

**DRAFT**

**ENVIRONMENTAL ASSESSMENT**  
**for**  
**LOST CREEK PROJECT FIRE PROTECTION (FUELS REDUCTION)**  
**JACKSON COUNTY, OREGON**

**INTRODUCTION**

The U.S. Army Corps of Engineers, Portland District (Corps) intends to implement fire protection (fuels reduction) measures on 86 acres of land in the vicinity of the Corps' Lost Creek Project office and facilities. The proposed project is located in a rural area of Jackson County, Oregon (Township 33S, Range 1E, Sections 26, 27, 34, and 35) (Figure 1) between the towns of Shady Cove and Prospect. The nearest larger city is Medford, located about 25 miles to the south. All areas slated for fuels reduction are upland, non-riparian forested and non-forested lands. At the project site, decades of fire exclusion has resulted in denser brush fields, over-crowded forest stands, and diversion from natural species composition and age class. This unnatural state has resulted in conditions that pose an increased vulnerability to damaging agents such as stand-replacing wildfire and insect and disease infestation.

This increased vulnerability was shown with recent catastrophic wildfires occurring in southwest Oregon in 2002. The Timbered Rock Fire, started by lightning strikes, burned a total of about 27,000 acres from mid-July to mid-September 2002 (Federal Register 2003) and affected forest land within several miles of the Corps' Lost Creek Project office and threatened homes in the vicinity. The much larger Biscuit Fire of 2002 affected vast areas of southwest Oregon and northwest California, including the Siskiyou National Forest.

The desire to implement fuels reduction measures stems from concerns over the condition of forest lands surrounding the Lost Creek Project office and associated facilities, and the Corps' ability to protect those facilities. Without reduction of fuels, the potential for fire damage to Corps' facilities will remain high.

The most extensive and serious problem related to health of national forests in the western U.S. is the over-accumulation of vegetation, which has caused an increasing number of large, intense, uncontrollable and catastrophically destructive wildfires (General Accounting Office 1999). In the arid West, where moisture is too scarce to support fungal decay, fire is the primary mechanism for removing dead trees and limbs from the forest floor. Climate factors and widespread wildfire suppression efforts, which became effective after World War II, have contributed to overgrown conditions. Many forests now require hands-on active management to restore fire-adapted ecosystems [U.S. Forest Service (undated)]. This is the case for the lands detailed here as there has been much ladder fuel build up, composed primarily of young trees in forested areas and deerbush and buckbush in non-forested areas. Ladder fuels consist of vegetation located

below the crown level of forest trees which can carry fire from the forest floor to the tree crowns and can greatly increase risk of catastrophic fire.

## **PURPOSE AND NEED FOR ACTION**

### **Purpose:**

The purpose of the proposed action is to reduce the threat of fire in the vicinity of the Corps' Lost Creek Project office and associated facilities.

### **Need:**

The need for the proposed action is to protect the Lost Creek Project office and associated facilities from an increasing threat of fire due to accumulation of fuels in surrounding forested areas and non-forested brushy areas.

## **ALTERNATIVES**

### **1) Cutting, Piling, and Burning (Preferred Alternative):**

Under the Preferred Alternative, ladder fuels reduction would consist of the following components:

- Crews will cut all live and dead standing woody vegetation greater than 12 inches in height but not over 6 inches diameter at breast height (DBH). Stump height will not exceed 6 inches.
- Pile all material lying on the ground which exceeds 2 feet in length and/or 4 inches in diameter at any point.
- Slashed, cut and felled materials shall be bucked into standard length of no more than six feet.
- Pile size shall be a maximum of 8 feet in diameter by 8 feet in height and a minimum pile size shall be 6 feet in diameter by five feet high.
- All piles shall be covered with government-furnished polyethylene plastic and cover 90% of the surface of each pile.
- Piles shall not be closer than ten feet from one another. Piles shall not be placed in roadways or drainage ditches, or within channel bottoms or streams.
- All piles will be burned in the fall of the same year that the cutting occurs. All burning will be conducted on burn days as designated by the Jackson County Fire Unit.
- Vernal pools in the work area will be flagged by the Corps prior to work and no work or disturbance will occur within the flagged area. The flagged buffer around the vernal pools will be 50 feet on all sides.
- All vehicles will remain on maintained roads, and work within the 86 acres will be accomplished by crews entirely on foot using handheld equipment including equipment with internal combustion engines (chainsaws and power trimmers).

