

Open Lands Fuel Removal & Restoration Strategy

1. Introduction:

The Helena Open Lands Management Plan (adopted in 2004) provides overall management goals and implementation opportunities for Helena's Open Lands. Chapter 3- Forest Management specifically addresses issues of concern, goals and objectives and outlines management activities that are allowed as well as a list of Best Management Strategies (BMPs). This strategy tiers to the existing plan and outlines proposed treatments activities, estimated costs and a schedule for addressing the high level of beetle killed trees on Helena's open lands. The strategy serves as an overall approach, a tool for budget and project planning and a product for public communication. The strategy will be updated and reviewed as new information is gathered and/or as conditions and opportunities change.

The strategy was developed utilizing input and priorities from the HOLMAC forestry subcommittee, city staff field analysis and interaction with other city departments. The strategy will result in future proposed projects and funding options that will be individually reviewed by HOLMAC and presented to the Commission for approval.

2. Proposed Treatment & Activities:

Tree Removal: The proposed treatment of these lands will involve the harvest (removal) of all mountain pine beetle infested trees with the exception of those beetle-killed trees retained for wildlife habitat (snag trees); combined with the thinning of live, un-infested trees on an approximated 15-20 foot tree crown to tree crown spacing. Addition forest fuels modification work will involve the pruning of lower limbs to a height of 6 feet on those trees 20 feet tall and greater and a pruning to a height equal to 1/3 of the total tree height on those trees less than 20 feet in total height.

Cut waste material generated during thinning and harvesting will either be chipped and spread on the forest floor or hand piled for burn disposal depending upon the topography and accessibility of the given treatment site. Material too large to be chipped or burned will be taken off-site for disposal, fuel wood donation or marketing. Bid proposals for tree removal and thinning work will be awarded to qualified contractors using a bid process.

Forest Restoration: There is a need to restore the forest to include a mosaic of tree species, age classes and stocking levels that are more resilient to the stresses of climate change into the future. Restoration activities will include tree planting; grass seeding, weed control, on-going maintenance efforts and fire rehabilitation efforts in the case of a wildland fire.

Public Health & Safety: City staff will continue to be involved in numerous cooperative-planning efforts that address public safety risks associated with wildfire. Current documents that guide the city's efforts include the Tri-County Community Wildfire Protection Plan, and the Helena/South Hills Population Protection Plan. These plans recognize hazards associated with current forest conditions, wildfire risks

and evacuation routes. Mitigation actions have been identified and prioritized that are necessary to improve evacuation routes and staging areas in the event of a fire in the wildland urban interface. The city's proposed fuel mitigation projects are identified as high priority in these plans.

Solid-waste: Attention will be placed on addressing the solid-waste issues that will result from tree removal from both city-owned open lands as well as forested private lands within the city limits. In addition to exploring biomass technology development, city staff may recommend the purchase of 1-2 air curtain burners and a tractor/woodchipper that could be utilized to reduce the amount of material being taken to the landfill. The capital investment for two air curtain burners and a woodchipper is approximately \$200,000.

3. Forest Thinning Unit Costs:

The unit costs for forest fuel treatment are projected to average approximately \$1,650.00/acre for the 500 acres deemed in immediate need, therefore resulting in a total estimated forest fuel treatment cost of approximately \$825,000. The city has several pending grant awards and applications for funding.

Given the current aggression levels of the mountain pine beetle within the Helena area, and the resulting potential need for the city to eventually sanitize all of the ponderosa pine stocked acreage occurring within the open lands system, the total cost could increase to \$1,750,000.00 for the forest fuel treatment phase alone. Mountain pine beetle infested areas that have realized high mortality, and consequentially lack a suitable seed source, may require regeneration assistance with associated tree planting costs projected to average \$600.00/acre over a currently undeterminable number of acres.

4. Timeframe & Schedule of Costs:

The following timeframe includes estimated time for pending grants to be realized, and forest fuel projects to be completed, regeneration inventories and further field analysis to ensure adequate restoration. The timeframes could be accelerated if the city chose alternative funding sources other than grants.

Activity	Timeframe	Estimated Cost
Capital Investment (equipment) 2- air curtain burners Wood-chipper Forestry equipment	2009-2010	\$ 250,000.00
Dead tree removal & thinning projects (up to 1100 acres of ponderosa pine)	2009-2014	\$1,750,000.00
Restoration Activities: tree planting, grass seeding, weed management, slash burning	Begin 2011	\$1,050,000.00
TOTAL ESTIMATED COSTS		\$3,050,000.00

5. Pending Forest Fuel Treatment Grants:

These projects were identified and prioritized by city staff and the HOLMAC forestry subcommittee.

Project Name & Year	# of Acres	Grant Source & Amount	City Match	Total Cost
Mt. Helena (East-face) 2010	100	State-DNRC \$80,000	\$60,000	\$140,000
Mt. Helena (Le Grande) 2010	100	USFS- RAC \$84,700	\$65,000	\$149,700
South Hills (FEMA) 2011	150	FEMA \$217,000	\$30,500	\$247,500
Open Lands (FEMA) 2011	150	FEMA \$250,000	\$38,500	\$288,500
Unknown: based on future assessments	Up to 600	--	--	--

6. Funding Options:

City staff will continue to use a variety of funding mechanisms for implementing these activities. There will be an on-going commitment to leverage city funds with state and federal grants. To date, city match for state and federal grants has been funded from the Open Lands Assessment budget. Implementation costs exceed annual open space maintenance assessment funds. Recognizing there is limited capacity within the general fund for funding these activities city staff will evaluate assessment/fee options for future commission consideration.

7. Overview of ordinances and resolutions that govern open lands:

There appears nothing in the existing ordinances or resolutions that prevent the city from conducting these activities on designated open lands and natural parks. The proposed management activities are also supported under the guidance of the Helena Open Lands Management Plan. Two activities of potential concern include the use of motor vehicles and clear-cutting. The use of motor vehicles can be authorized by the city manager or designated representative. Patch cutting of dead trees in 100% mortality areas has been interpreted by city staff and HOLMAC to not qualify as “clear cutting of timber” as prohibited by ordinances.