

**PLACERVILLE RANGER DISTRICT  
ELDORADO NATIONAL FOREST**

**LAST CHANCE FUELS REDUCTION PROJECT  
NOXIOUS WEED ASSESSMENT  
2002**

PREPARED BY:     /s/ Mike Taylor     DATE:                     

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**Background**

Forest Service Manual 2081.03, the Sierra Nevada Forest Plan Amendment (SNFPA), and the Region 5 Noxious Weed Management Strategy require that a noxious weed risk assessment be conducted to “determine risks for weed spread ... associated with different types of proposed management activities” (SNFPA Record of Decision, Appendix A, page A-30). Noxious weeds are defined in FSM 2080.5 as “those plant species designated as noxious weeds by the Secretary of Agriculture or by the responsible State official. Noxious weeds generally possess one or more of the following characteristics: aggressive and difficult to manage....”

**Project Description**

The Last Chance Fuels Reduction project proposes to establish a system of fuel reduction zones along primary ridges in the Henry’s Diggins and Leoni Meadow areas. Treatments are designed to tie in with fuel reduction work accomplished along Caldor Railroad Grade and Plummer Ridge and past treatments in the Clear Creek area. The areas proposed for treatment form the base for establishing contiguous fuel treatments along ridges from the community of Grizzly Flat southeast to Leoni Meadow.

Silvicultural goals for this project are to protect large trees, increase growth of medium sized trees, and remove smaller trees to reduce fuel ladders. Species preference for residual trees in descending order of priority is: sugar pine, ponderosa pine, Douglas-fir, white fir and incense cedar. Black oaks would not be designated for removal although incidental amounts may be removed to facilitate operations. Snags which pose a hazard to treatment operations would be removed, or felled and left in log deficient areas.

Where necessary, concentrations of existing or activity generated fuels within the units would be treated by a combination of tractor piling with a brush rake, mastication with a brush shredder, and/or hand cutting and piling.

Post mechanical/hand treatment evaluations of site-specific fuel conditions would be done to determine the need for follow-up prescribed burning. Prescribed understory burning would occur when weather conditions prescribed in the burn plan are met.

In preparation for prescribed fire some perimeter hand line construction may be needed where roads, trails, or natural barriers are absent. Burn prescription parameters would be designed to achieve a fire with an average of 4 foot or less flame lengths. Protection of sensitive features is also part of the burn objectives. These are areas that have been identified by a resource specialist or the LRMP. Site-specific prescriptions would be

developed for these areas and range from keeping fire completely out to allowing fire to burn through but retaining the important features.

Weed prevention and eradication strategy included in the proposed action consists of the following:

- 1) All off-road equipment would be cleaned to insure it is free of soil, seeds, vegetative matter or other debris before entering National Forest system land if it is known to have most recently operated in an area known to be infested with noxious weeds, or if the last operating location is unknown. The equipment would also be cleaned prior to moving from an infested treatment unit, to a unit that is free of such weeds.
- 2) Any new infestations of noxious weeds that are discovered during implementation will be documented and locations marked. New sites would be treated by hand pulling or lopping.
- 3) Post fuels treatment surveys would be conducted at the documented sites. Populations would be grubbed or hand-pulled prior to seed-set. Where appropriate, seeding of weed-treated areas with native grass species (ENF Seed, Mulch and Fertilizer Prescription, March 21, 2000) would be done to reduce, through competition, further weed establishment or expansion of existing infestations.

## **Objectives of this Weed Risk Assessment**

Evaluate each risk factor, including all the proposed actions, for their potential to introduce and/or expand noxious weeds and other invasive species into the Last Chance Project area.

## **Factors that Influence the Spread of Weeds**

### **1. Presence of weeds in and adjacent to the project area: *Low-moderate risk***

The project area has been surveyed for noxious weeds. Two occurrences of weed species that the ENF considers highly invasive, skeletonweed (*Chondrilla juncea*) and scotch broom (*Cytisus scoparius*) have been documented. District biologists lopped the scotch broom site and marked the location. Monitoring of the location will occur prior to and post treatment. The skeletonweed sites will be hand pulled prior to seed set until funding is secured for a district or forest-wide treatment plan for skeletonweed is completed.

Klamathweed and bull thistle are widely dispersed on the ENF and are present in low concentrations on roadsides, moist areas, and disturbed soils within the Last Chance Project. On the ENF bull thistle populations tend to decrease over a relatively short time period once disturbances cease and the native vegetation returns (pers observation – ENF botanists).

A bio-control agent for Klamathweed (a seed-predator) was introduced decades ago and has been relatively effective in reducing the populations of Klamathweed throughout the west. Neither Klamathweed nor bull thistle are thought to be aggressive competitors in areas where soil disturbance is infrequent.