- Only portions of the 86 acres will be treated in any particular year, as funding allows. Work will begin in areas deemed to be most at risk of catastrophic fire and progress over time to areas of lesser risk.
- Weed seed introduction onto Corps' land from work trucks is presumed to be of low probability since trucks will not have reason to travel off maintained roads during the work, but precautions to prevent introduction of weed seeds into work areas will include inspection of vehicle tires for seeds prior to trucks entering Corps' lands. Seeds will be washed or otherwise removed from tires.

## **2) Prescribed Burn:**

Under this alternative, ladder fuels reduction would consist of the following components:

- Consult a qualified burn manager.
- Develop appropriate prescribed burn plans to meet the needs for treatment of the varied vegetation types found on site to include such components as locations and types of fires, firing sequence, identification of hazards such as roads, buildings, power lines, etc.
- Incorporation of a burn safety plan.
- Implementation of the prescribed burn plan.
- Vernal pools in the work area will be flagged by the Corps prior to work and no work or disturbance will occur within the flagged area. The flagged buffer around the vernal pools will be 50 feet on all sides.
- All vehicles will remain on maintained roads, and work within the 86 acres will be accomplished by crews entirely on foot.
- Only portions of the 86 acres will be treated in any particular year, as funding allows. Work will begin in areas deemed to be most at risk of catastrophic fire and progress over time to areas of lesser risk.
- Weed seed introduction onto Corps' land from work trucks is presumed to be of low probability since trucks will not have reason to travel off maintained roads during the work, but precautions to prevent introduction of weed seeds into work areas will include inspection of vehicle tires for seeds prior to trucks entering Corps' lands. Seeds will be washed or otherwise removed from tires.

This alternative was eliminated because the Preferred Alternative can be implemented at a lower cost and can achieve desired results without resulting in substantial differences to the quality of the human environment.

## **3) No Action Alternative:**

No fuels reduction work would occur under the No Action Alternative. This alternative would result in the continued increase in amount of ladder fuels over the 86 acres of interest, thereby increasing the threat of fire. Fire in the area could jeopardize the Lost Creek Project office and surrounding facilities.

## AFFECTED ENVIRONMENT

The nearby Lost Creek Dam was completed in 1977 on the Rogue River. The primary purpose of the dam is flood control and is operated in conjunction with Applegate Dam to regulate water flows as well as impound water for recreation. The Joseph H. Stewart State Recreation Area is located along the southern shore of the reservoir and Casey State Park is located on the Rogue River below the dam. The Cole M. Rivers Fish Hatchery is located just downstream of the dam. The river below the dam is a popular recreation site and is used for various activities including fishing and rafting. The 86-acre project site itself is not used substantially for recreation.

Elevation in the project area ranges from 1600 to 1960 feet Mean Sea Level. The soil types are Freezener-Geppert and Medco-McMullin. The forested areas are mid-successional and the dominant overstory is Douglas-fir (*Pseudotsuga menziesii*) and Ponderosa pine (*Pinus ponderosa*). The understory is comprised mainly of Pacific madrone (*Arbutus menziesii*), Oregon white oak (*Quercus garryana*), and California black oak (*Quercus kelloggii*). Non-forested slopes are medium steep to flat ridgetop and the aspect ranges from north to northwest and southwest. The shrub layer is medium thick on the slopes with deerbrush (*Ceanothus intergerrimus*), buckbush (*Ceanothus cuneatus*), poison oak (*Toxicodendron diversiloba*), and western service-berry (*Amelanchier alnifolia*). Plant surveys conducted during spring and summer over the entire 86 acres slated for treatment yielded a total of 153 plant species (Siskiyou BioSurvey 2008). Two small vernal pools in close proximity to each other were located during the plant surveys

