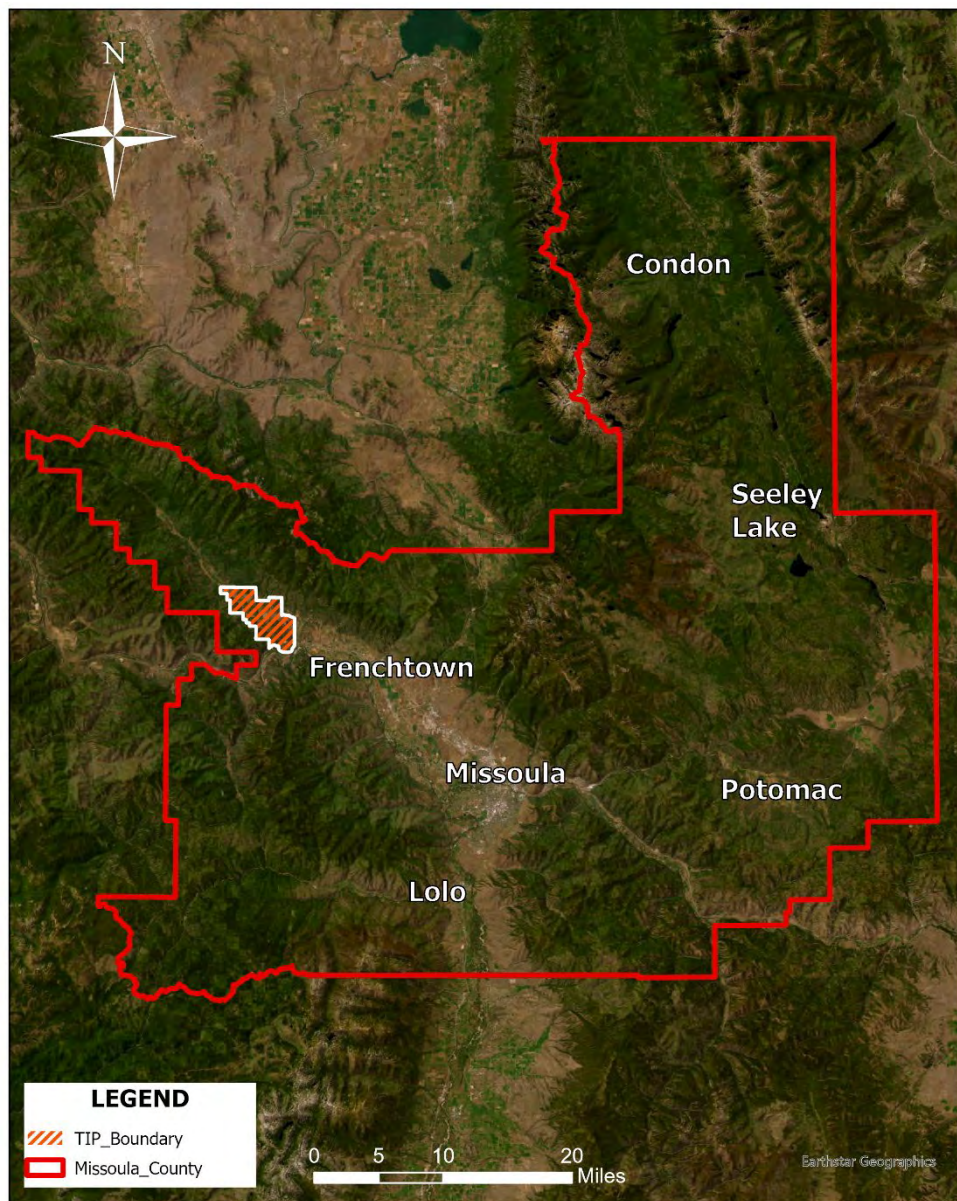


United States Department of Agriculture

Natural Resources
Conservation Service

LOWER NINEMILE FOREST HEALTH TARGETED IMPLEMENTATION PLAN

Missoula County, Montana



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SUMMARY

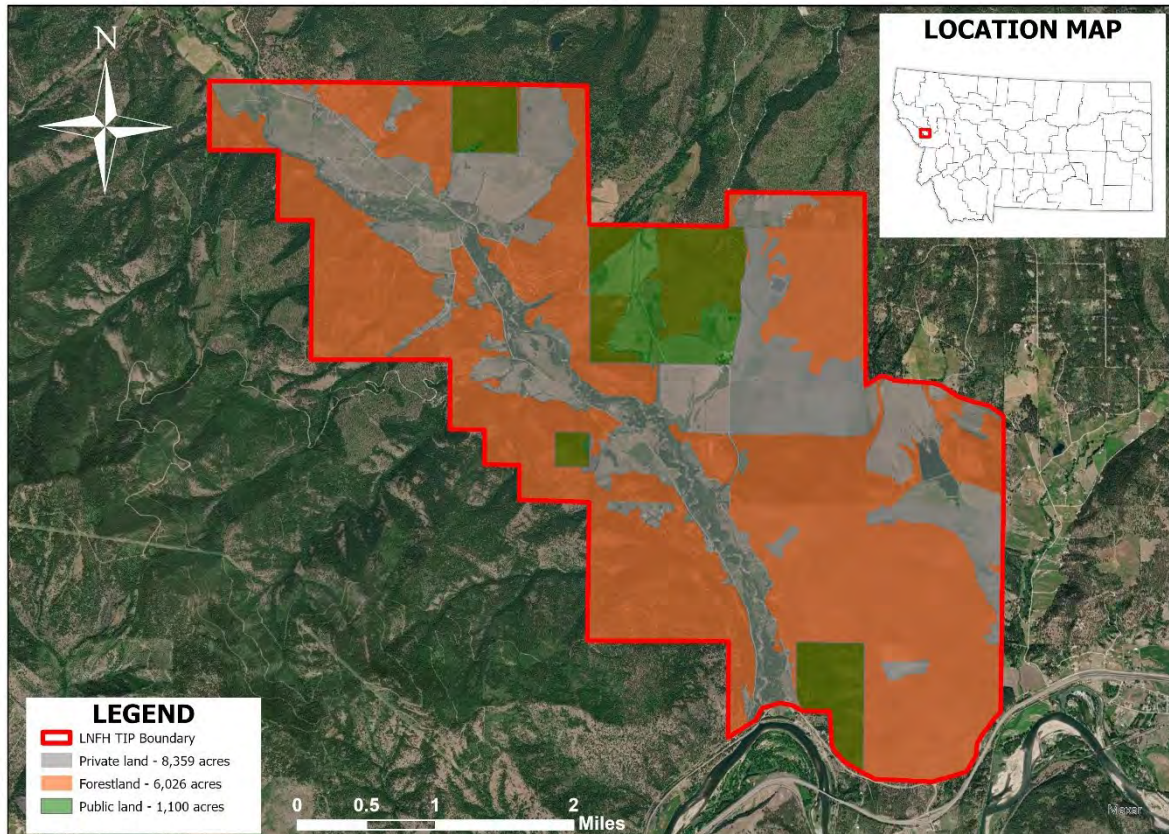
The Lower Ninemile Forest Health (LNFH) Targeted Implementation Plan (TIP) is a Natural Resources Conservation Service (NRCS) proposed extension of the existing Upper Ninemile Forest Health (UNFH) TIP, addressing resource concerns, such as plant productivity and health, plant structure and composition, and wildfire hazards from biomass accumulation. The project goals include improving forest health by increasing stand resilience to insect and disease, reducing hazardous fuels to minimize wildfire impacts, increasing wildfire preparedness in the urban interface through education, outreach, and partnerships, and address noxious weeds that may interfere with existing resource concerns. These goals can be achieved by financially assisting landowners through a suite of forestry practices, such as Forest Stand Improvement (Code 666), Woody Residue Treatment (Code 384), and Herbaceous Weed Treatment (Code 315), to confront these resource concerns. Additionally, through technical assistance and partnerships, landowners will also have opportunities to receive additional funding and conservation expertise for any forested land. By incentivizing and offering guidance on silvicultural prescriptions and land management, landowners may observe and prosper from many short- and long-term conservation benefits, such as removal of noxious weeds to improve wildlife habitat and increased preparedness by safeguarding homes from wildfire.

