

Shafer Resource Management Project Proposed Action

1 Location

The Shafer project area is located west of Shafer Butte-Deer Point ridge and extends west about 3 miles to the National Forest boundary (see Figure 2 on page 2). The project area is located in the Shafer Creek watershed and includes a small portion in the Dry Creek watershed. The principal access route is from the south via the Bogus Basin Road (Forest Highway 79). Access is also possible from the north by way of Forest Development Roads (FDRs) 307 to 374. The legal description of the project area is T5N, R3E, Sections 3-10, 15-22 and 24-32, Boise Meridian, Boise County, Idaho. The project area encompasses about 6,600 acres of National Forest System land administered by the Mountain Home Ranger District of the Boise National Forest.

2 History of the Project Area

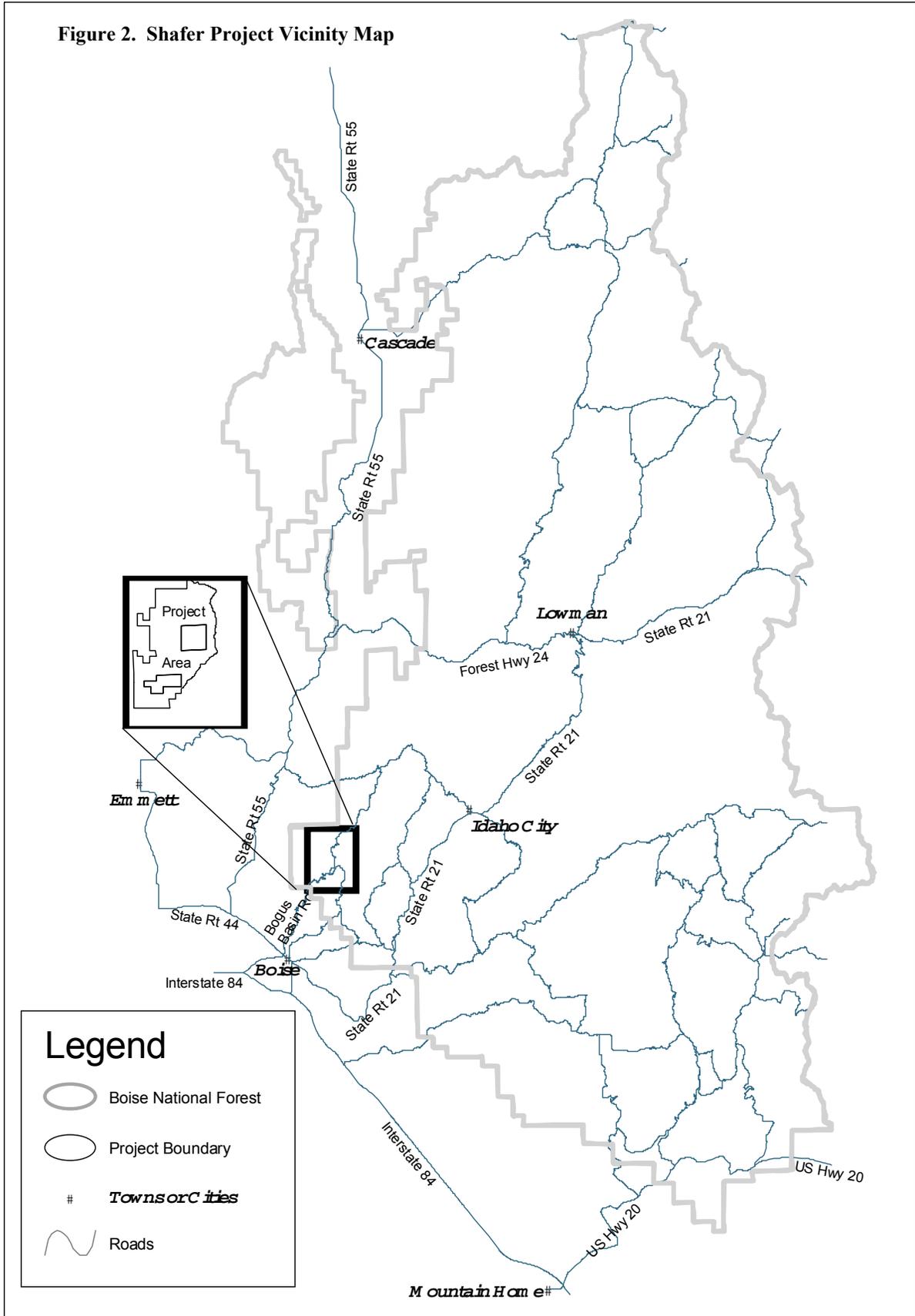
Figure 1. Panorama of the Shafer project area.



