

OVERCOMING THE TIMBER HARVEST BLUES

NOBODY LIKES THE LOOK OF CLEAR-CUT FORESTLAND, NO MATTER HOW MUCH REVENUE THE TIMBER PRODUCED. A FOREST MANAGEMENT PLAN, AMONG OTHER CONSIDERATIONS, JUMPSTARTS THE ROAD TO REPLANTING AND RECOVERY.

BY DAVID MERCKER AND CLINT PATTERSON

There's nothing pretty about clear-cut forestland. Those unfamiliar with forest management liken it to what land might look like following a natural disaster. In reality, a clear-cut represents a blank slate, unlike hurricanes or ice storms that leave behind trees snapped or uprooted, branches broken, trails blocked, creeks plugged, and views permanently changed.

Some have compared a timber harvest to a "controlled tornado" because rather than a sudden and random disaster, it involves foresters offering expertise and insight, making the event systematic. After all, when timber is sold, a contract is signed. Landowners are prepared for the harvest, can observe the progress, and can make special requests about lanes, fences, vistas, and creeks. Unlike natural disturbances, timber harvests can be timed to coincide with landowner plans, such as debt payments or retirement. Perhaps the greatest benefit of a planned timber harvest is that landowners have a say in which trees are harvested and how.

Still, the visual blight in the first few years following a harvest can be unsettling. The land previously used for recreation or wildlife habitat takes on a different role, at least temporarily, bringing about what could be called the "timber harvest blues."

Once the noise of the harvesting equipment ceases, the dust settles, and the initial shock is overcome, forest restoration and aesthetic renewal begin. Forest recovery through tree seed distribution is inevitable. Whether by wind, gravity, water, or wildlife, tree seedlings sprout. The sun, having been absent from the forest floor for decades, warms the

soil. Seeds that have laid dormant for years germinate, while stumps often re-sprout, and a new forest arises. It is reassuring to understand that a timber harvest is not the end of a forest, but a renewal. Landowners benefit from knowing that the mature trees they sold, at one time began as seedlings initiated by others.

The regrowth of forest openings created through the harvest of timber results in the establishment of early succession habitat. This forest renewal provides excellent habitat for nesting and brooding turkeys, lactating does, and a full host of other species. The lack of early forest succession habitat is of primary concern across the nation. Landowners conducting timber harvests can thus feel reassured about playing an important role in restoring this valuable forest component.

There are many facets of a timber harvest that need attention before and upon completion. To aid in visual improvement and forest recovery, landowners should consider the following:

FOREST RESTORATION PLAN

A forest restoration plan is crucial. Plans can be simple or complex, depending on the extent of work desired. Professional foresters develop these plans. As opposed to pine, hardwood replanting is rarely necessary. Tree seedlings emerge either because they were present in the understory before the harvest or they originate from seed following the harvest. Often there are residual overstory trees that could be deadened to increase sunlight and benefit the growth of the seedlings. This is known as site preparation for natural re-





A photo taken from the same spot as the picture on the previous page, four years later.

generation. Sometimes, with perseverance, improved hardwood seedlings can be planted into harvested land. If pines are to be replanted, then a tree planting plan will be needed.

INVEST BACK

Perhaps one of the best ways of overcoming regret that might follow a timber harvest is to consider giving back to the forest from which you benefitted. Whether you intend to retain or sell the property, reinvesting a portion of the sale proceeds helps the property to more rapidly recover value. Several practices can be considered, but timber stand improvement (TSI) should be principal among them.

TSI is the application of cultural practices to a forest to improve the composition, stocking, and growth of trees to better achieve landownership goals. After a timber harvest, invariably there will be additional trees that could be deadened or felled. For instance, there might be culls. Culls are trees, which because of defects, are useless for their intended purpose. Culls may be hollow, crooked, excessively branching, split, etc. There might also be younger stands within the forest that weren't included in the timber harvest. These areas may be overstocked and, much like a garden, in need of weeding. TSI accomplishes this too. Culls and unmerchantable trees can be used for firewood or can be left for wildlife.

