

Appendix B Description of Treatments

Treatment	Treatment Description
Clearcut with Reserves	This is an even-aged management technique where most of the merchantable trees in the stand are harvested in a single cutting to establish a new age class. A varying number of trees or groups of trees are retained to achieve wildlife and tree species diversity goals. Generally, 6-12 trees (minimum diameter at breast height of 6") per acre are left uncut.
Seed-Tree Cut	This is an even-aged management technique where most merchantable trees are cut, but a small number of trees are retained for seed production. The residual basal area is typically less than a shelterwood cut, but more than a clearcut. Some or all of the seed trees that are retained after regeneration would become established to attain goals other than regeneration; however, the seed trees are not enough to become the featured stand or create a two-aged stand.
Shelterwood Seed Cut with Reserves	This treatment is similar to a regular shelterwood cut. Most trees are harvested fairly uniformly across a stand, but leaving a higher residual basal area than a clearcut. The residual trees provide a shaded microenvironment for regeneration and acts as a seed source. Unlike a regular shelterwood, the shelter trees are retained indefinitely for purposes other than regeneration. The intent is a two-aged or multi-aged stand.
Single-Tree Selection	Individual trees of specified size classes and species are removed fairly uniformly throughout the stand to produce an uneven-aged structure. The intent is to promote growth of the residual trees while providing space and increased light for regeneration.
Variable Density Thinning	The objective of variable thinning is to remove some trees in a stand in order to improve the health and vigor of the overstory and to increase structural and compositional diversity. Remaining trees will grow faster due to reduced competition for nutrients, water and sunlight. This technique would utilize leave islands (or groupings) of trees and designate different basal area objectives in different portions of each stand. Variable thinning would primarily favor the retention of red pine trees along with other species that are different from the dominant forest type. Retention of birch, cedar, and other hardwoods will improve habitat for cavity nesters and provide foraging habitat for birds.
Interplanting	The objective of this planting method is to increase within stand diversity by utilizing natural regeneration along with the desired planted species. Interplanting for diversity which occurs after a shelterwood harvest would be approximately 222 seedlings per acre on 14' x 14' spacing. Interplanting for diversity following a clearcut with reserves would be approximately 112 trees per acre.
Plant	Planting species such as white spruce, white pine, black spruce, and red pine after a timber harvest method such as a clearcut with reserves. Trees are planted at approximately 680 seedlings per acre on an 8' x 8' spacing to establish a young cohort of desired species.
Underplant	The objective of this treatment is to underplant various species for wildlife or tree species diversity purposes. Seedlings are planted under existing vegetation and hand released from competition three to five years after planting, if necessary.
Mechanical Fuels Reduction	Mechanical equipment is used to treat understory hazardous fuels, including dead and down material and ladder fuels. The fuels may be piled and burned, crushed, chopped, or removed with mechanical equipment. The overstory remains undisturbed. The intent is to reduce understory fuel hazards, thus reducing the risk of crown fire development.

Treatment	Treatment Description
Mechanical Site Preparation	The objective of this treatment is to prepare an area for regeneration and reduce competition from brush and undesirable tree species currently on site. The equipment type and operating season depends on the site conditions, such as soil moisture and vegetation present. Regeneration of the stand can be through natural seeding, direct seeding or planted seedlings. The treatment can be used post-harvest or in stands with low stocking and undesirable regeneration.
Site Preparation Burn	<p>A fire that is allowed to burn over the entire unit. The prescribed burn that removes the dead woody material on the surface (including post harvest slash) and removes a portion of the duff layer. Burn intensity varies over the treatment unit depending on vegetation, fuels, and topography. Skipped areas or lightly burned areas within the unit may not be uncommon.</p> <p>There are two objectives of this type of burn: 1) to reduce hazardous fuels in stands where harvest treatments may leave residual slash and where harvest treatment may not remove all the dead and down and 2) to prepare the site for regeneration. By removing the dead woody material and exposing some mineral soil, natural regeneration through seeding from the remaining overstory can take place. Planting of seedlings is also enhanced. Survival rates are improved from reduced brush competition.</p>
Under Burn	This treatment is a low intensity fire that burns beneath the canopy of live, standing timber. The understory materials that would be removed include small down, dead, woody material. Some live trees may be burned, but the objective is to maintain the forest cover. The primary objective of understory burns is to reduce hazardous fuels in the understory. Other objectives include restoring fire to the stand and improving stand health.
Slash Disposal	Slash created from harvest treatments is disposed of through a variety of methods including chipping, biomass removal, burning, or other appropriate methods. The objective is to dispose of hazardous fuels created from management activities.
Temporary Roads	<p>All temporary roads will be obliterated using the following actions where appropriate:</p> <ul style="list-style-type: none"> • Culverts and temporary bridges will be removed. • Stream crossings will be returned to a more natural state by returning the crossing to the approximate original contour and by stabilizing the crossing banks through revegetation. • Original drainages will be reopened and water diversions from roadbeds will be provided. • Water bars will be constructed on temporary roads or skid trails in areas with steep slopes. Areas at risk for erosion will be seeded. • Windrows of slash or rock along temporary roads will be flattened or spread out. • Where available nearby small balsam and spruce will be transplanted into road bed and one cubic yard of rocks (embedded 1/3 of their depth), stumps, and slash will be randomly placed on the visible part of the road to ensure that passage does not seem feasible and is not attempted. Cuts and fills will be recontoured to pre-road condition. <p>At the access point off the main road, the original ditch will be restored.</p>