

Differences between *Draft Biomass Harvesting Guideline on Forest Management Sites in Minnesota* and existing *Voluntary Site-level Forest Management Guidelines*

The follow topics were added to the Biomass Guidelines:

Guidelines with strike-out were deleted by FRC vote on May 16, 2007

Guidelines with asterisks were significantly altered by FRC vote on May 16, 2007

- ~~1. Avoid harvest of woody biomass within Sites of High or Outstanding Biodiversity Significance [with exceptions for ecological management]~~
2. \* Avoid biomass harvest in native plant communities that are ranked as critically imperiled or imperiled at the state level [with exceptions for ecological management]
3. \* Avoid harvest where state or federal endangered, threatened or special concern species are known to occur unless harvest has been demonstrated to maintain or improve habitat for these species.
4. Reference to legislation prohibiting biomass harvest in final or preliminary MCBS sites of statewide biodiversity significance.
5. Avoid biomass harvest of additional biomass from within RMZs over and above the tops and limbs of trees normally removed in a roundwood harvest under existing timber harvest guidelines
6. Avoid biomass harvest of additional biomass from within 25 feet of a dry wash bank except tops and limbs of trees normally removed in a roundwood harvest under existing timber harvest guidelines when managing near a dry wash in southeast Minnesota
7. Avoid biomass harvest (over and above bolewood utilization):
  - On organic soils deeper than 24 inches that are ombrotrophic (bogs and nutrient poor conifer swamps)
  - In aspen or hardwood cover types on shallow soils (8 inches or less over bedrock)
8. Do not remove the forest floor, litter layer, or root systems for utilization as biomass
9. No more than 3% of the site should be taken up by roads, landings, and **stockpiles** [existing guidelines say no more than 1-3% for roads and landings.]
10. Avoid additional biomass harvest from erosion-prone sites (e.g., those sites on steep slopes of 35% or more) over and above the tops and limbs of trees normally removed in a roundwood harvest under existing timber harvest guidelines
11. Ensure that landings or on-site areas used to store biomass are in a condition that favors regeneration and growth of native vegetation and trees after use.
12. Encourage native species seed mixes and avoid invasive species seed sources appropriate to site to stabilize soils
13. \* Re-entry into the general harvest area of a site by a second operation for the purpose of harvesting biomass should be avoided
14. \* Re-entry into a site using existing infrastructure (roads and landings) may be permitted as long as road and lands are rehabilitated and erosion control features re-established
  - Re-establish erosion control measures, including vegetation cover after reentering a site for biomass harvest
  - Avoid re-entry of sites across non-frozen wetlands
  - Avoid trafficking over the general harvest area including skid trails or over regeneration

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15. Retain and limit disturbance to all pre-existing CWD (except in skid trails and landings)
  16. Retain stumps and uprooted stumps
  17. Avoid biomass harvest in leave tree clumps except tops and limbs of trees normally removed in a roundwood harvest under existing timber harvest guidelines
  18. Retain and scatter tops and branches of 20% of trees harvested in the general harvest area (1 "average-sized" tree out of every 5 trees harvested)
  19. Avoid removing tops and limbs resulting from incidental breakage from the general harvest area
  20. If harvesting brush and small trees for biomass associated with a timber harvest, leave 20% of this material on the site (this material can be run over or cut, but should remain on the site).
  21. Biomass harvest for Fuel Reduction [i.e., when harvesting understory vegetation for purpose of mechanical fuel reduction]
    - Retain understory vegetation in several reserve patches that total at least 20% the harvest unit (reserve patches should represent soil moisture conditions within the harvest unit)
    - Retain down logs where one end is >12 inches in diameter and 6 feet in length.
  22. ~~Biomass Harvest for Salvage Following Blowdown or Fire when No Roundwood Harvest is Occurring~~
    - ~~• Retain reserve patch(es) that total at least 25% of the harvest unit~~
    - ~~• When present, retain at least 10 snags >12 inch dbh per acre out side reserve patches (if fewer large snags are present, retain 10 snags per acre of the largest dbh). These do not have to be evenly distributed.~~
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**Following is an interpretation of the list, above:**

All Voluntary. All open to site-level interpretation and flexibility.- remembering that for certified entities the guidelines will be more than voluntary, albeit with flexibility

\* Avoid biomass harvest at locations known to contain some rare species(T&E) or rare plant communities or species (RTE).

\* Avoid biomass harvest within RMZ's, leave tree clumps, near dry washes or on steep slopes - timber harvest exception.

\* Avoid biomass harvest on deep organic soils, or shallow soil hardwoods ( over bedrock.

\* Do not harvest stumps, roots, litter or existing coarse woody debris.

\* Do not beat up the site when re-entering for biomass removal.

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\* Leave 20% of slash scattered on site of timber harvest. The goal here is to leave 33%, the addition 13% common from normal breakage of slash when trees are harvested and removed from the site.

\* Leave 20% of small trees and brush harvested for biomass on site either scattered, or when fuels reduction is a goal in a reserve patch within the harvest unit.

Deleted:

\* Avoid biomass harvest within Sites of High or Outstanding Biodiversity Significance.

\* Reserve from biomass harvest 25% of salvage unit following blow down or fire. Retain 10 snags per acre in area of harvest.