

B. Regeneration

National Forest Management Act (NFMA) regulations require that cutover lands be adequately restocked within five years after regeneration (regen) harvest. Stocking surveys on regenerated stands are conducted the first, third and fifth years after harvest to assess stocking levels.

Regeneration may occur naturally or by planting or seeding.

Key Points

- Adequate regeneration five years after harvest was met on 99.5% of the acres harvested in 2005. Despite challenges due to brush competition and deer browse, the Forest has made great gains in its goal of 100% compliance to NFMA.

Monitoring Question

Are harvested lands adequately restocked after five years?

Results

Stands with even-aged harvests in 2005 were evaluated to determine success in reforestation five years after harvest.

One hundred eight stands (1,681 acres) received treatment by regeneration harvests in 2005. NFMA compliance was met on 99.5% of these acres by being fully stocked and certified by the end of 2010. Two stands (9 acres) not certified by the end of 2010 should be certified in 2011 following their stocking surveys.

Since 2004, NFMA compliance from year to year ranged from a low of 38% to a high of 99.5% (in 2010). The Forest has worked very hard to meet its goal of 100% NFMA compliance.

Despite these efforts, some challenges remain very difficult to overcome. With tremendous competition from hazel brush on some sites and restrictions regarding the use of herbicides, all release must be done by hand cutting. Where the application of herbicides would kill brush, hand release only shortens the brush for one year. Hazel grows back quickly and potentially denser than to start with. Three treatments of hand release are planned on all sites. Actual treatments may be more or fewer than this, depending on variability between sites. Hand release is continued until seedlings are taller than the brush and free to grow. The development of a disc in 2008 to do site preparation has proven to reduce competition from brush, therefore reducing the number of entries required for hand release. This type of site prep work is increasing our efficiency and ability to meet NFMA requirements.

The second challenge comes from deer that browse every species of conifer on the Forest except tamarack. For a period of time the Forest used spray repellants in an attempt to discourage deer from eating seedlings. Over time deer adapted to the repellant and it became ineffective. In 2008, the Forest switched from repellants to bud capping. Bud capping is labor intensive and not 100% effective. It does however appear to be more successful than repellants at this time in deterring deer from eating tree seedlings.

There are sixteen stands (294 acres) harvested in 2002, 2003 and 2004 that are still receiving reforestation work and surveys. These stands have experienced unusually high levels of deer predation on young trees, excessive brush competition (particularly hazel), drought mortality and delays in establishment due to the planned use of prescribed fire. These stands will be certified as soon as they meet requirements for regeneration.

Implications

Adequate regeneration five years after harvest was met on 99.5% of the acres harvested in 2005. The nine acres (2 sites) not yet certified are projected to be certified in 2011 following stocking surveys. Despite many obstacles, the Forest has worked hard and made great gains in its goal of 100% compliance to NFMA.

Recommendations

- Where stands have not yet been certified, continue to regenerate and survey as appropriate until certification occurs.

A more detailed report can be found in the project file and is available upon request.