



# MOUNT SHASTA BIOREGIONAL ECOLOGY CENTER

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Electronically Submitted

Danelle Harrison, Acting Forest Supervisor  
Bill Moore, Forest Vegetation Manager  
Chris Christofferson, Doublehead District Ranger  
Modoc National Forest  
225 West Eighth Street  
Alturas, CA 96101

Re: Comments on the Medicine Lake Caldera Vegetation Treatment Project Draft EA

Dear Danelle Harrison, Bill Moore, and Chris Christofferson,

The Mount Shasta Bioregional Ecology Center appreciates the opportunity to submit comments on the Environmental Assessment for the Medicine Lake Caldera Vegetation Treatment Project. We are a nonprofit public interest organization founded in 1988 and involved in the protection of the Medicine Lake Highlands for over two decades on environmental and historic preservation issues. The people we serve appreciate our region's natural landscapes, biological diversity, pure air and waters, cultural significance and outstanding scenic beauty.

The landscapes of the Medicine Lake Highlands are known for their exceptional natural, cultural, hydrologic, geologic, and scenic values. The project area is home to sensitive wildlife, is an enormous water catchment system for the Fall River Springs, and is a popular recreational area receiving high public use. The entire uplift above the approximately 6,000 foot elevation has been designated by the Forest Service and Historic Preservation agencies as eligible for the National Register of Historic Places as a Traditional Cultural District of sacred importance to the Native Peoples of this region. The Medicine Lake Caldera itself is the center of this highly significant recognized cultural landscape.

We certainly share concerns about the Mountain Pine Beetle (MPB) infestation of lodge pole pine stands in the Caldera and recognize that appropriate vegetation management in the overstocked stands is needed for the prevention of wildfires. However, we would like to see additional alternatives added to the EA that meet these objectives with a gentler hand than the current Proposed Action reflects. The new alternative would implement more respect for the forest, wildlife, native plants, soils, and the integrity of the landscape involving the interconnected life web in the Caldera and Native American cultural values, as reflected in the Historic Properties Management Plan (HPM) for the Medicine Lake Traditional Cultural District, and also in the Northwest Forest Plan.

*Honoring and Protecting Our Mountain Environment Since 1988*

During the time the HPMP was developed, I served as environmental coordinator with the Pit River Tribe for over 10 years. The deep Tribal and agency commitment during the 5-year HPMP development process – involving Elders, traditional practitioners, members of the Tribes’ Cultural Committees and staff, and dedicated agency personnel – demonstrate how seriously the specific concerns, standards and values contained in the HPMP are held. The HPMP contains much of the deep traditional wisdom of the Elders (many of whom are no longer with us) regarding the relationship of people to the land.

These guidelines now need to be applied to the Proposed Action in the Medicine Lake Vegetation Treatment Project (“Project” or “Proposed Action”).

### **The Forest Service has obligations under the 2000 MOA**

The HPMP Executive Summary, p. 2, states:

**Signatories to the MOA are the Forest Service, Bureau of Land Management, California SHPO, ACHP and the Pit River Tribe as amended (2005). The MOA stipulates measures to lessen adverse effects to cultural values resulting from geothermal development in the Highlands. The MOA also stipulates that the HPMP will be implemented whether geothermal resources are developed or not. In accordance with NHPA, the MOA prioritizes the development of the HPMP and highlights issues to be addressed in terms of cultural values, desired future cultural conditions, and mechanisms for the protection of cultural values.** For purposes of the HPMP the “Highlands as a Whole”, henceforth referred to as the Central Highlands, **will be managed as a National Register Eligible property.** This area contains roughly 73,000 acres of public lands and is generally bounded by the 6000’ elevation line. (*emphasis added*)

The MOA (see HPMP Appendix A) states:

(2) All studies related to inventory, evaluation, treatment, and **management of cultural and historic properties, and, under the terms of this Agreement, shall meet professional standards, as outlined in the National Park Service's *Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines* (48 F.R. 44716-44742), *The Secretary of the Interior's Standards and Guidelines for Federal Historic Preservation Programs, the Council's Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites* (64 F.R. 27085-27087), [National Register] Bulletin 38, as applicable, and guidance provided by the Modoc, Klamath, and Shasta-Trinity National Forests Heritage Program Leaders and Tribal Relations Program Managers...** (*emphasis added*).

From what I understand from traditional Tribal members, this level of discussion and analysis by appropriate Heritage Program and Tribal Relations professionals, and traditional cultural people has not yet occurred.