Landowners interested in growing shiitake mushrooms may find an abundant supply of material for mushroom inoculation among the culled logs and TSI stems. Mushrooms are becoming increasingly popular in restaurants and farmers' markets and can provide a source of income.

Reinvesting in your property can include planting trees, controlling exotic invasives, establishing food plots, or prescribed burning. All of these practices, including TSI, might be eligible for cost-share assistance from state and federal agencies. And that portion that is not cost-shared, might be eligible for deduction from income tax. Landowners, through having a

timber harvest, find that this process introduces them and their families to a world of opportunities and activities that enhance the enjoyment of owning forestland. Growing ginseng and other medicinal herbs, for example, is another activity that could provide additional income and help comfort landowners as the appearance of their harvested forest recovers.

TREETOPS AND BRANCHES

Loggers are interested in the merchantable portions of timber. Mostly this includes the bole of a tree. The bole is the trunk, including the butt and upper logs, normally down to a 10-inch diameter. Unless pulpwood markets exist, slash is left behind. Slash is the common term for nonmerchantable residue left on the ground after harvesting. Included are tree tops, broken branches, uprooted stumps, defective logs, and bark. Slash can have ecological benefits by adding nutrients to the soil or providing wildlife habitat.

Much like the residue that remains after row crop harvests, branches rot quickly and return to the soil as organic matter. During decomposition, branches provide new habitat for a host of small mammals, reptiles, amphibians, and birds.

For many landowners, treetops are the most unappealing part of the harvest. They're messy and impede forest views. Eliminating treetops and branches is not necessary, other than for aesthetics. If, however, aesthetics is important, treetops can be cut for firewood or just "lopped," cutting the tops so they fall to the forest floor where, due to contact with the moist soil, they decompose more quickly.

Lopping tops might be more essential where vistas are important, such as along trails and roadways. Where deer populations are high, and over-browsing impacts the regeneration of oak seedlings, treetops can provide barriers that protect young seedlings as they grow past the height of deer browsing. Be careful when lopping tops though. The branches in treetops, particularly when intertwined, can be bent and have tension

wood. When cut, tension wood can launch with great force in unanticipated directions and cause great bodily harm.

LOG LANDINGS

Log landings, also called log yards, are places at the harvesting site where logs are assembled and loaded onto trucks for transport. Larger logs are dragged from the woods to the landings where they are bucked into smaller logs, loaded onto trucks, and hauled to the mills. Log landings receive considerable impact due to the dragging of the logs and to the array of heavy harvesting equipment. Vegetation is cleared to create log landings and the soil is compacted. It is often desired to locate landings near roads, for easy access by haul trucks. Ideally, a buffer strip should remain between the landing and public roads, to minimize the visual impact.

As larger logs are bucked into smaller logs, customarily there will be sections that have major defects. Mills reject these logs. Defects can include rot, hollow, excessive knots, cracks, and shake (the separation of growth rings). Defects are cut from the logs before loading onto the haul trucks. These "cut-offs" are normally piled and left at the landing, where they will become wildlife habitats. Some landowners have an aversion toward the appearance of the cut-offs, and if so, they can be pushed out of view or cut for firewood.

After harvesting ceases, log landings can be sown into wildlife-friendly cover and maintained for future log landings. The greening of the site will conceal the exposed soil, making the site more visually appealing. However, the soil will require considerable loosening for good seedbed preparation.

SKID ROADS

Roads or trails over which logs are dragged (or transported) from the stump to the landing are termed skid roads. During harvesting, skid roads receive extensive traffic. Modern harvesting equipment is large and heavy, and dragging logs from the woods to the landing causes soil compaction, rutting, and sometimes erosion.

Your forester will discuss the location and number of skid roads with the timber buyers. Normally it is preferred to minimize their number (unless increasing the number is necessary to avoid wet areas). Loggers generally prefer roads to be straight and near the log landing area. This improves harvesting production.



