

2008 Great Lakes – St. Lawrence Science Seminar Overview
February 25 and 26, 2008
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The Canadian Ecology Centre played host to the Forestry Research Partnership's Great Lakes – St. Lawrence Science Seminar again this year. A second iteration of this event was held at the Great Lakes Forestry Centre in Sault Ste. Marie during the first week of March. The purpose of these seminars was to provide updates on the FRP's current research, communicate their results to practitioners and give people a venue for dialogue.

Approximately fifty people attended each event, representing the Ministry of Natural Resources, the forest industry, sustainable forest licensees, the Canadian Forest Service, Nipissing University, Sault College, the Forestry Futures Trust, and the forestry consulting sector. During the day and a half - long seminars, sixteen projects were presented on research topics ranging from new technologies for forest inventory to applied silviculture.

The first sub-theme, 'Tech, Tools, and Gadgets', included descriptions of LiDAR, new yield curves, structural stand density management diagrams, and the FRP's progress with implementing the Patchworks spatial planning model into forest management plans. The research presentations began with Murray Woods of OMNR's Southern Science and Information Unit describing the Ministry's effort to enhance forest inventories through a fusion of LiDAR and multi-band orthophotography. "LiDAR" stands for "light detection and ranging"; it involves sending and receiving rapid pulses of laser light from an airborne transmitter/receiver that strike the earth and are reflected back. If a laser pulse hits a penetrable object like tree cover, it will produce a range and intensity measurement for each surface, thus making LiDAR capable of producing 3-D images of both the tree canopy surface and the terrain surface at the same time. LiDAR shows its best potential for forest inventory when combined with current multi-band orthophotography. LiDAR also has application in mapping surficial geology and surface hydrology, giving it operational potential for predicting drainage for culvert installations.

Four presentations examined some aspect of the need for competition control in regenerating white pine. Wayne Bell of OFRI gave re-measurement results of a 1994 competition control trial in the Wharncliffe study area near Thessalon. Doug Pitt of CFS and Bill Parker of OFRI described competition control trials in both shelterwood and clearcut situations on the McConnell Lake block near North Bay. Andrée Morneault of MNR's Southern Science and Information Unit gave the results of site preparation trials following shelterwood cutting on the French-Severn Forest near Britt. All four presenters drove home the point that competition control efforts must be taken early and rigorously if white pine regeneration efforts are to be successful.

Eight presentations examined some aspect of tolerant hardwood management. Scott McPherson of the Southern Science and Information Unit reported on three studies on logging impacts, reinforcing what is already known about logging damage: stem wounding is the leading cause of tree injury and spring is the most vulnerable season of

operations. In one study, undamaged sawlog trees averaged 67% more in value 23 years after injury. Bill Cole of OFRI showed the results of his 2005 Parkside Gully project which examined differences in growth rates, stem quality, downed woody debris and woody vegetation between harvested and uncut areas at the Swan Lakes Research Forest in Algonquin Park. Selection management has produced very good results at Swan Lakes, with the test site yielding \$121/ha/year in net revenue, compared to an Algonquin Park average of \$24. Ken Elliott and Dawn Burke of MNR's Southern Science and Information Unit presented results of their work on the ecological impact of single-tree and group selection, with emphasis on hardwood regeneration and songbird populations. It was found that forest bird diversity changes little with cutting but that community composition changes considerably, due to the different responses of various species. Andrée Morneault of MNR and Peter Nosko, Jeff Dech and Kelly Major of Nipissing University all presented studies on some aspect of red oak regeneration. Nipissing's Biology Department has taken a real interest in red oak regeneration, with graduate and undergraduate students examining various aspects of stump sprouts, thinning coppice clumps, maple competition, acorn predation, herbivory, and leaf litter and soil chemistry.

Other presenters gave project updates on spacing trials, yield curves, stand density management diagrams, forest modeling and many other subjects. A copy of the complete suite of presentations may be seen at

<http://www.forestresearch.ca/workshops/GLSLmattawanew.pdf> and a more detailed

synopsis of the presentations is available at

<http://www.forestresearch.ca/workshops/GLSLSummary.pdf>