

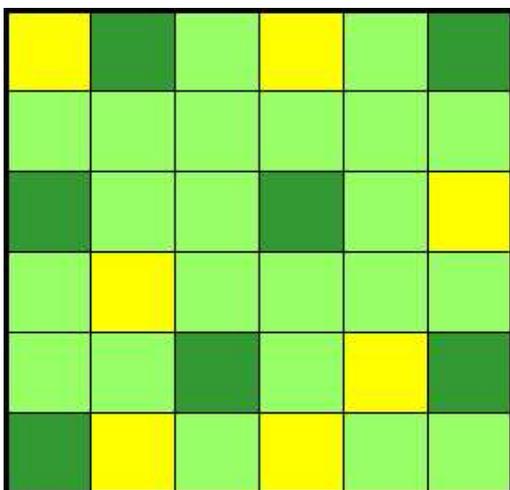
## Some practical guidelines for implementing variable density thinning

The following is adapted in part from Harrington, C. A.; Roberts, S. D.; Brodie, L. C. 2005. Tree and understory responses to variable-density thinning in western Washington. In: Peterson, C. E.; Maguire, D. A., eds. Balancing ecosystem values: innovative experiments for sustainable forestry. Proceedings of a conference. Gen. Tech. Rep. [PNW-GTR-635](#). Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 97-106.

**Step 1.** Overlay a grid pattern upon the stand to be thinned. This generally is done in your “minds eye” while on the ground, although an actual grid could be laid out until you get a feel for the approach. You will be assigning thinning treatments to the cells, including gaps (removal of all or most trees), skips (no thinning), and thinned. A 0.1 to 0.25 acre cell size for gaps and thinning treatments and 0.25 to 0.75 acre cell size for skips have been used in practice, although this is entirely up to you. When selecting a grid cell size, keep in mind that your objective is to create distinctly heterogeneous conditions across the stand. Small cell size creates heterogeneity at a fine a scale which may not be readily apparent to the observer. More importantly, an overly small cell size may not result in distinctly different resource environments across the stand. Conversely, a cell size for gaps that is too large, e.g., 1 ac, will result in the creation of small clearcuts within the stand.

**Step 2.** Assign thinning treatments to cells including, gaps, skips (uncut cells), and thinning (say to 70% of initial basal area). A rule of thumb that has been used in VDT application is to assigned 10-20% of cells to gaps, 10-20% to skips, and the remainder to standard thinning.

**Step 3.** Look for opportunities to tie cell treatments to existing features. For example, you might place a gap cell in an area that already has a natural gap or some advance regeneration of a desired species. Conversely, you might place a skip cell over an existing large snag, a small wetland, or unique patch of understory vegetation. Avoid aggregating gap cells to avoid opening the stand excessively.



- 1/4 ac grid scale
- vary thinning by 1/4 ac units
- 20% skips (green)
- 20% gaps (yellow)
- 60% thinned (light green)