## **The EA lacks a proper Section 106 Analysis under the NHPA**

A **large omission in the EA** appears to be a proper Section 106 analysis under the National Historic Preservation Act (NHPA and its implementing regulations 36 CFR 800, as well as National Register Bulletin 38) of the impacts of the Proposed Action on the cultural values of the Medicine Lake Highlands Traditional Cultural District. While the EA indicates that Tribes were informed and consulted about the project, it isn't clear that a Section 106 Process was conducted involving traditional cultural people and professional agency personnel and documented with the necessary cultural expertise. The EA (p. 16) treats cultural sites in a disjointed way and ignores that the whole Project Area is part of Traditional Cultural District where Intervening Areas also have significance and need protection.

These and other criteria for cultural protection addressed in the HPMP need to be documented as part of the Section 106 Process.

## **The HPMP is clear on the landscape features and qualities that make the area eligible for the National Register of Historic Places, and on the need to protect cultural values.**

The EA limits its consideration of the HPMP to strictly Timber and Fire Guidelines, and does not refer to other sections of the HPMP that specify what it means to "protect cultural values and properties," and enhance "wildlife and plant habitats" according to cultural definitions.

Some impacts and potential adverse effects on cultural and ecological values include:

- **The sheer size of the Proposed Action** involves over 5,000 acres of logging and other treatments, and almost 7 miles of "temporary" roads within the Caldera. The Proposed Action seems designed to maximize logging rather than promote forest health, which would be harmed by the loss of large trees, clear cuts (aka "group selection") on 25% of the stands, logging on riparian reserves, and impacts from industrial machinery.

- **Landscape fragmentation** and impacts on cultural sites and their interconnected pathways (see HPMP p. 38 on Intervening Areas) are not disclosed. Impacts would be caused by the extreme volume of trees to be harvested (30-50%! see EA Map 3, p. 62), clear cuts, ground disturbance due to heavy industrial machinery, landings (up to 30!), skid trails, and new roads (EA Map 3, p. 64). Although these roads are called "temporary," they would affect some extremely sensitive landscapes (such as the wet meadows on the south shore of Medicine Lake). These roads and their impacts would last a long time in the high-elevation harsh environment of the Caldera where natural regeneration occurs at a slower rate. (see HPMP Appendix D)

- **Impacts on the forests, their cultural and scenic values.** The spiritual value of the forests would be impacted by ground disturbance, loss of visual quality, loss of canopy and large trees – including lodge pole pine, red fir, and mountain hemlock – due to overharvesting, mechanical equipment, clear cutting, roads and landings. The EA does not give sufficient information to justify the extreme level of logging that is being proposed on 4008 acres in light of the relatively limited extent of MPB infestation (it isn't clear from the

EA how many acres or trees are currently infested). A concern for this high-elevation, ecologically sensitive area is that it takes a long time for trees to grow to a large size. We would like to see the project modified to ensure that enough large trees are retained to maintain the forests' ecological and cultural qualities, adequate canopy (how is this determined?), as well as surface and subsurface symbiotic mycorrhizal relationships, and alternative methods used to control the MPB. (See HPMP p. 34 on Forest Health).

– **Scenic quality** (EA p. 21) impacts need to be analyzed not only from surface perspectives, but also from trails and from the surrounding buttes and mountains where vision quests and other cultural activities take place. These effects would particularly apply to the 1- to 5-acre clear cuts that are proposed, which may be extremely visible from the heights. (See HPMP p. 38 and Appendix F)

– **Impacts on culturally significant plants.** An ethnobotanical study was done for the HPMP of plant species that have traditional importance. These would be especially impacted by mechanical logging methods using masticators, skid steer loaders, and the like. In order to maintain integrity of the landscape, its mycorrhizal networks and diversity of understory species, we recommend manual cutting over the use of masticators. (HPMP, p. 36 and Appendix C)

– **Impacts on wildlife** from reduced habitat and forage. The HPMP makes it clear that all native birds, mammals and other animals are valued as important cultural constituents of the landscape. However, the EA prescribes that only “10% of the planned thinning areas would be retained in untreated pockets to maintain habitat diversity at the stand level.” We seriously question whether this is enough to benefit wildlife. (see HPMP pp. 18 and 34)

Because the HPMP does give guidance on projects, we believe that the Section 106 process should lead to an analysis of how the Proposed Action would affect the qualities that make the area eligible for the National Register of Historic Places and spell out how the criteria of the HPMP would be applied. The extent and impacts of this project may also need to involve comments and consultations with historic preservation agencies such as the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP).