The project area contains dense second-growth timber stands with some areas of heavy brush (see Figure 1).

Timber management activities on the area west (down slope) from Bogus Basin Road were conducted from 1930 to 1950 when a substantial portion of the land was privately owned. The harvested areas have regenerated with conifer trees and dense, closed canopy stands currently exist.

An extensive road system was developed in conjunction with the previous timber management activities. The majority of these roads are located on the more gentle topography at about midslope and have been closed to all vehicle traffic since at least 1970. Most of the timber harvested consisted of ponderosa pine.



The Forest Service acquired approximately 2,500 acres in the late 1940s to early 1950s and another 280 acres in the late 1970s to early 1980s. No subsequent timber management activities have occurred on these lands since they were acquired, nor has any timber management occurred on other National Forest System lands within the project area except for those associated with development of the Bogus Basin Ski Resort and Idaho Power transmission lines.

Timber management activities on the area east (upslope) of the Bogus Basin Road have focused on the development and maintenance of ski runs and power transmission line corridors. Timber management activities proposed at this time are focused on improving the timber stands and aspen stands, and reducing the risk of wildfire spreading to or from private lands (see Section 5).

3 Forest Plan Direction

The Boise National Forest Land and Resource Management Plan contains direction for the management of the Shafer project area. The project area lies within portions of Management Areas 17, 19, and 22.

Management Area Prescription Comparison		
Management Area	Management Prescription	Emphasis of Management Prescription
17	D	Protect visual quality. Improve/maintain wildlife habitat. Modify timber harvest to protect visual quality and wildlife habitat. Suppress unplanned wildfire ignitions.
19	M	Winter recreation, primarily alpine and cross-country skiing. All resource management activities must be compatible with the developed recreation area objectives. Suppress unplanned wildfire ignitions. A Forest Plan Amendment would be needed to harvest timber to improve timber stand conditions (see section 7).
22	L	Protect visual quality. Manage for timber resources. Improve wildlife habitat. Suppress unplanned wildfire ignitions. Recreation opportunities characterized by evidence of man in harmony with the area.

The project area is not within or adjacent to any Inventoried Roadless Areas.

4 Project Development Process

A timber sale was planned for the Shafer area in 1986 by the Idaho City Ranger District. This project was not implemented at first due to poor timber market conditions and the lack of Forest Service right of way on Shafer Creek Road through private land. During the early 1990s, the Shafer Timber Sale and other projects were shelved indefinitely while Boise National Forest personnel concentrated on timber salvage due to wildfire and insects. In 1999 the Forest Supervisor decided that a new environmental assessment (EA) would be prepared for the Shafer project because of changes that have occurred since the 1986 decision. These changes included new land management direction, legal requirements, and resource information. New direction since 1986 includes the 1990 Forest Plan and the 1995 Inland Native Fish Strategy decision, both of which include a wide variety of requirements that were not considered in the 1986 decision. The bull trout, Canada lynx, and the plant *Spiranthes diluvialis* have been listed as threatened in recent years. The Forest Supervisor also wanted the timber stands reevaluated for the risk of stand-replacing wildfire and high levels of insect damage.