There are many landowners that have either already been practicing forest stewardship that aligns with NRCS goals or have expressed interest in pursuing forest management within the proposed TIP area. The geographic TIP boundary encompasses approximately 9,468 acres, including 6,026 acres of forested land on both public and private property. Of that acreage, approximately 4,926 are on private land. An estimated few hundred acres have been treated within the last few years either by partner-landowner agreements or at a landowner's out-of-pocket expense. However, more acreage could be treated with financial assistance mitigating the rising costs of contracting forest thinning. The anticipated deliverables of NRCS would be to treat at least 1,200 acres (a little less than one-third) of forested private land over four years, from 2024 to 2027. Across four years, the projected budget of implementation would total \$1,402,375.20 (estimation based on the fiscal year 2023 payment schedule), allocating on average \$350,500 annually toward the abovementioned conservation practices. Partner groups would be responsible for treating a few hundred acres (i.e., 300 acres), primarily working with small acreage landowners. Besides grant-facilitated forest management agreements, other partner contributions would include outreach, forest management plan development, education, and other technical assistance.

GEOGRAPHIC FOCUS AND BACKGROUND

Lower Ninemile Forest Health Targeted Implementation Plan

Project Area



The Lower Ninemile Forest Health (LNFH) Targeted Implementation Plan (TIP) includes all the private, non-industrial forested lands beginning at the confluence of the Clark Fork River and the Ninemile Creek and extending north to Butler Creek. This boundary aligns with the southern extent of the existing Upper Ninemile Forest Health (UNFH) TIP, and encompasses the remaining Ninemile drainage to complement the ongoing forestry efforts. The total acreage of the LNFH TIP boundary is 9,468 acres. Of that acreage, 8,359 acres are private land and 1,100 acres are public land (i.e., US Forest Service [USFS] or State Lands). Forested acres total 6,026 acres, of which 4,926 acres are private land and 1,100 acres are public land. There are associated agricultural land acres included in the TIP boundary that are not eligible for implementation of conservation practices. Landowners that are willing to participate in Farm Bill programs (i.e., Environmental Quality Incentives Program [EQIP]) and meet eligibility requirements represent about 50% of the TIP area.

The LNFH TIP area was chosen for three main reasons: 1) historical mismanagement and lack of current management of forestland, 2) complementary to other projects (i.e., UNFH TIP, US

Forest Service fuel break investments, Wildfire Adapted Missoula [WAM] collaborative), and 3) general landowner interest.

Most private forested land within the project area had been commercially logged in the 20th century, typically by lumber companies that owned the land at the time (i.e., Johnson Brothers, Plum Creek Lumber). Most of the stands were heavily cut when harvested, leaving open areas for weed infestations or unmarketable trees. In areas where the stand had more moderate treatments, the regeneration had not been thinned and now stand health is in decline due to the overpopulation of young trees. The forested landscape today in the Lower Ninemile is characterized by dense, patchy regeneration of ponderosa pine and Douglas-fir under either suppressed leave trees or dominant ponderosa pine canopies. Many of the acres of the suppressed stands have been negatively impacted by disease and insects, resulting in reduced forest health and increased fire risks associated with accumulating dead or downed dried fuels. Pine beetle, spruce budworm, dwarf mistletoe, fir engraver, western gall-rust, and root disease account for most of the reduced viability and tree mortality. These disease and insect pressures may continue to spread, leading to a continued increase in tree mortality and fuel creation until proper management of individual infected trees are removed from the landscape. Improving forest health and resilience through forest stewardship and public education will help landowners manage their forestlands more effectively.

The NRCS has implemented various projects in partnership with other agencies to address these concerns. For instance, the NRCS and USFS have been very active in planning and implementation of forest management projects throughout the county for many years, including the WAM project, submitted under the Joint Chiefs Initiative in October 2018, and supports the county wide Community Wildfire Protection Plan (CWPP), which was developed through the collaborative efforts of Missoula County local government and Rocky Mountain Research Station. CWPP planning identified that the Ninemile area has a high to very high burn probability and has a significant number of homesites intermixed throughout the wildland-urban interface (WUI) as well. Also recently, the USFS was awarded \$63M to expand fuel breaks across the West, which coincides with the objectives of this TIP. Additionally, the NRCS already has the UNFH TIP in the upper reaches of the Ninemile area that addresses these same identified issues. Lastly, county agencies, such as the Office of Emergency Management, and non-profit organizations, such as the Bitterroot Resource Conservation and Development, have both been active in the area assisting landowners with safeguarding homesites through grants. All these ongoing efforts support the intention of this TIP.