A log landing yard immediately following harvesting and after reseeded. These openings are used by a variety of wildlife

At harvest completion, loggers should establish water bars on the steeper portions of the skid roads. A water bar is a diagonal ditch or hump in a trail or road that diverts surface water runoff to minimize soil movement and erosion. Water bars should extend slightly beyond the width of the skid road, be angled downslope, and be placed at approximately six-foot drops in elevation. Many skid roads can be used to provide future management and recreational access. As with log landings, skid roads can be seeded to a wildlife mix to become linear food plots.

DAMAGE TO RESIDUAL TREES

There will be trees damaged in a harvesting operation. It's unavoidable. Even the most conscientious logger will occasionally fall one tree onto another or bump a residual tree while dragging logs.

Directional felling will minimize damage to residual trees. Directional felling is a form of careful tree cutting to ensure that trees fall in a predetermined direction to protect the residual trees from harvesting damage and to allow for easier log skidding. Long log lengths can also be problematic. Logs, when cut and dragged from the woods, can reach 60 or more feet in length. It is challenging to not damage the base of residual trees when making turns or curves on skid roads while dragging logs. If logs don't bump the residual trees, the equipment might. This is particularly the case with selection (or intermediate cuts), whereby many trees are retained for future sale.

The goal is not to eliminate all the damage to residual trees, but to minimize it. Careless loggers should be stopped if excessive damage is occurring, and in some cases, the damaged trees should be paid for. Harvesting damage is often addressed in the timber sale contract and your forester can evaluate what is "acceptable." Most trees recover from minor bark scuffing, but too much damage will degrade the butt log, allow stain-producing fungi to enter, and lower future value. It is not recommended to apply wound dressing to the butt damage. Doing so may hinder the natural ability to seal. The wound will remain inside the tree once it completely seals.

STREAMSIDE MANAGEMENT ZONES

Streamside Management Zones (SMZ) are established adjacent to rivers, streams, ponds, lakes, or other bodies of water. With

Defective log “cut-offs” are not usable by sawmills and are left. They provide unique wildlife habitat (particularly for nongame species) or they can be used for firewood.



Although unsightly, tree tops provide valuable wildlife habitat or they can be utilized for firewood.



Interior forest skid roads can improve recreational access.

SMZ, a buffer strip of trees or other vegetation is intentionally left (or disturbed only lightly) to protect water quality. Loggers are trained in understanding SMZ. Generally, the goal is to maintain a minimum of 50 percent crown canopy adjacent to SMZ and to minimize equipment operation within them. The steeper the slope leading to a water body, the wider should be the width of the SMZ.

Upon harvest completion, any treetops, logs, culverts, etc. located in stream channels should be removed. The portion of skid roads adjacent to streams should be stabilized and reseeded or protected with stone.

EXOTIC INVASIVES

An exotic invasive is a species that becomes established outside its natural range, forms a breeding population, and becomes a pest that may threaten the biodiversity of the local ecosystem. Just as with native plants, many exotic invasive plants thrive on the conditions that occur following a timber harvest, namely exposed soil and sunlight. If left unchecked, exotic invasives can

become a major concern and result in great expense to control.

The time to consider exotic invasives is not after the harvest, but before. Of particular concern in the Southeastern US region are these species: kudzu, privet, bush honeysuckles, Bradford pear, Japanese stiltgrass, and paulownia. If these species are near the intended harvest area, then their control is recommended before the proposed timber harvest. If control is not feasible (for instance the plant is on a neighbor’s property), then a buffer of uncut timber should be left between the invasive plants and the harvest area to reduce the chance of spreading. There is no confirmed rule on the width of such a buffer, other than the wider, the better.

Undertaking a timber harvest can be shocking and sometimes leaves landowners with a sense of remorse, even after a significant payday. But by following a forest management plan that includes replanting, the forest will soon recover. 🌱

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