Habitats in and around the project area support a wide variety of wildlife including, for example, elk (*Cervus elaphus*), black-tailed deer (*Odocoileus hemionus*), mountain lion (*Felis concolor*), black bear (*Ursus americanus*), gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), beaver (*Castor canadensis*), river otter (*Lutra canadensis*), and a variety of waterfowl, raptors, upland game birds, and songbirds.

Potential Federally-listed species that could occur in and around the proposed project area include Gentner's fritillary (*Fritillaria gentneri*) (endangered), large-flowered woolly meadowfoam (*Limnanthes floccosa grandiflora*) (endangered), Cook's lomatium (*Lomatium cookii*) (endangered), northern spotted owl (*Strix occidentalis caurina*) (threatened), and vernal pool fairy shrimp (*Branchinecta lynchi*) (threatened) (Corps 2008).

Archeological surveys in the Lost Creek area suggest a long history of human use. Beginning about 10,000 years ago (Paleo-Indian period), people migrated into the Rogue Valley. It is presumed that these people lived in small mobile groups and were big game hunters. People used the Lost Creek area sporadically until about 5,000 years ago (Archaic period), after which use of the area increased. During this time, collector-village subsistence and settlement patterns are noted in the region including the first appearance of pithouses and the use of the mortar and pestle. By about 1,500 to 1,000 years ago (Archaic period), small permanent villages existed in the Lost Creek area. This is the time

period during which the bow and arrow, and associated small projectile points were introduced. From 1,000 years ago to contact (Formative and Proto-historic period), the Takelma had a settlement pattern closely related to their subsistence regime. The permanent winter villages were located in the low elevation river valleys of the region in close proximity to the predictable and significant food resources. During the warmer months of the year the Takelma would temporarily move to their seasonal base camps in the surrounding uplands to hunt, gather crops, and procure other resources not available near their winter villages (BLM 2003).

## **ENVIRONMENTAL EFFECTS**

### **Safety:**

There will be no effects to public safety. Safety requirements for work crews would be detailed in the contract specifications.

### **Fish and Wildlife:**

Removal of small trees and woody material on the forest floor would likely adversely affect some vertebrate species. Manning and Edge (2008), for example, studied small mammal responses to woody debris reduction on the forest floor in southwest Oregon and found woody debris to be important habitat for some rodents. Cover on the ground, occurring in the form of woody debris, would be reduced with implementation of the Preferred Alternative and would therefore result in poorer habitat for some species. Reduction in availability of potential nest sites low to the ground could have negative effects on some bird species. There are no anticipated effects to fish that would occur; all work would occur in uplands, non-riparian areas and implementation of the project would not cause a concern for significant increases in runoff to nearby waters. The current status of habitat on the 86 acres slated for treatment is that of an unnatural condition and implementation of the Preferred Alternative would, over time, return the area to more natural conditions.

### **Threatened and Endangered Species:**

No Effect determinations were made under the Endangered Species Act for the Federally-listed Gentner's fritillary (*Fritillaria gentneri*) (endangered), large-flowered woolly meadowfoam (*Limnanthes floccosa grandiflora*) (endangered), Cook's lomatium (*Lomatium cookii*) (endangered), northern spotted owl (*Strix occidentalis caurina*) (threatened), and vernal pool fairy shrimp (*Branchinecta lynchi*) (threatened) (Corps 2008).

Surveys for rare plants were conducted on May 12 and June 27, 2008 over the entire 86 acres by Siskiyou BioSurvey, LLC for the purpose of establishing the presence/absence and locations of rare plants. Gentner's fritillary was not found during the surveys. Therefore, a No Effect determination was made for this plant.