Following this direction from the Forest Supervisor, the interdisciplinary team considered past activities and current conditions to identify specific problems or concerns. A Vegetation Report was completed in January 2001. This report contains data on present stand conditions that substantiates the need for management action and also includes the 1986 environmental assessment. In addition to timber stand vegetation, the team reviewed road accessibility, hydrologic conditions, and recreation, and visual concerns.

Subsequently, the interdisciplinary team compared their conclusions to:

- The Boise National Forest Plan direction for Management Areas 17, 19, and 22,
- The Forest-wide assessment, Resources At Risk: A Fire-Based Hazard/Risk Assessment for the Boise National Forest, and
- The National Fire Plan (in particular, Protecting People and Sustaining Resources in Fire-Adapted Ecosystems – A Cohesive Strategy).

Direction and recommendations provided by these additional sources were used to clarify and verify the team's objectives for the project area. This process led to identification of the following purpose and need.

5 Purpose And Need

The purpose and need for this project follows.

1. Improve timber stand health and sustainability in the ponderosa pine and Douglas-fir forest cover types so that stands are more resilient to insects (mainly bark beetles), disease (such as dwarf mistletoe) and stand-replacing wildfire.

The current high numbers of trees and the predominance of Douglas-fir in the ponderosa pine and Douglas-fir forest cover types leave the stands vulnerable to bark beetles and stand-replacing wildfire. Bark beetles, Douglas-fir tussock moth, and wildfire have weakened or killed many thousands of trees across the Boise National Forest since 1990.

The resilience of timber stands within the project area is considered low due to the following current conditions:

- Closed canopy conditions (see Figure 3 on page 6) cause a high level of intertree competition for available life sustaining resources, which decreases tree vigor and increases susceptibility to insect attack.
- Closed canopy conditions combined with the high fuel load and continuity of ladder fuels greatly increases the susceptibility to stand-replacing wildfire.

Historically, stands were composed of substantially fewer trees at much wider spacing, a greater dominance of more fire tolerant ponderosa pine, and considerably less (discontinuous) ladder fuels. Such historical conditions were more resilient to major infestations from bark beetles and stand-replacing wildfire.

Some stands contain Douglas-fir or ponderosa pine trees that are heavily infected with dwarf mistletoe, a parasitic plant (see Figure 4 on page 6). These infection centers facilitate the spread of dwarf mistletoe to uninfected trees. Severe mistletoe infections greatly decrease individual tree vigor and reduce tree growth.

Figure 3. Dense regeneration in the Shafer project area.



Figure 4. Douglas-fir trees infected with Douglas-fir dwarf mistletoe in the Shafer project area.



2. Improve the health, vigor, and sustainability of existing aspen stands throughout the project area.

Approximately 200 acres of scattered aspen stands (1/2 to 3 acres each) occur within the project area. These aspen stands are deteriorating, and all of them have one or more signs that they are declining and at risk of being lost. Most aspen stands in the project area are heavily encroached by conifers or are open with crowns rarely touching. Project area aspen stands have only one or two age classes with some mature trees dying out. The stands have little suckering to replace the overstory mortality.

3. Reduce the risk of wildfire spreading to or from private lands, facilities, and infrastructure near the national forest boundary.

The project area landscape is currently at high risk to wildfire due to the high numbers of trees, high fuel load, and continuity of ladder fuels. This high-risk condition also poses a risk of wildfire spreading to or from adjacent private land. The project area includes approximately 36.6 miles of boundary adjoining private land. Of the 36.6 miles, 20 miles are forested, 5 miles are low to middle elevation rangelands, and 11.6 miles are high elevation nonforested or sparsely forested lands. This wildland urban intermix zone contains facilities at risk, such as numerous structures at Bogus Basin Ski Resort and summer cabins/homes in southern portion of the project area. Infrastructure includes two separate power transmission lines that supply electricity to Bogus Basin Ski Resort and the Deer Point, Lower Deer Point, and Shafer Butte communications sites. Services

provided by Bogus Basin Resort and the communications sites could be temporarily disrupted if power transmission lines were damaged. The communications sites provide a variety of communications functions for the entire Treasure Valley, including but not limited to telephone service, mobile radio service, local television broadcast, cable television, and commercial radio stations.

