



Shane Knowlton, Dec 20, 2022

Clearcut Alternatives

To a growing number of forest landowners, timber harvest income, while important, plays a secondary supportive role to their primary objectives of fire fuels reduction, recreation, wildlife, and aesthetics. Boilerplate industrial-style forest management planning, where stands are clearcut, sprayed with herbicide, and planted with coniferous monocultures, is not an attractive option for these owners. The good news is that there are harvest options available other than clearcutting. With informed site assessment and conscientious planning, a harvest can be performed that will generate income, reduce the potential of stand replacement fire, improve wildlife habitat, promote native plant and animal biodiversity, while reducing aesthetic impact.

Non-Clearcut Harvest Types

Seed-tree Harvest

A seed-tree harvest leaves less than 20 mature, well-formed trees per acre to serve as a seed source for the future forest. Once the stand is established, usually two to five years after the harvest, the seed trees can be harvested.

Advantages:

- No regeneration costs
- More aesthetically pleasing than a clearcut
- Better post-harvest wildlife habitat than industrial-style management

Potential Disadvantages:

- For a small acreage harvest, the remaining seed trees may not comprise enough total volume to make a harvest economically attractive or feasible to a buyer when it comes time for their removal.
- In some cases, natural regeneration is too successful, resulting in overstocking. Precommercial thinning, a cost, can remedy the situation and bring the tree density down to a healthy level.





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Thinning Harvests

Thinning harvests are performed in dense stands to remove overtopped and diseased trees. The process frees up growing space for the best quality “crop trees.” These harvests are repeated every 5 -10 years, depending on the site’s fertility and landowner objectives. Thinning should be planned and overseen by a qualified forester to ensure proper harvest tree selection and post-harvest density.

Advantages:

- Generates periodic income
- Improve tree health and vigor
- Enhances wildlife habitat due to increased understory vegetation Captures income that would otherwise be lost to natural mortality
- Improves aesthetics

Potential Disadvantages:

- Failure to thin incorrectly will negatively impact your stand’s future health and value.
- Increased risk of ice and wind damage, especially after the first thinning.





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Shelterwood Harvests

A shelterwood harvest involves removing the entire forest gradually over time through a series of partial cuttings. The first cutting opens the upper canopy, allowing light to reach the forest floor, stimulating the growth of new trees. Two or three additional harvests remove the overstory entirely, and the newly regenerated stand is allowed to grow unencumbered. Preferred species composition, wildlife habitat, economic feasibility, and aesthetics determine the number and intensity of the overstory removal harvests in this system. Of all the harvest methods, the shelterwood method has the most potential for problems and is the least profitable.

Advantages:

- The mature trees are harvested over time, reducing the visual impact and leaving trees that provide seed and shelter for the next rotation.
- Enhances wildlife habitat due to increased understory vegetation

Potential Disadvantages:

- Lower stumpage prices due to higher logging costs
- Logging damage to remaining trees
- The proliferation of shade-tolerant commercial trees.



Conifer Shelterwood Harvest



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Patch Harvests

The patch harvest system involves harvesting a series of small areas (1 to 5 acres in size) at periodic intervals, creating a mosaic of stands varying in age. While technically clearcuts, they are small, with minimum overall impact on the landscape.

Example: a family owns 250 manageable (excluding stream buffers) acres of mixed natural hardwood-shortleaf pine woodland that, with proper management, takes 75 years (the rotation length) to reach maturity. The family uses the property for recreation, doesn't want the look of a large clearcut, and wants periodic income and improved wildlife habitat and diversity. For the first harvest, a series of small cuts are harvested, totaling approximately 50 acres. At 15-year intervals, an additional ± 50 acres are harvested, comprised of small patches. Visualize a jigsaw puzzle that you remove a set number of pieces from at designated time intervals, and you'll get the picture. At year 75, the trees in the first cutting areas will be mature once again, and the cycle will begin anew.

The cuts are small enough that they can be naturally regenerated from existing and adjacent seed sources.



Advantages:

- Creates a diversity of stand ages that will benefit wildlife species ranging from those that thrive in early successional habitats to those that need an older forest.
- Results in an abundance of wildlife beneficial edge habitat.
- The mature trees are harvested over time, reducing the visual impact and leaving trees that provide fruit and nuts for wildlife.
- Regular periodic income flow rather than a once in a lifetime windfall



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- Maintains the character of the land

Potential Disadvantages:

- Logging and sale layout costs can be higher than with larger clearcuts.
- Careful long-range planning and landowners that are committed to the plan are needed for success

Determining Your Harvest Type

Each property (and owner) is different, meaning thoughtful analysis and planning is required before choosing a course of action. Contact me and I will be glad to help you determine which method will be most suitable for your property and landowner objectives.



Shane Knowlton, Professional Forester

shane.knowlton@kforestry.com

kforestry.com

509-560-3065