Canopy Analysis

Lead by: Ken Greenway

Theme: Productivity

Status: Completed

Start: 1999

End: 2003

Participants

- Ken Greenway
- Dave Kelsberg
- Amar Varma

Background

n/a

Objectives

To quantify on a compartment level the amount of visible sky in different levels of partial harvest in deciduous dominant, deciduous with white spruce understory, mixedwood, and conifer dominant stands.

Key Results

32 compartments were completed. Readings were taken in repetitions 1 and 2, in 10, 20, 50 and 75% retention treatments of all four stand types. The data presented in the table show clear and predictable trends for less visible sky as the amount of retention increases and as the amount of conifer in the parent stands increases.. It is noteworthy that in the retention of 10% of the canopy stand stems, there is a 20% drop in visible sky in the aspen dominated stands and near 40% drop in the aspen with spruce understory stand. While the later stand type response is reasonable given the dense shading of a conifer understory and the aspen overstory, the large drop in visible sky fraction in the pure aspen stand is less intuitive. Part of the explanation here lies in the fact that many of the aspen stands had a considerable understory

component of alder in the 2-3 metre height range. As our measurements were taken a waist height, the influence of these alder could be substantial.