

AMP C2: SUCCESSIONAL AND PERMANENT SMALL OPENINGS

The feasibility of implementing AMP C2 primarily relates to the prevalence of management opportunity category(s): FDCV14&16; FRAG30; SCSP40

Note: The adaptive management of small openings resulting from cutting will frequently include planting in which case refer to AMPs P1 through P3 for suggestions.

Primary Objectives: To enhance, create or eliminate (= reforest) small openings to: 1) increase the surface cover, soft mast and herbaceous food available to *N. magister*; 2) regenerate a diversity of tree species; 3) advantage basking rattlesnakes and/or 4) reduce the potential for extra predation associated with long-linear openings (logging haul roads).

Sometimes the best place to create or enhance a forest opening is where there are already only a few existing trees. Surface rocks characteristic of habitat sites often and naturally result in a mosaic of small and sometimes large forest openings, Figure 1. By working the edges, the size and shape of these openings can be altered to enhance the ground cover (herbaceous plants, shrubs and vines), arbor vines, and promote tree species diversity. Too, shade trees over known or potential rattlesnake basking sites can be removed. As a general guideline, where the removal of trees is indicated, hard mast producers are reserved and some of the most common, non-hard-mast producing tree species are removed.



Figure 1. This canopy gap created by exposed rocks is rimmed by numerous red maples. Cutting some of these trees has the potential to create temporary cover, favor an oak crop tree or sapling, introduce a planting opportunity and/or promote the growth of ground cover, primarily herbs.

The tops of trees dropped ovetop rocks provides extra cover for foraging rockrats, and (given the presence of grape, Virginia creeper or poison ivy vines), a temporary arbor.

Together, opening size and shape, aspect and degree of slope, and residual stocking will influence the amount of sunlight an opening will receive.

No permanent opening should be created in any habitat site buffer zone (MZ3); however transitory openings are allowed and their creation is encouraged. Tree harvesting operations can be used to create temporary (= successional) openings in the habitat site buffer zone. The potential for regenerating a greater diversity of trees species including those needing full sunlight is greater if the gap diameters approximate at least 2 times the height of adjacent trees. The maximum size of a buffer-zone opening should not exceed 2 acres. The shape of openings should be irregular but tend toward round or square to encourage the vegetative diversity associated with more sunlight reaching the earth's surface. Openings can be smaller on south-facing slopes. Create no more than two successional openings per management compartment every 20 years; preferably one each on contrasting aspects.

South-facing slopes have more ground area exposed to the sun, thus there's the potential for an early green-up, and herbaceous diversity. This and given that most activity centers have southerly aspects will

Neotoma magister Management Workshop: Adaptive Management Practices that Stress Cutting

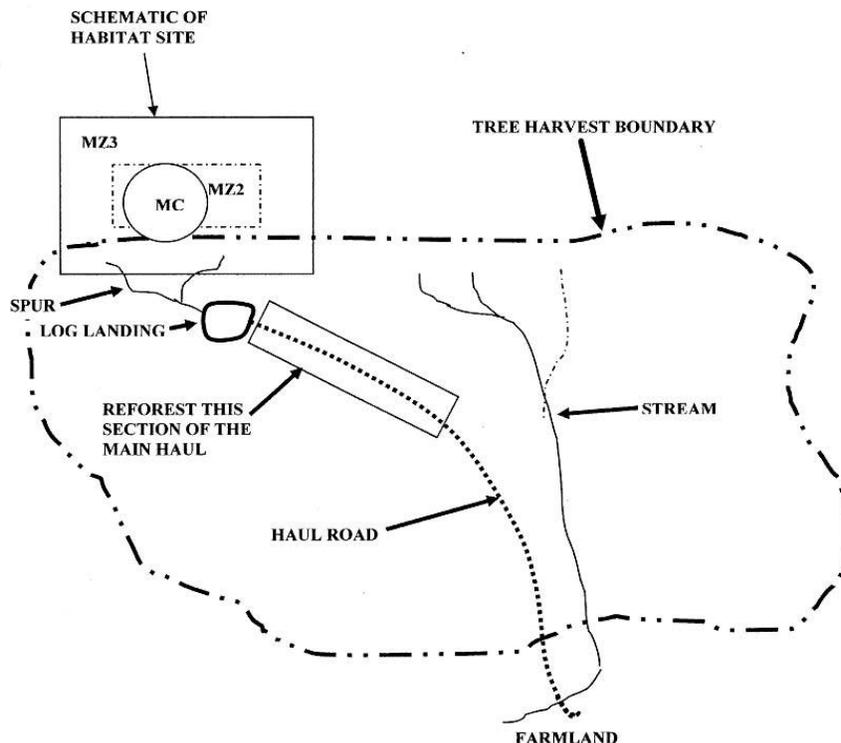
influence the locations of habitat enhancements. However, because southerly aspects are susceptible to drought, it is recommended that when the option exists opening management should be implemented on contrasting aspects within a management compartment, i.e. on both northerly and southerly facing slopes. This may be very important given predictions that the frequency and severity of droughts will increase in the future.

To create gaps in the canopy use the group selection method and/or variable-density thinning on benches or moderate slopes. Avoid the erosion potential associated with working on steep slopes. On the higher and dryer slopes, absent a competing ground cover, usually ferns, the probability of having an abundance of large oak advance reproduction increases as overstory density decreases to • 58% stocking. Sites with an abundance of larger oak reproduction are high priority locations for establishing a first opening.

Given current trends and the difficulty of maintaining oak, avoid cutting any oak trees when creating or enhancing an opening in a management compartment. Transitory openings with a significant, residual component of mature oaks can be larger than 2 acres.

Figure 2 is a schematic representation of a tree harvest that intentionally (=planned) includes a habitat site buffer zone (MZ3). Crop tree management (see AMP C1) is allowed in the buffer zone as is the creation of a small transitory opening. Following the tree harvest is an excellent time to plant hybrid chestnuts and other mast producers in the buffer zone if the regeneration harvest area is fenced to exclude deer.

Figure 2, not to scale



Any haul road that approaches MZ3 has the potential to invite extra predation. Isolated haul road sections and log landings (Figure 1) can function as temporary or, if maintained, long-term openings that attract both prey and predator. The operative word is "isolated." A continuous haul road should not lead from the vicinity of the buffer zone to a perennial stream, farmland or permanent, public use road. To prevent this, reforest a 200 to 300 meter section of the end of the main haul road nearest the habitat site buffer zone. Also consider replanting the log landing with mast producing tree species.

MORE INFORMATION

Guidelines for Applying Group Selection Harvesting

<http://www.fs.fed.us/na/durham/coopforest/stewardship/text/guidelines.shtml>