

Estimating the Capital Recovery Costs of Managing for Old Growth Forests

Chris B. Ledoux, Project Leader/Industrial Engineer, Northeast Research Station, USDA Forest Service Phone: 304-285-1572, Cledoux@Fs.Fed.Us

Contemporary forest management practices require a variety of retention treatments that leave clumps, blocks, strips, or zones of existing forest cover in order to achieve a wide array of biodiversity, wildlife, visual, ecological, and old growth creation/conservation objectives. Some of these practices call for leaving a portion or portions of existing stands for extended periods of time to accomplish such objectives. Generally, the production of wood fiber (veneer, sawlogs, pulp, etc.) requires specific rotation lengths that reach either financial or biological maturity. Optimal financial rotation length is reached when discounted present net worth (PNW) is at its maximum. Optimal biological rotation length is reached when mean annual growth is at its peak. The most profitable approach is to harvest the stand at its optimal financial rotation. Treatments to accomplish other than timber/wood fiber production such as the creation of old growth forests generally require much longer rotation lengths. The further retention treatments deviate from the optimal financial rotation, the higher the monetary value/loss becomes for that treatment. For example, a young stand may reach optimal financial maturity at say age 100. However, for the same stand to grow to old growth conditions may require a rotation age of 150 or more years. The difference in financial value between these two rotation lengths is an excellent measure of the value of managing for old growth. In this paper, we provide a methodology for estimating the opportunity costs/values and capital recovery costs/values associated with alternative old growth creation objectives. The methodology is appealing because it uses a logical sequence of analysis steps that can be easily understood by the range of publics involved in forest planning activities. The results should be valuable to managers, planners, landowners, and folks associated with creating/conserving old growth forests.



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131 Main Street, 214 Nesmith Hall, Durham, NH 03824