Missoula County is heavily forested, making forest health and fire preparedness among some of the most prevalent concerns in the county. As mentioned, some landowners within the TIP boundary have been implementing good forest stewardship, and there are other landowners that have expressed interest in properly managing the forestland for their own benefit, as well as for a holistic ecosystem benefit. A local landowner-partner meeting was held on August 24th, 2023 to outline TIP goals and purpose, discuss conservation practices, and highlight partnership collaboration for implementation of the project. This event allowed landowners and partner groups to come together to network and support this NRCS project.

RESOURCE CONCERNS

The primary resource concern for the Lower Ninemile focus area is ***plant productivity and health***, which includes plant pest pressure. The secondary resource concerns identified are ***plant structure and composition*** and ***wildfire hazard from biomass accumulation***.

According to the Long Range Plan (LRP) for Missoula and Mineral Counties, one of the prioritized resource concerns includes forest health (LRP, Section V, pg. 37), and the many associated forestry resource issues that were stated as needing to be addressed (LRP, Section VI, pgs. 33-34). These issues included poor or lacking forest management and fire-wise home safety. Consequently, the result of mismanagement is increased densities of shade-tolerant trees leading to overstocked forests with insect and disease infestation potentials, and decreased resiliency to wildfire that conflicts with the increase in home construction in the area. Through conversations with landowners who reside in the Lower Ninemile, it is evident that they are experiencing increased pressure from these threats. Other projects in the localized area, including Conservation Stewardship Program (CSP) contracts and county/district grants, have captured these issues quantitatively as well. For instance, the Frenchtown Rural Fire District has already completed 7 projects totaling approximately 83 acres since 2018. Due to the landowner interest, rising economic costs to implement forest management, ongoing complementary efforts, and available partner contributions, the NRCS initiating this financial incentive now would not only be practical, but effective in addressing current resource concerns addressed in the LRP, including enhancing wildlife habitat and reducing noxious weed infestations.



Figure 1. Example of unmanaged forest regeneration (left side) and forest stand improvement thinning (right side) for ponderosa pine stand.

GOALS & OBJECTIVES

- 1) Improve forest health, increasing stand resilience to insects and diseases
 - a. Complete at least 1,200 acres of treatment over four years leveraging the assistance of multiple partners
 - b. Work with partners to identify insect and disease outbreaks in the project area that may have damaging effects on forest health and cause an increase in hazardous fuels
 - c. Collaborate with partners to develop Forest Management Plans (FMP) with silvicultural prescriptions for each participant with consideration for long-term forest health and resiliency
- 2) Reduce hazardous fuels to minimize wildfire impacts and decrease the likelihood of stand replacing fire events
 - a. Install forestry practices, such as Forest Stand Improvement (Code 666) and Woody Residue Treatment (Code 384), to decrease fuel loads
 - b. Implement Herbaceous Weed Treatment (Code 315) , especially when noxious weeds are of concern to wildfire fuels
- 3) Increase wildfire preparedness through education and outreach activities
 - a. Partner group facilitation with site visits, forest management plan development, fuels mitigation assessments and fire risk assessments on homes and properties for program participants, outreach regarding defensible space information, and implementation of fuel breaks when applicable.
 - b. Promote and participate in the forest stewardship workshop hosted by MSU Extension on an annual basis
- 4) Address existing populations of noxious weeds.
 - a. Partner education, outreach, and training regarding noxious weed related issues that exist in the Lower Ninemile Creek drainage.
- 5) Collaborate with partners to increase landowner education regarding general forest health, defensible spaces from wildfire, noxious weed control, and improving wildlife habitat
 - a. Inform landowners of opportunities to collaborate with partner groups on a technical or financial basis, and vice versa from partner groups where applicable