4. Improve and/or maintain timber stand growth and yield.

Timber stand growth on approximately 2,790 acres is as much as 50 percent below its potential given intermediate stand management opportunities. While timber stand growth on average is in a decelerating trend throughout the project area timber stands, individual stands differ depending on species composition and whether the stands have been previously treated. In untreated stands (approximately 1,290 acres), tree mortality exceeds growth in many areas due to bark beetle infestation and heavy mistletoe infections. On the 1,500 acres that received timber management in the 1950s and earlier, tree growth is slowing due to the increasing competition among trees. Maintenance of individual tree vigor and moderate tree density are key to vigorous stand growth.

6 Proposed Action

Once the purpose and need for action was clearly defined, the interdisciplinary team developed the following generalized proposed action, designed to meet and/or establish a trend toward the project objectives listed in section 5.

- Tree density would be reduced to a basal area of 30 to 60 square feet (average of 50), which would reduce the intertree competition (see Figure 5). The residual trees per acre would depend on individual stand conditions, but in general trees would be spaced to reduce crown competition and provide room for crown expansion.

Figure 5. Typical postharvest second-growth stands with 50 basal area.



- Where the stand composition includes both ponderosa pine and Douglas-fir, the relative amount of ponderosa pine would be increased from approximately 60 percent, on average, to 90 percent. The amount of Douglas-fir in the stands would be reduced to 0 to 30 percent (average of 10), depending on site aspect. More southerly slopes would have less Douglas-fir. On higher elevation Douglas-fir stands, the density would be reduced to 40 to 80 square feet with a focus on removal of mistletoe infected trees,
- Stand structure would be modified to retain larger diameter ponderosa pine and substantially reduce the vertical and horizontal continuity of the “ladder” fuels, especially the smaller size tree classes. The results of this treatment would be similar to the stand shown in Figure 5 on page 7, with a long-term goal for large ponderosa pine structure shown in Figure 6.

Figure 6. Long-term goal for timber stand structure and tree species composition.



- Ladder fuels and ground fuels would be reduced. Numbers of small trees with the potential to carry fire into the crowns of larger trees would be reduced. Slash resulting from timber harvest would be treated.
- A fuel break would be created at a strategic location to facilitate wildfire suppression. This would provide a defensible place to start backfires or drop fire retardant during wildfires.

- Aspen stands would be rejuvenated by eliminating competing conifer trees and stimulating the aspen clones to produce new suckers (see Figure 7).

Figure 7. Aspen suckers following burning.



7 Alternatives

7.1 Introduction

The interdisciplinary team then considered alternative means of achieving the proposed action. One distinct action alternative, or “activity package”, was developed. This alternative and a no-action alternative will be evaluated under the process required by the National Environmental Policy Act. Further analysis may lead to new alternatives, modifications of activities, or identification of new activities. Field reconnaissance, stand inventory data, professional experience, discussions with resource specialists, and review of the latest research on historical forest stand conditions were used to develop the proposed activities.

7.2 Alternative 1

A no-action alternative will be analyzed to establish a base line to which all alternatives will be compared. The no action alternative would not meet the purpose and need of the project.