Cheat grass (*Bromus tectorum*) is widespread on the Eldorado where it has established itself as a minor component in many plant communities. It is present in scattered, small occurrences along roadsides and in plantations in the project area. Though it appears to move off the roadsides and into plantations here on the ENF and elsewhere in the Sierra, whether or not it will persist, spread or become the major problem here on the moister west side of the Sierra as it has become on the drier eastern Sierra and Great Basin, is unknown.

2. Habitat vulnerability (*low risk*)

The project is thinning units that densely vegetated either with small trees or small trees and shrubs. Stands such as the ones identified for this project are common on the ENF. Botanical knowledge gained from years of surveying similar dense stands suggests that the vegetation is composed of native species and the degree of shade under these stands is not conducive to invasive weed growth. The project does propose reduction in the canopy of native vegetation cover, which may provide enough sunlight for some weed species, but the lack of weed propagules (seeds/stems/roots) on the sites will significantly reduce the risk of weed invasion.

3. Vectors unrelated to the proposed project (*low risk*)

Roads occur throughout the project area. Weeds are most commonly vectored along roadways. Vehicle and people themselves can carry weed seeds into the project area. Recreationists, woodcutters, and forest workers can carry seeds of noxious weeds into the project area on clothing and tools. Animals, especially domestic dogs, often vector weed seeds in their coats from infestations at home. These vector mechanisms are difficult or impossible to develop practical mitigation measures for, therefore no management requirements, except for weed monitoring, have been incorporated into the project to prevent them from occurring.

4. Habitat alteration expected as a result of the project - *Low-moderate risk*

In areas where cheatgrass and other annual grasses currently exist these weeds may move into nearby disturbed areas that provide enough sunlight for growth. Native plant species will return to these disturbed areas and are expected to limit or inhibit, through competition, the expansion of these infestations.

Areas where mastication is proposed will end up with a layer of soil shading mulch. Where the mulch covers the soil 2-3 inches or deeper, germination of seeds, both native and alien, will be inhibited.

Risks from equipment introducing weed seeds will be reduced because of the equipment-cleaning clause.

5. Increased vectors as a result of project implementation (*Low risk*)

Project induced vectors include weed seed brought in on tools, workers' vehicles (not subject to the off-road cleaning clause), and on project workers' clothing and boots.

These vector mechanisms are difficult or impossible to develop practical mitigation measures for; therefore no management requirements have been incorporated into the project to prevent them from occurring. There is a low risk that these vectors will actually introduce weeds into this project area. Vectoring activities that result from

the project are similar to vectoring risks that occur every day along roads, and recreation and administrative sites all over the Forest.

To date on the ENF evidence is lacking that proves these activities (tools, workers' vehicles, on project workers' clothing and boots) actually have produced weed infestations. Whereas opportunities for seeds to be vectored into the project area occur regularly, the general lack weed infestations, except for roadways and other highly disturbed sites, may be due to seeds falling in areas hostile to germination and establishment (vegetated areas, sites lack of enough sunlight, excessive thatch or duff layers, desiccation, etc.).

To the extent that vectored seeds actually result in weed establishment on roadsides and disturbed sites such as landings, it's likely they will be discovered early on, while the infestations are small, and treated by hand pulling or grubbing. Forest Service field personnel are increasingly becoming aware of common noxious weed species, and have been reporting discoveries to the district biologists or the botany department at the SO. Once reported new occurrences of weeds are mapped and entered into the weed database, then monitored and treated (hand pulled, dug out) in a timely fashion.

#### 6. Mitigation measures (*low risk*)

Measures are included in the proposed action that will reduce the likelihood of weed introduction into the project area (equipment cleaning clause).

- Hand treatments for any new infestations discovered during implementation.
- Post treatment surveys in the vicinity of known weed infestations.
- Troublesome areas, such as highly disturbed sites with new weeds establishing will be hand treated and then overseeded with native grasses or forbs.
- The ENF seeding and mulching policy (ENF 1999) requires any seed sown on Forest to be from native species, if possible "locally" native species. Straw used for erosion control will be certified weed-free (rice) straw.

To the degree that measures such as those noted above are successfully utilized, the likelihood of invasive species becoming a significant problem in the analysis area will be diminished.

## Conclusion

Risk factor tally:

1. known weeds = low-moderate
2. habitat vulnerability = low
3. vectors unrelated to project = low
4. proposed actions = low-moderate
5. vectors related to project = low
6. mitigations = low risk

The proposed action provides a low-moderate risk for introducing or enhancing new or existing weed populations. Measures built into the project reduce opportunities for weed spread and expansion. Information gained from monitoring this and other projects is expected to further our knowledge on local weed ecology thus enabling us to better predict how Forest Service management activities influence the introduction and spread of weeds.

## References

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