ALTERNATIVES

*Alternative 1 – **Not Selected***

Conservation practices include:

- Forest Stand Improvement (Code 666)
- Woody Residue Treatment (Code 384)
- Fuel Break (383)
- Herbaceous Weed Treatment (Code 315)

Implementing these conservation practices listed above would address the identified resource concerns. Landowners participating in this NRCS program would benefit from short- and long-term forest health goals that would address overstocking issues, fuel loads, defensible space, and noxious weed control. Through financial and technical assistance, forestlands would benefit from higher quality timber with reduced insect and disease problems, greater wildlife usage, and decreased likelihood of structure damage from wildfires. Partners would assist where applicable.

*Alternative 2 – **Selected***

Conservation practices include:

- Forest Stand Improvement (Code 666)
- Woody Residue Treatment (Code 384)
- Herbaceous Weed Treatment (Code 315)

Implementing these conservation practices listed above would address the identified resource concerns. Landowners participating in this NRCS program would benefit from short- and long-term forest health goals that would address overstocking issues, fuel loads, and noxious weed control. Partner groups would step in to assist landowners with fuel breaks through their expertise and grants, reducing NRCS workload and allowing landowners more flexibility with standards and specifications.

*Alternative 3 – **No Action***

No conservation practices applied. No action will result in forest health continuing to deteriorate, noxious weeds continuing to be prevalent or spread, and wildfire hazards continuing to exist. Forest health will continue to decline in the short- and long-term due to overstocking, insects, disease, noxious weed presence, and increased fuel loads, resulting in low quality timber stands, wildlife habitat, and ecosystem services. Forest fuels will likely continue to increase which will increase the susceptibility to catastrophic fire events.

PARTNERSHIPS

The LNFH TIP consists of the following partners:

- Montana Department of Natural Resources & Conservation (DNRC)
- Missoula County Office of Emergency Management (OEM)
- Missoula County Office of Lands and Communities (OLC)
- Missoula County Department of Ecology and Extension (DEE)
- Missoula Conservation District (MCD)
- US Forest Service, Ninemile Ranger District (USFS)
- Frenchtown Rural Fire District (FRFD)
- Bitterroot Resource Conservation and Development (BRC&D)

The NRCS hosted a landowner-partner meeting on August 24th to discuss the TIP opportunities and partner group contributions to landowners that reside in the Lower Ninemile area. Seven total landowners and 6 partners, OEM, OLC, MCD, USFS, FRFD, and BRC&D, were in attendance at the Historic Ninemile Ranger Station. Many other landowners were contacted and expressed interest in this TIP proposal, but were unable to attend. Those who attended expressed interest in completing the Conservation Program Application (CPA-1200) for this project, with one landowner submitting theirs at the end of the meeting. Some landowners currently had CSP contracts active and expressed their continued interest to work with NRCS if this proposal was approved and funded. A few landowners took informational packets home to disperse to neighbors.



Figure 2. Kickoff landowner-partner meeting at the Historic Ninemile Ranger Station discussing TIP proposal.

Below outlines partner group contributions that were discussed prior to the meeting:

Montana Department of Natural Resources and Conservation

- *Technical:* Support NRCS by visiting landowners to exchange technical resources and information (i.e., insect and disease identification)
- *Technical:* Work with Service Forester to write forest management plans for NRCS contracts
- *Technical:* Assist with outreach to promote financial assistance through mailers

Missoula County Office of Emergency Management

- *Financial:* Assist with on-going fire cost-share hazard reduction program focused strictly on structure protection and fuels mitigation on smaller forested parcels via United Way of Missoula, and Montana Conservation Corps
- *Technical:* Share information about each other's programs with landowners and potential clients, providing complimentary assistance whenever necessary (i.e., NRCS may assist with large-scale forest improvements while OEM focuses their resources specifically on the protection of structures)

Missoula County Office of Lands and Communities

- *Technical:* Share information about all partner program grants with landowners and potential clients, providing complimentary assistance whenever necessary

