



Supporting Sustainable Management of Private Woodlands

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Managing Small Parcels

Peter Smallidge, NYS Extension Forester and Director, Arnot Teaching and Research Forest,
Department of Natural Resources, Cornell University Cooperative Extension, Ithaca, NY 14853.

In New York and most of the eastern states, the greatest proportion of woodland owners have relatively small parcels. A “small” parcel size is not defined, but often considered to be greater than 10 acres, or less than 50 acres. The USDA National Woodland Owner Survey (NWOS) offers a feature to make tables and charts about owner attributes and intentions (Google search “nwos table maker”). The NWOS data for NY indicates that 62% of owners have parcels less than 9 acres and 28% of owners have parcels that are 10 to 49 acres. The average parcel size is 18.3 acres. The 90% of owners with parcels less than 50 acres collectively control about 42% of the woodlands.

Small is perhaps best defined, from the owner’s perspective, relative to what the owner wants to accomplish. From that perspective, a parcel might be too small, or not. Statewide however, 13% of owners with parcels less than 49 acres have had commercial harvests, 4% of those with parcels less than 10 acres have had a commercial harvest. These small-parcel owners want to be active on their land, but are challenged by the scale of operations. As parcel sizes decrease, the feasibility for commercial activity also decreases, but there are still options.

The challenges of extracting woodland products, especially sawlogs or firewood, relate to the costs to the logger or forester of operations versus the benefit or value obtained from those products. The fixed costs include, for example, those associated with moving equipment, building landings for log trucks, arranging for log trucks, and in some communities town or municipal permits (Figure 1). Another fixed cost is the opportunity cost of harvesting a small parcel with the time to coordinate and execute the harvest, rather than setting up on a larger parcel that will provide a greater volume and value. Variable costs, or those that differ among harvests, might be less or greater on small parcels. On small parcels the skidding distance will be less and thus a reduced cost. However, there will be fewer options for landings, and a higher percentage of the harvest



Figure 1. The costs for logging depends in part on the type of equipment, but for any logger there are costs for moving equipment and setting up the harvest. On small parcels, the cost per acre is higher than on larger parcels.

area adjacent to neighbors. Thus, as parcel sizes get smaller, the cost of operations on a per acre basis increases. For a business (logging is ultimately a business) to justify operating on a parcel, the value must be greater than the cost.

Woodland owners with small parcels may be placed in a compromised position given the need for value to exceed cost. Some owners will decide to take no action because the changes in their woodlands would be too substantial. Owners who need to have some management applied, such as for forest health or forest products, need to find strategies to have the work done, but without overly excessive harvesting that could nullify the owner's objectives.

There are two paths an owner might take. Any given owner might take one or the other at different times for different circumstances. For lack of better terms, these paths are "Do it Yourself" (DIY) and "commercial."

Regardless of the path an owner pursues, a forester should be involved in the planning, design and oversight of the activities. Because of the smaller area and likely lower values as compared to larger parcels, foresters might be more inclined to charge a flat rate rather than percentage of the harvest value. Foresters will also know the loggers who work in an area and who might have a business strategy with lower costs than other loggers. Owners should start with a DEC public service forester, but may ultimately need to select a private-sector forester from a list provided by the DEC.

The DIY option requires that the owner or the owner's friends have the necessary equipment, skill with that equipment, time and motivation. These are real investments and easy to underestimate. However, many owners thrive on this type of activity, or have friends who do. This option effectively reduces the costs by excluding or reducing the need to transport equipment, pay salaries, and pay overhead. Owners should be aware that their investment of time has value because they could be doing something else that might be more important or more productive.

Time and motivation are important, but if their availability is overestimated the consequences may not have great consequence. However, overestimating the skill or appropriate equipment for the task could result in personal injury, death, or damage to the woods. Of particular note is the essential need to be able to use directional felling techniques when cutting trees. Also, having the right equipment to maneuver in the woods and extract the size and quantity of logs being harvested. Another reality is that the DIY small-scale logging is hard and slow work. The equipment can't move large quantities of wood (Figure 2). It is typically impractical to move commercial volumes of wood with small-scale equipment.

The DIY path results in logs at the disposal of the woodland owner. The owner may be able to process the logs for firewood, hire a portable band-saw to make boards for sale, or sell the



Figure 2. DIY harvests will often make use of small equipment belonging to the owner or a family member. Owners need to use particular care because they usually lack the skill of a professional logger and their equipment has fewer safety features than commercial equipment.

logs roadside. Each of these processes includes additional effort for the owner, and as regards the sale of products may increase the owner's tax liability.

Skill and the correct equipment are essential. At a minimum, anyone felling trees should have training, such as Game of Logging, to directionally fell trees. The details of the topography, soils, season, and size of trees will determine the minimum types of equipment that are needed. Video of small-scale logging are available at www.youtube.com/ForestConnect and in the discussion forum at www.CornellForestConnect.ning.com

The commercial path requires that the owner find some way to change the cost-to-value ratio. This could be through either an increase in the value or volume of wood harvested, or reducing the cost per unit of wood harvested. Increasing value might be accomplished as increasing total value, total volume, or the value per unit.

One strategy to change the cost-to-value ratio is through a more intensive harvest on the property, or focusing on just the high-value trees. Either of these approaches could be counter to the owner's objectives, is exploitive, and could degrade the condition of the woods. The forester needs to know the owner's objectives and be instructed to not compromise those objectives.



Figure 3. Owners who have developed a good working relationship with their neighbor, through regular communication, may be able to align their individual objects to use the same forester and logger.

A second strategy is for the owner to work with another landowner, ideally a neighbor, to increase the total value and volume, and also reduce the cost per acre (Figure 3). Each owner could have different objectives, and require harvests based on different silvicultural prescriptions and different harvest intensity. Although easily said, the feasibility is low for finding a neighbor who is ready to harvest at the same, and use the same forester and logger. A similar strategy would be for the owner to join a woodland cooperative, but cooperatives are rare.

The challenges to managing small parcels are daunting. In some cases the owners may decide that a harvest isn't feasible. If the final goal is to manipulate the trees that are present to create better wildlife habitat, improve forest health, or improve tree growth for bigger trees there are non-harvest options that the owner could discuss with their forester. One such option might be the use of selective herbicides or mechanical girdling to kill some trees and allow adjacent trees better growth. In all cases, the owner needs to have a clear awareness of their objectives to avoid the potential pitfalls of the management strategies they pursue.

For additional information on woodland management go to:

www.ForestConnect.com and www.CornellForestConnect.ning.com



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