

Response of forest net primary productivity to harvesting and fire

Lead by: [Ellen Macdonald](#)

Theme: [Productivity](#)

Status: Continuing

Start: 1999

Participants

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Background

Net primary productivity is one component of forest sustainability.

Objectives

To determine the long-term net primary productivity forest response to treatments.

Key Results

Trees and shrubs in all 600 permanent plots were measured to obtain standard volume estimates. In addition, 34 white spruce, 34 aspen and 8 balsam poplar trees were dissected to derive relationships between sapwood basal area and foliage, branch, stem and root biomass. Sub-samples of stems, branches, foliage and roots were collected and further analyzed to obtain estimates of increments and productivity. Data sets are being prepared for productivity estimates of foliage, branch, root and stem wood increments by volume and, using density estimates, biomass. To date: the stem analyses are complete, foliage, branch

and twig dry weights have been completed and wood density is being completed. All trees on the survey plots have been measured and shrubs on the CDOM and ADOM cover-types have been re-measured.