7.3 Alternative 2

Timber Stand Management Activities – On approximately 2,790 acres of forested land, the stand density would be reduced across all diameter classes using commercial thinning followed by precommercial thinning and/or low intensity prescribed fire (see Figure 8 on

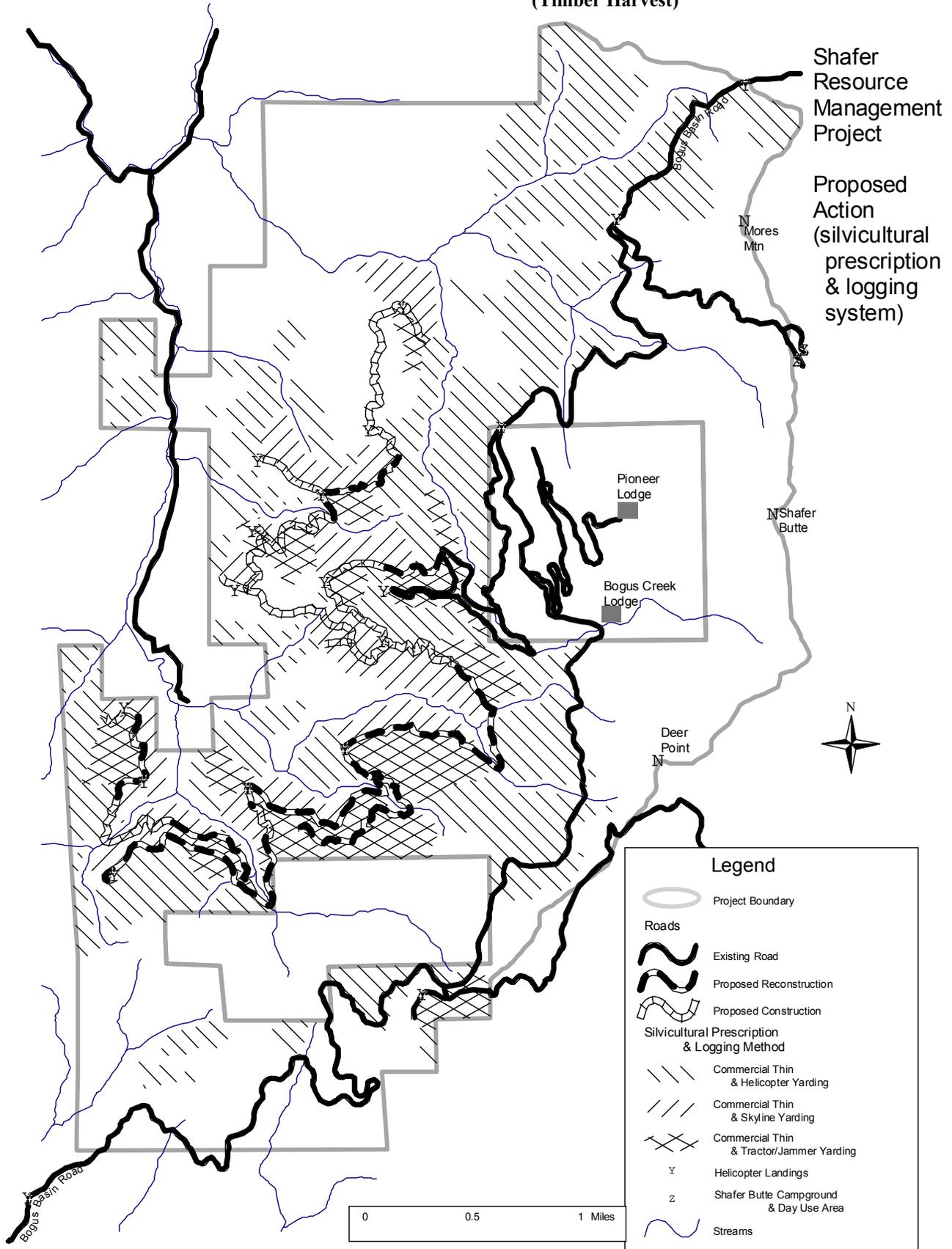
page 11). Along with tree density reduction, a package of fuel treatment activities would occur on harvested acres to further reduce the total fuel load and break up the ladder fuels. These integrated activities would improve resilience of forested areas to insects (mainly bark beetles) and disease (dwarf mistletoe); reduce the probability of stand-replacing wildfire and wildfire risk to private lands adjoining the Forest Service lands; and improve individual tree and overall stand growth. Commercial and precommercial thinning would: 1) thin mainly from lower crown class trees so that the largest and most vigorous trees would be left, and 2) preferentially thin Douglas-fir so that the ponderosa pine would be more common following treatment. Some salvage harvest of heavily dwarf mistletoe infected trees and large diameter, beetle infested trees would occur.

