

**Ponderosa Pine Dwarf Mistletoe Management and Restoration Recommendations**  
 Approved by the Steering Committee, Deschutes Collaborative Forest Project 10/11/11

The subject of ponderosa pine dwarf mistletoe management [specifically in large trees (defined herein as trees 21”+ dbh)] represents a significant point of contention due to the multiple ecological, social, and economic values associated with large trees. Consequently, the DCFP Restoration Planning Sub-committee prioritized dwarf mistletoe management as an issue to address for a discrete area within the Popper Vegetation Management Project. The purpose of these recommendations is to test the potential to balance multiple objectives and values at the project- and stand-level *before* such a proposal is applied across the Deschutes Collaborative Forest landscape and broader Deschutes National Forest.

The following recommendations outline a collaborative strategy that aims to balance the following:

1. Retention of large trees in patches and clumps that are ecologically and socially-valued;
2. Containment of dwarf mistletoe infected large trees in patches and clumps and reduction of dwarf mistletoe levels outside those areas to address forest health concerns;
3. Removal of some large infected trees located in buffers or isolated across stands to further reduce dwarf mistletoe levels and provide economic value.

The table below provides recommendations to address ponderosa pine dwarf mistletoe in the stand structural categories being analyzed by U.S. Forest Service in the Popper NEPA planning process. The DCFP Steering Committee and Restoration Planning Sub-committee would like Forest Service planning staff to take into account historic and current stand-, project-, and landscape-level context when implementing the various elements of these recommendations.

<b>Ponderosa Pine Dwarf Mistletoe Reduction and Containment Recommendations</b>	
<b>Stand Structure</b>	<b>Recommended Treatment</b>
Plantations:	<ul style="list-style-type: none"> <li>• Retain uninfected trees where they are found in plantations</li> <li>• Utilize sanitation thinning, group selection, and prescribed fire to reduce mistletoe infection levels and control its spread within plantation stand(s)</li> <li>• Thin within plantations to create buffers (“donuts”) to separate adjacent heavily infected mistletoe stands and control and prevent mistletoe spread into plantations</li> <li>• Use lower basal area targets within plantations and second-growth stands according to site potential on 10-15% of treatment area to harvest more intermediate sized trees*</li> <li>• Meet average basal area targets within plantations and second growth stands through variable density thinning as prescribed in restoration treatments*</li> </ul>
0-3 large TPA:	<ul style="list-style-type: none"> <li>• Retain uninfected large trees where found; consider strategic pruning of large trees with low dwarf mistletoe infection levels (limited to bottom 1/3 of crown)</li> <li>• Create snags from isolated, large infected trees according to wildlife standards and guidelines as determined by wildlife biologist to reduce mistletoe impact “footprint”</li> <li>• Utilize sanitation thinning, group selection, and prescribed fire in surrounding younger cohort to reduce mistletoe level and control its spread within stand</li> </ul>
4-14 large TPA:	<ul style="list-style-type: none"> <li>• Patch retention (<i>aggregations of 10+ large trees</i>):               <ul style="list-style-type: none"> <li>○ Retain large trees in patches</li> <li>○ Thin from below to remove overtopped, infected understory and</li> </ul> </li> </ul>

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	<p>reduce competitive stress on overstory</p> <ul style="list-style-type: none"><li>● Clump and buffer (<i>aggregations of 4-9 large trees</i>):<ul style="list-style-type: none"><li>○ Retain large trees in clumps (in some cases located around patches)</li><li>○ Create buffer around clumps and patches to contain mistletoe and control its spread within surrounding stand(s) by:<ul style="list-style-type: none"><li>▪ Creating snags according to wildlife standards and guidelines as determined by wildlife biologist</li><li>▪ Cutting and removing large, infected trees that exceed wildlife requirements</li></ul></li><li>○ Consider limited planting of non-host tree species (e.g., Douglas-fir) as experimental control of dwarf mistletoe spread where site conditions are appropriate</li></ul></li><li>● Isolated, large infected trees: (<i>areas with 1-3 dispersed large trees</i>)<ul style="list-style-type: none"><li>○ Retain uninfected large trees where found; consider strategic pruning of large trees with low dwarf mistletoe infection levels (limited to bottom 1/3 of crown)</li><li>○ Create snags according to wildlife standards and guidelines as determined by wildlife biologist to reduce mistletoe impact “footprint”</li><li>○ Cut and remove infected large trees that exceed wildlife standards and guidelines for snag density as determined by wildlife biologist</li></ul></li></ul>
15+ large TPA:	<ul style="list-style-type: none"><li>● Retain large, infected overstory trees</li><li>● Thin from below to remove overtopped, infected understory and reduce competitive stress on overstory</li></ul>

\* The DCFP Steering Committee and Restoration Planning Sub-committee supports this restoration recommendation in ponderosa pine plantations and second-growth stands across the DCFP landscape, with or without dwarf mistletoe.

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0-3 21"+ DBH TPA

Cut and remove DM infested trees (overstory and understory). Girdle or otherwise kill DM infested trees that will not pay their way to the landing, i.e., skidding distance too great, and/or located on steep slope. Retain existing snags where they do not pose a safety hazard.

4-14 21"+ DBH TPA

Cut and remove DM infested trees (overstory & understory). Girdle or otherwise kill DM infested trees that will not pay their way to the landing, i.e., skidding distance too great, and/or located on steep slope. Retain existing snags where they do not pose a safety hazard.

*Understory development is the most important aspect of this treatment. Putting these stands on a trajectory to become large-tree dominated ponderosa pine stands requires the removal of the infested overstory and understory. This treatment should produce the desired future condition of a **resilient** and **healthy** stand occupying this site in the long run.*

15+ 21"DBH TPA

Prioritize DM infected trees (understory & overstory) for removal. Thin from below. Girdle or otherwise kill DM infested trees that will not pay their way to the landing, i.e., skidding distance too great, and/or located on steep slope. Retain existing snags where they do not pose a safety hazard.

*It appears from maps and tables provided thus far that little or no stands of this type occur within the DM treatment acres. Forest Service proposes a thinning-from-below regime. I interpret this to mean that trees > 21" dbh or with old-growth characteristics may be removed in order to meet residual target densities.*

*One of the purposes of the Popper Project is to improve forest health. "Retain large, infected overstory trees" within the 15+ 21"+ DBH TPA (Draft Dwarf Mistletoe Reduction and Containment Recommendation) appears counter-productive to this stated purpose.*

*Northwest Forest Plan Matrix definition: Most timber harvest and other silvicultural activities would be conducted in that portion of the matrix with suitable forest lands, according to standards and guidelines. Most scheduled timber harvest takes place in the matrix.*

*I have yet to find in the NW Forest Plan S&G's where retention of diseased trees is a stated objective.*

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Page 1 of the CFLR Deschutes proposal states as one of its goals for conducting treatments in stands is “*setting forest structure on a trajectory to develop late-successional stands*”.

Page 1 of the proposal also states, “*The goal for this landscape is to restore forest ecosystems to be **resilient** to natural processes, like fire and insects*”. (Emphasis added)

Page 7 of the proposal also states, *Dwarf mistletoe is greater in the current forest than in previous times, and would be addressed by selecting for removal those trees that are heavily and moderately infected.*”