Missoula County Department of Ecology and Extension

- *Technical:* Provide coordination, education, outreach, and training to clients for implementing integrated weed management, vegetation mapping, research, and hands-on training

Missoula Conservation District

- *Financial:* Promote and offer assistance with mini-grants (i.e., Riparian Planting Mini-grant) designed to promote the maintenance and restoration of riparian areas, such as the Ninemile Creek
- *Technical:* Assist with providing technical information and client referrals/networking with other partner groups
- *Technical:* Contribute to general outreach and education for this project, including mailers

US Forest Service, Ninemile Ranger District

- *Technical:* Provide local information about ongoing projects to interested landowners (i.e., prescribed fire activities, mine reclamation restoration)
- *Technical:* Provide educational outreach opportunities about forest land management for landowners when inquiries come in

Frenchtown Rural Fire District

- *Financial:* Work with landowners interested in wildfire hazard fuels reduction through cost-share program (i.e., NRCS may assist with large-acre forest improvements while FRFD focuses resources on small-acre projects)
- *Technical:* Conduct property risk assessments by appointment for landowners prior to executing forest management activities
- *Technical:* Promote information regarding wildfire preparedness for homeowners

Bitterroot Resource Conservation and Development

- *Financial:* Provide access to financial assistance to homeowners interested in completing fuels reduction projects, including commercial logging sales (i.e., NRCS may assist with large-acre forest improvements while BRC&D focuses resources on small-acre projects)
- *Technical:* Conduct property risk assessments by appointment for landowners prior to executing forest management activities
- *Technical:* Promote information regarding wildfire preparedness for homeowners

IMPLEMENTATION PLAN

Management is key to maintaining plant productivity and health, which subsequently has been identified as the primary resource concern for this project. Forest management activities that include Forest Stand Improvement, Woody Residue Treatment, and Herbaceous Weed Treatment can provide landowners who reside in the Lower Ninemile focus area with an opportunity to adapt their forests to multiple threats including drought, invasive species infestation, disease, and wildfires while concurrently improving the productivity and health of selected leave trees as well as the native understory vegetation. These management practices can improve and maximize site growth potential, resulting in larger, healthier trees and more valuable timber. In addition, thinning allows for the continued growth of the healthiest preferred species within a forested stand while removing the suppressed, diseased, genetically inferior, and low vigor trees that can reduce the overall health of a stand. Maintaining proper stand density is essential for mitigating disease and insect susceptibility within a forested stand while minimizing catastrophic fire risk. The proposed treatment of forested acres through the implementation of this TIP in conjunction with recently completed and on-going forest management activities that have occurred within the focus area by both private landowners and partner agencies have the potential to collectively and positively impact forest health on a broadscale within the Lower Ninemile. In addition, utilizing an integrated approach to forest management activities on a landscape level within the focus area has the potential to spur additional partner participation, contributions, and landowner interest both with and without Farm Bill program assistance. Ultimately, this collaborative approach to conservation within the Lower Ninemile drainage could lead to implemented results that far exceed the projected outcomes outlined in this document.

This project is intended to be available for 4 years starting in 2024, accepting applications for EQIP funding until 2027. Based on fiscal year 2023 estimates, the total financial assistance needed to complete this project is \$1,402,375.20 over 4 years (see Table 1 for yearly breakdown). The practices included will be Forest Stand Improvement (Code 666), Woody Residue Treatment (Code 384), and Herbaceous Weed Treatment (Code 315), which are practices that can be completed entirely by NRCS conservation planners. Assistance from partner groups will mostly come in the form of technical advising, with financial assistance grant and cost-share programs available when most appropriate for the partner group and/or the landowner. The prioritization areas will include all forested acres that have not been treated to NRCS standards and specifications, focusing on any WUI intermix areas first, which covers approximately 4,100 acres of the forested acres in the TIP. The goal of this TIP is to treat approximately one-third of those prioritized acres, or 1,200 acres (see Table 2). NRCS conservation planners and partner groups will manage projects throughout the span of any signed contract and implement necessary maintenance and operation as specified (see Table 3). When participation is limited, DNRC and MCD has agreed to issue mailers to promote NRCS TIP programs, which is the main foreseen obstacle that could limit implementation, but should not be a major issue with the current support.