Two small vernal pools in close proximity to each other were located during the plant surveys. These pools could potentially support vernal pool fairy shrimp. Under the Preferred Alternative, a 50-foot wide no work zone would be established outward from the edges of the vernal pools, and work crews will be made aware of their location so that no foot traffic occurs through them. Because of these measures to be implemented, No Effect determinations were made for vernal pool fairy shrimp and its designated critical habitat. No Effect determinations were made for large-flowered woolly meadowfoam and Cook's lomatium because, although these plants occur in vernal pools in Jackson County, none were noted during surveys.

**Cultural Resources:**

Field surveys will be conducted over the 86-acre area planned for fuels reduction treatment and will be coordinated with the State Historic Preservation Office. Appropriate measures will be taken to avoid or minimize impacts to any cultural resources that may be identified.

**Water Quality:**

No Effect, as work would not be conducted near water. Small wetlands that occur on-site in the form of vernal pools would be avoided by establishment of a flagged 50-foot buffer.

**Air Quality and Noise:**

Burning will be conducted in the fall or winter and will take place on a Burn Day as designated by the Jackson County Fire Unit. Noise generated from sawing will be far away from centers of population and may cause minor disturbance in the form of noise to people recreating in the local area (anglers and park users).

**Utilities and Public Services:**

No Effect, as no changes to utilities and public services would result from implementation of the project.

**Land Use:**

No Effect, as no changes to land use will occur. Lands slated for treatment currently do not have specific uses.

**Recreation:**

Noise generated from sawing will be far away from centers of population and may cause minor disturbance in the form of noise to people recreating in the local area (anglers and park users). Lands slated for treatment are owned by the U.S. Army Corps of Engineers and do not have recreational trails that pass through.

### **Hazardous, Toxic, and Radioactive Waste:**

No Effect, as hazardous, toxic, and radioactive wastes would not be introduced into the area with implementation of the project.

### **Aesthetics:**

Changes to lands slated for treatment would not cause significant changes to the scenic quality of the lands.

### **CUMULATIVE EFFECTS**

Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions (Bass et al. 2001). Under the Preferred Alternative, treatment would result in more vigorous, healthy stands of trees as individual tree growth and health would likely increase. Stand susceptibility to fire, as well as insect damage, would be expected to decrease. This reduction in fuels could also benefit adjacent lands by lessening the probability of spread of fire.

### **COORDINATION**

This Environmental Assessment (EA) was prepared to address the requirements of the National Environmental Policy Act (NEPA) and has been issued for 30-day public and agency review under Public Notice CENWP-PM-E-09-04. This EA was sent to government agencies and other groups. Government agencies included U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Bureau of Land Management, National Marine Fisheries Service, Oregon Department of Fish and Wildlife, Oregon Department of Environmental Quality, Oregon Department of Parks and Recreation, and Jackson County.

Public comments will be addressed. After consideration of all public comments, if it is determined that the Preferred Alternative will have no significant impact on the quality of the human environment, then a Final EA with incorporation of responses to comments, and a Finding of No Significant Impact will be prepared which will conclude the NEPA process. If it is determined that the Preferred Alternative will have a significant impact on the quality of the human environment, then further consideration under NEPA will occur.

### **CONSULTATION REQUIREMENTS**

- a. National Environmental Policy Act: This Environmental Assessment satisfies the requirements of the National Environmental Policy Act.
- b. Endangered Species Act: A No Effect determinations were submitted to the U.S. Fish and Wildlife Service for Genter's fritillary (*Fritillaria gentneri*) (endangered), large-flowered woolly meadowfoam (*Limnanthes floccosa grandiflora*) (endangered), Cook's lomatium (*Lomatium cookii*) (endangered), northern spotted owl (*Strix*

*occidentalis caurina*) (threatened), and vernal pool fairy shrimp (*Branchinecta lynchi*) (endangered).