### **Other Recommendations and Conclusion**

- We would like to see the project modified to ensure that enough large trees are retained to maintain the forests' ecological and cultural qualities, adequate canopy (how is this determined?), surface and subsurface connectivity and symbiotic mycorrhizal relationships, and alternative methods used to control the MPB. (See below and HPMP p. 34 on Forest Health).

- Healthy large LPPs do not need to be cut down to be protected from the MPB. Pheromone treatments by private landowners at Medicine Lake have proven successful, as we have learned from communications with residents.

- Treatment of slash should be specified; burning of slash and fuels should be through low intensity burning in order to preserve seed banks (see Historic Fire Use, HPMP p. 17).
- Group selection (clear cutting) should be limited to ¼ to ½ acres
- Trees do not need to be felled to achieve mistletoe control, as mechanical pruning also works. Please see guidance on mistletoe in the Northwest Forest Plan and also: [www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5187427.pdf](http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5187427.pdf).
- Mechanical equipment and new roads should be prohibited in Riparian Reserves. The impacts of using old roads should be addressed.
- We recommend manual thinning as opposed to use of masticators.
- It is not clear how the EA addresses the NW Forest Plan's Aquatic Conservation Strategy for Blanche, Bulleseye, No-Name and Little Medicine Lakes, and other riparian areas. These hydrologic features are left out of the EA. We were unable to find or access the Hydrologic Report Appendices A and B mentioned at EA p. 40.
- Enhancing the diversity of species in LPP stands will increase resiliency of the forest to MPB. Interplanting LPP stands with native species (red fir, mountain hemlock, and others) would accelerate reforestation and succession. We have done some research on this (please see box below).

#### **Mimicking natural seral succession to enhance species composition**

Research by the Forest Service reveals that the mountain pine beetle (MPB) plays an important role in forest succession involving lodgepole pine (LPP). LPP is a seral species (and almost never a climax species except in rare soil conditions). The MPB aids the process of seral succession by killing off older LPP, making room and light for the release of the seedlings of fir and other species as openings appear in the stands due to LPP mortality. Please see "*The Role of the Mountain Pine Beetle in Lodgepole Pine Ecosystems: Impacts on Succession*" by G.D. Amman in W.J. Mattson (ed) *The Role of Arthropods in Forest Ecosystems*, pp. 3-18. Springer-Verlag, New York, 1977. There are more recent articles, but I've found this to be the clearest. The author of the study, G.D. Amman, is Principal Entomologist at USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, Utah.

As Amman found in the Rocky Mountains, but one can readily see similarities with conditions in the Medicine Lake Caldera even though the fir species differ: "Lodgepole pine stands depleted by the beetle and not subjected to fire are eventually succeeded by the more shade-tolerant species consisting primarily of Douglas-fir at the lower elevations and subalpine fir and Englemann spruce at the higher elevations throughout most of the Rocky Mountains (Fig. 8). [Note: In the Medicine Lake Caldera, we would substitute red fir and mountain hemlock].

(continued on page 6)

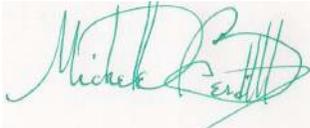
Because of this finding, we recommend maximum retention of existing red fir and mountain hemlock, especially the larger trees. Because natural regeneration would be slow in the Caldera, reforestation could be accelerated by planting seedlings of these and other Caldera species to replace and diversify the treated LPP stands. These species could be propagated and planted in order to mimic and accelerate natural succession, resulting in a more diversified forest that includes species not susceptible to MPB infestation.

## Conclusion

The Mount Shasta Bioregional Ecology Center incorporates by reference the comments on this Project by Medicine Lake Citizens for Quality Environment and by EPIC (Environmental Protection Information Center).

We are requesting a modified alternative incorporating appropriate elements from the HPMP and other recommendations in these comments, in consultation with the Pit River, Modoc and other Tribes whose cultural values would be affected. This would be more in line with the Northwest Forest Plan and National Historic Preservation Act, and reflect the need to retain the cultural, ecological and scenic character of the Caldera. We strongly urge the Forest Service to develop alternative treatments to address the MPB and potential fire problems, in order to protect the integrity of the area, its forests and large trees, wildlife, and the cultural and spiritual values that have long been invested here.

Very truly yours,



Michelle Berditshevsky  
Founder  
Senior Conservation Consultant  
MOUNT SHASTA BIOREGIONAL ECOLOGY CENTER

cc: Pit River Tribe  
Medicine Lake Citizens for Quality Environment  
Native Coalition for Medicine Lake Highlands Defense  
Stanford Environmental Law Clinic  
Environmental Protection Information Center