Table 1. Anticipated NRCS financial assistance (FA) budget projection by year.

Contributions	2024	2025	2026	2027	Total
<i>NRCS EQUIP FA*</i>	\$290,911.50	\$352,093.80	\$407,276.10	352,093.80	\$1,402,375.20

*Rates were determined by fiscal year priority (Pr) estimates:

Forest Stand Improvement = \$696,92/ac for high intensity pre-commercial thinning

Woody Residue Treatment = 455.33/ac for pile and burn

Herbaceous Weed Treatment = \$113.96/ac for chemical applications

Table 2. Anticipated yearly NRCS deliverables by acreage and cost.

Activities	2024	2025	2026	2027	Total
<i>Forest Stand Improvement (Code 666)</i>	250 ac \$174,230	300 ac \$209,076	350 ac \$243,922	300 ac \$209,076	1,200 ac \$836,304
<i>Woody Residue Treatment (Code 384)</i>	250 ac \$113,832.50	300 ac \$139,599	350 ac \$159,365.50	300 ac \$139,599	1,200 ac \$552,396
<i>Herbaceous Weed Treatment (Code 315)</i>	25 ac \$2,849	30 ac \$3,418.80	35 ac \$3,988.60	30 ac \$3,418.80	120 ac \$13,675.20

Table 3. Projected NRCS and partner contributions in hours

<i>Contributions (hours)*</i>		2024	2025	2026	2027	Total
<i>NRCS</i>	Outreach	10	15	20	15	60
	Planning	40	60	70	60	230
	Contracting	30	35	40	35	140
	Technical Assistance	20	25	30	25	100
	Certification	30	35	40	35	140
	TOTAL	130	170	200	170	670
<i>Partners</i>	Outreach/Education	30	35	40	35	140
	Technical Assistance	40	60	70	60	230
	Financial Assistance	60	70	80	70	280
	TOTAL	130	170	190	170	650
<i>TOTAL</i>	1,320 hours					

*Hours are subject to change based on landowner interest during each time of year and available grant money from partner groups.

A screening tool and ranking questionnaire will be used to prioritize projects based upon conservation benefit and feasibility for the project to be completed in the scheduled timeframe to ensure the proposed projects meet NRCS goals and objectives.

Ranking Questions

- 1) Has the applicant implemented management within the last 3-years that is restoring the native forest plant community on the property before applying for NRCS financial assistance? (Demonstrates a commitment to project objectives)
- 2) Are the planned acres of Forest Stand Improvement (666) located adjacent to properties on which previously completed pre-commercial thinning activities have taken place within the last 5-years (private, industrial, state, or federal lands all apply)?
- 3) Does the application include stands that have three or more identified disease or insect problems present? (Does the application include Herbaceous Weed Treatment (315) promote the health and productivity of native understory vegetation?)

OUTCOMES

The overall goal and desired outcome for the LNFH TIP is to implement forest stand improvement treatments within the focus area to improve forest health and reduce wildfire risk to the community. Considering all variables, approximately 1,200 acres should be treated for forest health improvements, which is approximately one-third of the private forested land. Success will be measured based on acres of forest stand improvement treatments within the WUI intermix prioritized areas.

Progress Evaluation and Monitoring

A stand level forest inventory will be completed prior to contract obligation to document stand conditions and to develop a silvicultural prescription. The silvicultural prescription will be used to determine practices to include in the contract and for practice certification when conditions in the prescription have been attained. Inventory will include documentation of the existing species composition within stand, stand density and tree spacing as well as disease and forest-health attributes. Pre- and post-treatment photos will be used to visually show stand improvements. Each treatment area will have at least one georeferenced pre- and post-treatment photo point to capture variables, such as species composition (%), tree spacing per acre (TPA), basal area per acre (BA), disease and insect problems, and anything else of importance (i.e., snags per acre, wildlife thickets). All contract items will be certified with a NRCS conservation planner on-site field visit, with photos and maps to document the conditions at practice certification. After contract completion, the landowner is responsible for monitoring and documenting stand conditions if applicable to a Forest Stewardship or Tree Farm obligation, and NRCS field staff will assist if requested.

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