A variety of fuels treatments would be used to reduce the horizontal and vertical continuity of fuels in the timber stands and adjacent grass and shrublands (see Figure 9 on page 12). On approximately 1,300 acres, the slash would be lopped to within about 2 feet of the ground, but not burned. Approximately 578 acres would be underburned with low intensity fire following timber harvest. Approximately 676 acres would be whole tree yarded. Approximately 236 acres would be whole tree yarded followed by underburning with low intensity fire. Tree tops and limbs left at the landings from whole tree yarding would be piled and burned. Approximately 115 acres of grass and shrubs would be burned. On a ridge between Bogus Basin Road and Shafer Creek, a shaded fuel break would be developed. It would follow the east-west ridge for approximately 2 miles and average about 200 feet in width. Existing conifer stands would be thinned so that tree crowns would not be connected and all lower branches pruned. Also, smaller diameter trees and shrubs would be cut, piled, and burned. The intent of the fuelbreak would not be to prevent or stop a wildfire, but rather provide a strategic location for fire managers to successfully employ appropriate control techniques (i.e., backfire or pretreat with retardant.)

Log Yarding - Helicopter yarding would be used on approximately 1,747 acres, skyline yarding on 478 acres, and tractor yarding on 565 acres. Up to 19 helicopter landings would be constructed on ridgetop locations and revegetated following use. Logging systems and helicopter landings are shown on Figure 8 on page 11.

Road Construction and Reconstruction - Approximately 6.1 miles of new road would be constructed and 7.0 miles of old logging roads would be reconstructed (see Figure 8 on page 11). Following project activities, the roads would be closed to prohibit public motorized travel. The old logging roads are a small portion of the extensive jammer road network constructed during the 1940s prior to when the land was acquired by the Forest Service. These old logging roads are not part of the Forest Service road inventory, but the brushed over road prisms do exist on the ground and are well located, following the contours of the land with gentle road grades (examples are shown in Figures 10 and 11 on page 13). The new road construction is needed to connect this road network to Bogus Basin Road. The old logging road network was designed to haul down Shafer Creek Road, which has four different private land holdings along it. The Forest Service does not have road easements or rights-of-way through these private lands.

Figure 8. Shafer Proposed Action Map (Timber Harvest)



