

Kalama Thinning
APPENDIX A
Public Comments and Forest Service Responses

The following are substantive comments received following a formal comment period, which began on March 6, 2006. Comments were received from two sources. Forest Service responses appear in italic face following the excerpt of each comment.

1. Explore option of eliminating need for new road. On some of the steepest areas of this sale that cannot be accessed with a forwarder, downhill yarding could be considered. Another option is to drop the steeper areas of the sale and make up the acreage in adjacent areas that seemed to be suitable for thinning. If there is no way to eliminate the need for the new road, we recommend that decommissioning include sub-soiling to ensure that the area's absorption capacity is restored. We also trust that the requisite drainage work will be done to ensure it does not deliver water and sediment to the main road system or streams in the future. We assume the road will be out-sloped when built, and full gravelling of the roadbed will be avoided.

Elimination of the temporary road was determined to be infeasible. Downhill yarding was considered, however the IDT believes that this practice could result in adverse impacts, especially within a riparian area. Logs being dragged downhill would be uncontrolled and would damage residual trees. The road, as proposed, would not only allow uphill cable yarding, but would also facilitate logging on the ground based areas by lessening skid distances and ground disturbance. Project design feature #22 is included to remove the 0.5 mile of road following sale activities. Full graveling of the roadbed will be avoided.

2. Thinning to 40% canopy cover would result in a RD of 22–25. From a timber productivity standpoint, a RD of 25 is too heavy a thinning to fully capture the released growing space. From an ecological perspective, it is too low considering the peak flow concerns raised in the watershed analysis. If, however, you stick with the 19x19 spacing and the DxD suggestions in 1C, the density will be close to 35 RD and 50–55% canopy closure. This level makes more sense to us.

Thinning prescriptions have been expressed in terms of Curtis RD. The uplands will be thinned to a RD of 38 (128 trees per acre [TPA] greater than 8" dbh) and to a RD of 42 (or 148 TPA) in the Riparian Reserves. The exception is the west branch of Fossil Creek, in which the Riparian Reserve would be thinned to a RD of 38.

3. In order to increase horizontal variability and species diversity we recommend:
 - Cut only DF in DxD and make all other species "invisible".
 - Make trees with broken tops "invisible", e.g. "Do not cut trees with a broken top that are less than 75' in height".

Pacific silver fir, western hemlock, western redcedar, and hardwoods will not be harvested with Riparian Reserves. The exception would be in dense areas of predominately Pacific silver fir and western hemlock trees. In this case, Pacific silver fir and hemlock trees could be cut, but the leave tree must be one of these two species.

2.6 green, broken topped trees, 30 to 70 feet in height, 12" dbh or greater will be retained for snag retention. If insufficient numbers exist, additional green trees will be retained for snag creation.

4. In order to meet the in-stream wood recruitment and connectivity objectives of the riparian reserves and add variability to the whole stand, the simplest approach we suggest is:
 - Increase the width of the no cut buffers to 50' along the small streams and wet areas.
 - In the thinned areas of the riparian reserves, use the same DxD approach but decrease the spacing to a baseline of 15' x 15' or 193 TPA of DF, which would result in a canopy cover around 70%. As the difference between 40% and 50% canopy cover is relatively minor, increasing it in the Riparian Reserves will provide for patches that have substantially different understory light levels within the stand and thus reduce the potential for simplification of the understory plant community.
 - In addition, 3 dominant trees per acre could be marked for day-lighting in the RR with an 18' radius DxD circle. Minor species greater than 8" dbh could also be designated as the leave tree in the general riparian DxD.

In general, a 25' no-cut buffer is prescribed within the Riparian Reserves. Additional no-cut buffer widths are not necessary due to the type of stream channels and slope conditions. The remainder of the Riparian Reserve widths will be thinned to a Curtis RD 42 (146 TPA). This thinning grade is more open than 193 trees per acre and would accelerate the residual tree growth and provide more open space for understory shrubs to occupy. This should enhance the development of late-successional characteristics within the Riparian Reserves. Three dominant trees per acre will be marked for daylighting and to preserve diversity, western redcedar, Pacific silver fir, western hemlock, and hardwood species will not be harvested with Riparian Reserves, unless necessary to comply with project design feature #2.

5. We recommend that language be included in the contract to ensure that large CWD is avoided as much as possible on skid trails and cut through with a "rigging cut" when it cannot be avoided. The main goal is to avoid picking up and moving large CWD and destroying the fungal, vegetative, and invertebrate connections to the soil.

Existing remnant down logs will be protected by falling trees away from the logs, and routing skid trails around them, whenever possible.

6. Place a skip in NE corner of unit A3. This area has a high number of large snags and wildlife trees with broken tops. By protecting these, you will reduce the need to create snags after the fact.

A 4 acre skip in this general area will not be harvested.

7. Do not subsoil skid trails: This seems like overkill as this soil type is resistant to compaction. The disturbed soil is a great place for invasive weeds to establish. Instead, cover skid trails with slash as much as practical,

We agree. Sub-soiling skid trails within thinned stands can cause root damage to the residual trees. Only temporary roads and landings are required to be sub-soiled. However, cross

drains and grade breaks would be installed in skid trails prior to seasonal precipitation. Invasive weeds will be monitored and treated, as needed. All heavy equipment is required to be cleaned prior to moving onto the national forest.