- c. Clean Water Act: All work will occur in uplands. Nearby waters will not be affected.
- d. Clean Air Act: Burning will be conducted in the fall or winter and will take place on a Burn Day as designated by the Jackson County Fire Unit.
- e. Natural Historic Preservation Act: Field surveys will be conducted over the 86-acre area planned for fuels reduction treatment and will be coordinated with the State Historic Preservation Office. Appropriate measures will be taken to avoid or minimize impacts to any cultural resources that may be identified.
- f. Native American Graves Protection and Repatriation Act: There are no recorded historic properties within the immediate project area and the probability of locating human remains in the project area is low. If human remains are incidentally discovered during construction, the Corps and/or contractor will be responsible for following all NAGPRA requirements.
- g. Coastal Zone Management Act: Not applicable, as the project is not near the coast.
- h. Fish and Wildlife Coordination Act: The Proposed Alternative was coordinated with the U.S. Fish and Wildlife Service.
- i. Marine Protection, Research, and Sanctuaries Act: Not applicable, as the project is not near the coast.
- j. Executive Order 11988, Flood Plain Management: Not applicable, as no flood plains are present in the project area.
- k. Executive Order 119900, Protection of Wetlands: Two small vernal pool wetlands are present in the project area in close proximity to each other. These pools would remain unaffected as a 50-foot wide buffer would be established around the edges of the pools and no work would occur within this buffer. The buffer area would be flagged and remain so during the duration of the work.
- l. Analysis of Impacts on Prime and Unique Farmlands: Not applicable, as no farmlands are present in the project area.
- m. Comprehensive Environmental Response, Compensation, and Liability (CERCLA) and Resource Conservation and Recovery Act (RCRA): There is no indication that any hazardous, toxic and radioactive waste (HTRW) are in the vicinity of the project area. Presence of HTRW would be responded to within the requirements of the law and Corps regulations and guidelines.

## REFERENCES

- Bass, R.E., A.I. Herson, and K.M. Bogdan. 2001. *The NEPA Book: A step-by-step guide on how to comply with the National Environmental Policy Act*. Solano Press Books. 475 pp.
- Federal Register. 2003. (Agency: Bureau of Land Management). Notice of intent to prepare an Environmental Impact Statement for restoration and timber salvage within the Timbered Rock Fire, Medford District, OR. 68(16):3545-3546.
- General Accounting Office. 1999. *Western national forests: A cohesive strategy is needed to address catastrophic wildfire threats*. GAO/RCED-99-65. 3 pp.
- Manning, J.A. and W.D. Edge. 2008. Small mammal responses to fine woody debris and forest fuel reduction in southwest Oregon. *Journal of Wildlife Management* 72:625-632.
- Siskiyou BioSurvey LLC (R. Calligan). 2008. *Vascular Unit Summary for Lost Creek T33S-R1E-S 26, 27, 34 and 35*.
- U.S. Army Corps of Engineers, Portland District. 2008. No Effect letter for Federally-listed species for fuels reduction measures in the vicinity of the Lost Creek Project. To U.S. Fish and Wildlife Service, Portland, Oregon [concurrent with Environmental Assessment].
- U.S. Bureau of Land Management, Medford District, Butte Falls Resource Area. 2003. *Environmental Assessment for Flounce Around*. 47 pp. + appendices.
- U.S. Fish and Wildlife Service. 2008. *Federally listed, proposed, candidate species and species of concern which may occur within Jackson County, Oregon*. 3 pp.
- U.S. Forest Service. Undated. Position paper: "Fire and Fuels Buildup. 6 pp. (obtained at <http://www.fs.fed.us/publications/>).