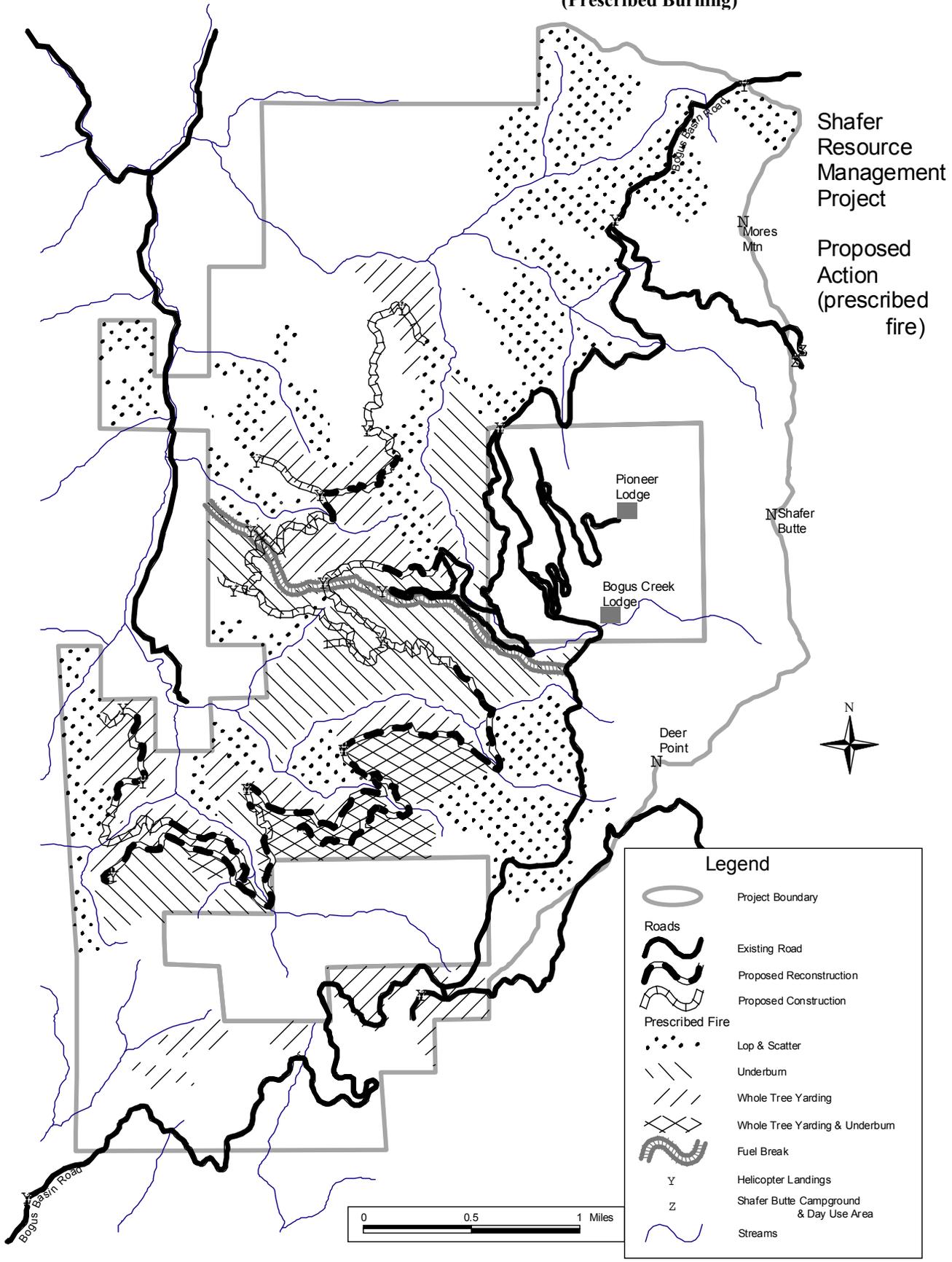
Shafer Resource Management Project

Proposed Action (silvicultural prescription & logging system)



0 0.5 1 Miles

Figure 9. Shafer Proposed Action Map (Prescribed Burning)



Log Haul Route - The proposal uses the most cost effective log haul route from the project area to timber processing facilities, while also using the most expedient route through Boise City to Ada County Highway District designated truck routes. The log truck route proposed includes Bogus Basin Road to Harrison Boulevard to 16th Street to Main Street to I-184 (the connector) to I-84. An estimated 20 to 30 log truck loads with return trips could travel this route per day during summer months when the project area is snow free. It is expected that timber harvest and subsequent log haul would occur over two logging seasons.

Figure 10. Old logging road in ponderosa pine second growth stand in the Shafer project area.

