

**APPENDIX H
Unit Specific Design Criteria**

The table on the following pages contains the list of stands that would be treated as part of the Glacier Project. The list identifies the specific stand, harvest prescription, and site specific design criteria that would be implemented. The design criteria are based on information in Appendix E Operational Standards and Guidelines. This Appendix shows how the Operational Standards and Guidelines would be implemented on a site-specific basis.

The following list of codes includes the definitions of the actions that would be taken when implementing a specific management unit.

Season of Harvest	
ws	Conduct mechanized management activities during frozen ground or normal dry conditions.
w	Conduct mechanized management activities during frozen ground conditions
as	No restrictions on season of operation.
Reserve Trees Design Criteria	
RT	<p>“Reserve trees” are live trees selected to remain on the site in even-aged managed areas to provide present and future benefits including shelter, resting sites, cavities, perches, rest sites, foraging sites, mast, and coarse woody debris.</p> <ol style="list-style-type: none"> 1. In general, retain a minimum of 6-12 live trees left uncut per acre. 2. Reserve trees should be a minimum of 6 inches diameter at breast height (DBH) and include at least two trees per acre from the largest size class available on site. 3. Reserve trees may be left individually or in clumps ranging from ¼ acre and greater. Minimal harvest within clumps is acceptable (down to a minimum of 80 BA) as long as the integrity of the clump or key leave trees are not disturbed, and as long as the clump is not doubling as a legacy patch (see above). 4. In clear-cut harvest units 20 acres or larger, reserve trees are retained in addition to legacy patches. 5. In seed-tree, shelterwood and partial harvest stand age = zero, the units emphasis should be placed on maintaining at least ½ of the reserve trees (3-6 trees per acre) in clumps, the remainder can be made up of non-designated species or other residuals. 6. Reserve trees include the full variety of tree species found in the stand to provide within stand diversity and structural diversity.
RT-BO	Harvest units adjacent to large lowland areas would generally have reserve areas and trees concentrated along the wetland boundary (within 200 yards) to maintain potential nesting trees for boreal owl. Retain some large aspen capable of producing nesting cavities if present.
RT-TTW	In even-aged jack pine and upland mixed conifer regeneration harvests, retain 6-10 jack pine per acre either scattered or in clumps where ecologically

	appropriate, to provide foraging habitat for three-toed woodpeckers. Jack pine reserve trees can count toward the reserve tree design criteria above. Where not enough jack pine occurs, upland black spruce may be substituted. For the remainder of the reserve trees follow design criteria for reserve tees.
RT-BE	In harvest units within ¼ mile of lakes and streams suitable for bald eagle foraging, all super-canopy red and white pine trees should be retained where possible.
RT-OSF	In the “remainder zone” of conifer units, maintain 10-20% canopy cover for quality olive-sided flycatcher habitat where possible.
RT-NG	In conifer thinning stands, maintain deciduous trees, especially aspen where possible.
RT-CL	Retain 5 ac or greater patches in harvested stands for lynx denning habitat
Soils Design Criteria	
CMS	Moist soils which are susceptible to compaction, rutting and displacement: ELTs 1 & 3. Avoid areas of moist soils or conduct mechanized management activities during frozen ground conditions or during normal dry period.
CWS	Wet soils which are susceptible to compaction rutting and displacement: ELTs 2, 4 & 6. Avoid wetlands or conduct management activities during frozen ground conditions.
CVW	Very wet soils which are susceptible to compaction rutting and displacement due to continuous saturated conditions: ELT 5. Avoid wetlands or conduct management activity during frozen ground conditions. Poorly decomposed organic soils have the potential for nutrient removal. No activity permitted for the purpose of timber production. When conducting prescribed burns minimize the loss of the forest floor by igniting only when the Build Up Index (BUI) is 50 or less, adjust ignition timing and firing patterns and take site conditions into consideration (i.e. vegetation type, number of days since precipitation, wind, air temperature, humidity and fuel loadings).
CNR	Potential loss of forest floor and removal of nutrients from the sited due to thin surface organic layer over boulders or very shallow soils: ELTs 12 & 18 No activity permitted for the purpose of timber production. When conducting prescribed burns minimize loss of forest floor by igniting only when the Build Up Index (BUI) is 50 or less, adjust ignition timing and firing patterns and take site conditions into consideration (i.e. vegetation type, number of days since precipitation, wind, air temperature, humidity and fuel loadings).
CFN	Potential loss of forest floor and/or removal of nutrients from site due to thin surface organic layer and coarse textured soils: ELTs 8, 9 & 11. Retain and/or return distributed slash or woody debris and, where appropriate, retain stumps and bark on site. Consider extended rotation. When conducting prescribed burns minimize loss of forest floor by igniting only when the Build Up Index (BUI) is 50 or less, adjust ignition timing and firing patterns and take site conditions into consideration (i.e. vegetation type, number of days since precipitation, wind, air temperature, humidity and fuel loadings).

