

ABSTRACT

**An Analysis of:
Single Tree Selection Order-of-Removal Procedures
in Northern Hardwood Forests
and
Rotation Lengths in Red Pine and Aspen Forests**

The Wisconsin Forest Practices Study topic looking at the economic and ecological consequences of certain forest policy, regulations, and guidelines will include an analysis of two particular forest management practices - Single Tree Selection Order-of-Removal Procedures in Northern Hardwood Forests and Rotation Lengths in Red Pine Plantations and Aspen Forests. The project will evaluate the potential economic and ecological effects through the supply chain of following these commonly used harvest guidelines on private lands enrolled in Wisconsin's forest tax law programs and on certain public state and county forestlands. Case study northern hardwood harvest sites will be selected for pre-harvest field inventory and analysis and include evaluations of marked cut and leave trees and forest stand characteristics. Future stand modeling based on the residual forest resulting from the case study samples, as well as alternative marking scenarios will be completed, followed by a thorough examination of possible outcomes. The study will also research the potential effects of the Wisconsin forest tax law silvicultural guidelines relating to rotation age recommendations for even-aged management of aspen and red pine forest types. The analysis will include several simulations modeling varied rotation lengths and optimization scenarios. Implications of these forest management harvest guidelines and modeled scenarios will be examined as they relate to wood supply, landowner and supply chain economic implications, timber sale viability, and ecological considerations potentially influenced by these management practices. This project will be led by Steigerwaldt Land Services, Inc., partnered with James W. Sewall Company for select portions, and includes a team of three expert project advisors. Joining the team will be Dr. Volker Radeloff, Professor, UW-Madison Department of Forest and Wildlife Ecology, Terry Strong, retired USDA-USFS research forester and consulting forester, and Kevin Burns, University of Wisconsin-Stevens Point, College of Natural Resources Vallier Treehaven Forest Ecologist.