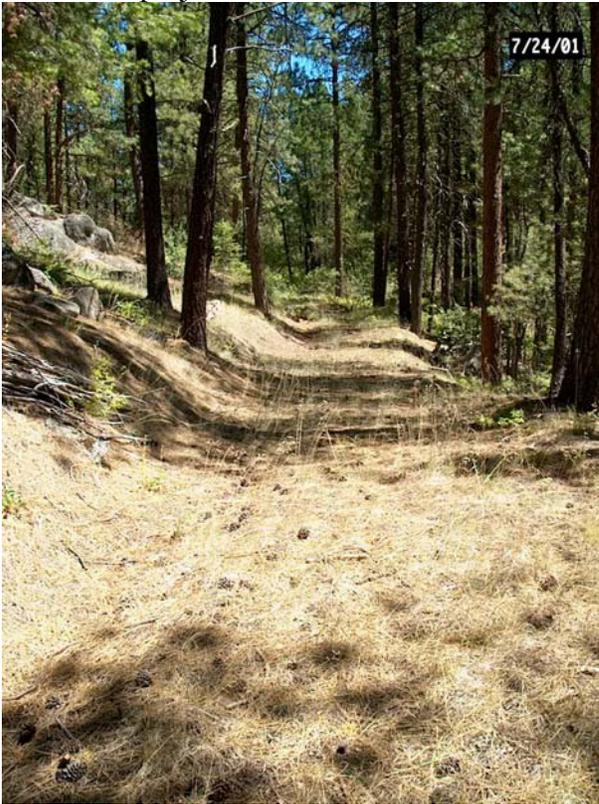


Figure 11. Old logging road in brushy area of the Shafer project area.



Aspen Stand Rejuvenation - On approximately 200 acres of aspen stands (1/2 to 3 acres in size) dispersed among the forested stands, conifer trees would be harvested. Slash would be left in place, and aspen stands would be broadcast burned with high intensity prescribed fire. These activities would promote regeneration of aspen suckers and saplings and prevent conversion to conifer stands.

Forest Plan Amendment - An amendment to the Forest Plan would be required to allow for the timber management described above to occur in the project area within Management Area 19. Currently Management Prescription M restricts timber harvest activities to salvage sales and special need situations that would enhance the recreational values of the area. The amendment would eliminate Prescription M's restriction on type of timber harvest and would allow timber harvest that maintains or enhances the recreational values of the area. For Management Area 19, the Desired Future Condition, Goal, and Standard related to timber harvest would be reworded so that timber harvest to "maintain or enhance recreational uses" is consistent. Currently timber harvest must be designed to enhance recreational uses to be consistent with the Forest Plan's Desired Future Condition, Goals, and Standards for Management Area 19.

8 Potential Issues

During the development of the proposed action, some potential issues were identified. These issues may be further clarified and additional issues identified through public comment and/or environmental analysis.

Log truck traffic – The potential for log trucks making up to 30 round trips a day through Boise city streets will likely be a concern to North End residents, specifically those immediately along and adjacent to Harrison Boulevard. These concerns would likely include log truck adding to existing traffic congestion, potential impacts of log trucks on traffic and pedestrian safety, and potential impacts on the characteristics of the Harrison Boulevard Historic District.

Visual Quality – While not visible from Boise, many of the stands proposed for harvest are visible from Bogus Basin Road and Boise Ridge Road. There may be some concern about the amount of visible change in the landscape from of the timber harvest or road construction. Some harvest units will occur in the foreground but most of the harvest units that are visible occur in the middleground areas seen from sensitive viewing locations such as the Bogus Basin Road, the Shafer Butte Recreation Sites, and the Bogus Basin lodges. Some of the visual changes expected are those from burning activities and harvest slash and disturbed soil from harvest activities. Some trees around the Nordic ski track may be harvested, but the forested setting around the track would remain following timber harvest. All activities would be designed to meet the Forest Plan's visual quality objectives.

Summer recreation - Log hauling may displace recreationists who use the project area roads for running, hiking, mountain biking, horse riding, and sightseeing. People camping at Shafer Campground would hear helicopters during log yarding.

Special use permits - Log hauling could conflict with special use permittees who operate on roads.