Soils Design Criteria continued	
CSP	Potential erosion from slopes >18%: ELTs 8, 9, 10, 11, 13, 14, 16 & 17. On slopes greater than 18% confine operations to the lower end of slopes and avoid creating long uninterrupted equipment paths that could channel water and erode soil. Bracke scarification is not allowed when slopes exceed 18%. Shearing would take place on frozen ground. On slopes greater than 35% management activities would be designed to employ equipment and techniques that minimize operations on these slopes.
CFT	Fine textured soils that will retain water long enough to create temporarily saturated soil which would be susceptible to compaction, rutting and displacement: ELTs 10, 14, & 15. Avoid areas of fine-textured soils or conduct mechanized management activities during frozen ground conditions or during normal dry period.
CSS	Shallow soils susceptible to nutrient loss due to thin surface organic layer and shallow soil depth: ELTs 16 & 17. Avoid areas of shallow soils or conduct mechanized management activities during frozen ground conditions or during normal dry period. When conducting prescribed burns minimize loss of forest floor by igniting only when the Build Up Index (BUI) is 50 or less, adjust ignition timing and firing patterns and take site conditions into consideration (i.e. vegetation type, number of days since precipitation, wind, air temperature, humidity and fuel loadings).
Heritage Resources Design Criteria	
1	Site within unit will have one chain flagged buffer prior to project implementation.
2	Unsurveyed shoreline will be surveyed prior to project implementation.
3	No previous block survey. General areas that have not been surveyed would be surveyed prior to treatment.
4	No known heritage resource concerns.
Recreation Design Criteria	
R-1	Recreation concerns (minimize impacts to recreation resource)
Wildlife and Plants Design Criteria	
RP1	Avoid the population of montane yellow-eyed grass in unit 83-27 by leaving a 50 foot buffer around the population
RP2	Avoid the population of few-flowered spike rush in unit 14-034 by leaving a 50 foot buffer around the population
RP3	For the large-leaved sandwort population in unit 79-21, minimize ground disturbance from logging equipment in the population and do not deposit slash on the population
RP4	For the least moonwort population adjacent to unit 78-10 and in and along FR181H, do not deck the logs or deposit slash on the population and ensure that use of FR181H is during frozen ground conditions.

Wildlife and Plants Design Criteria continued	
RP5	Avoid the population of Lapland buttercup in unit 95-37 by leaving a 50-foot buffer around the population
RP6	For unit 14-046, avoid cutting the Canada yew in the unit during release activities.
NRRI	Protect NRRI bird plot center tree from harvest if possible.
SR-BE	Restrict harvest and associated activities during the bald eagle nesting period, when nests are active. Activities should not occur between February 15 and October 1.
SR-NG	Mitigate smoke and brushing activities, if necessary from impacting goshawk site during nesting season (march 1-Aug 30)
Non-native Invasive Design Criteria	
WEED1	For non-native invasive plant occurrences: either re-locate skid trails, temporary roads, or landings if infested and use would be in growing season, OR treat (e.g. mow or pull) before use if use would be in growing season. Non-native invasive plant occurrences located within 50 feet of treatment units would be mowed before mechanical site preparation occurs.
WEED2	Treat Siberian peabush infestation prior to construction of winter road.