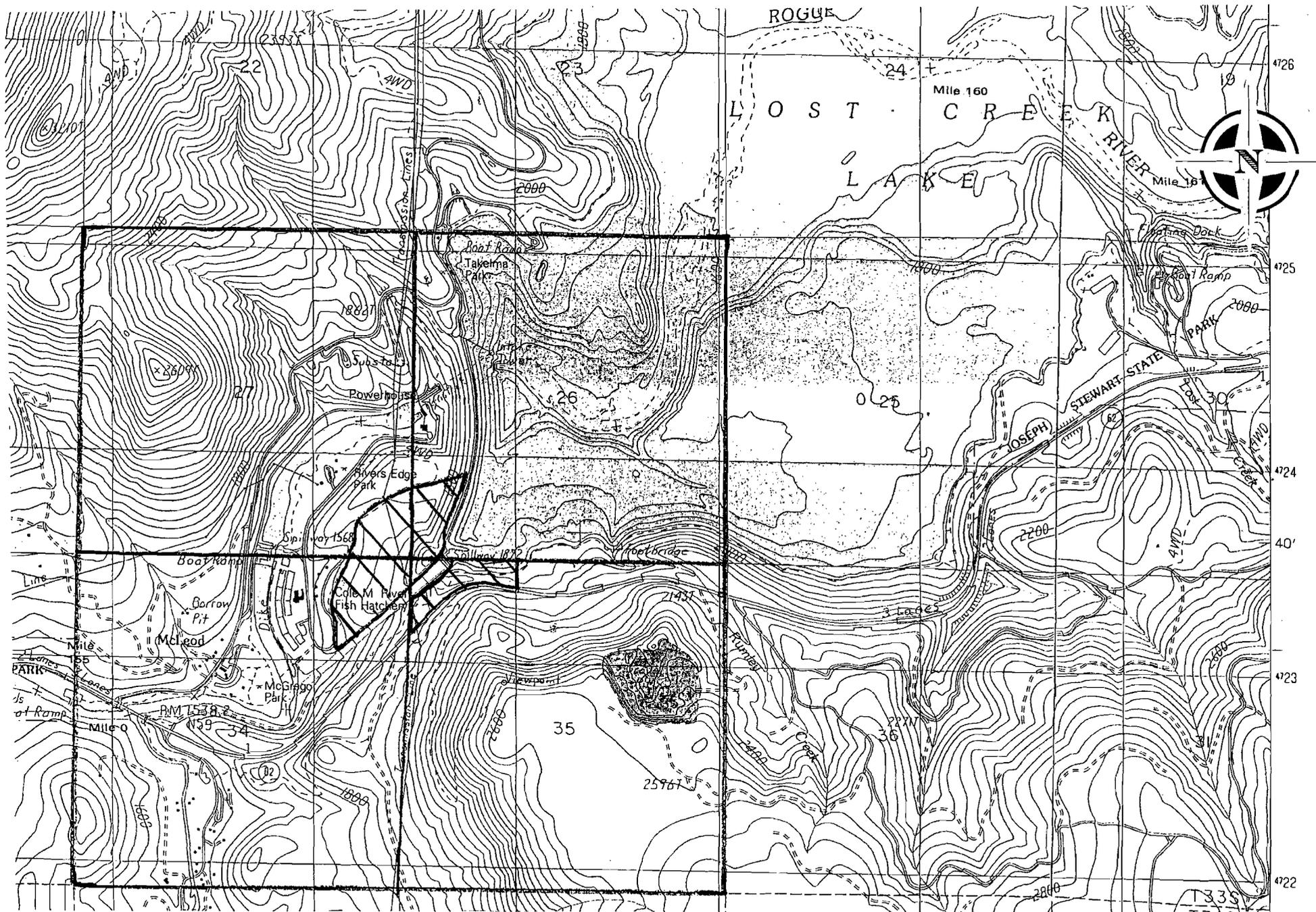


Figure 1. Proposed 86 acres slated for fuels reduction (hatched areas within outlined Sections 26, 27, 34, and 35 of Township 33S, Range 1E) in the vicinity of Lost Creek Lake, Jackson County, Oregon (1 inch = approximately 0.4 mile).