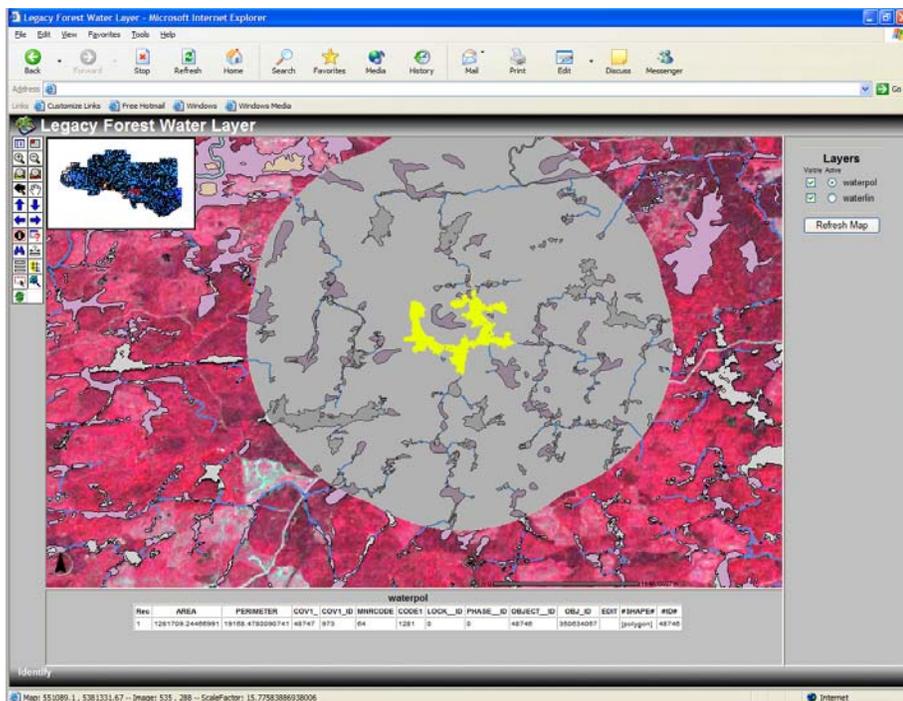


Legacy Forest Visions

A newsletter on the science and sustainable management of all forest values



This is an Internet accessible digital satellite image overlaid with a distance buffer on the water layer of the Legacy Forest.

WATER QUALITY AND FOREST ACTIVITIES

The Legacy Forest now has an aquatic component initiated by Dr. Ellie Prepas, Canada Research Chair in Sustainable Water Management. The project is entitled “Linking Nutrient-Based Aquatic Ecology and Biodiversity in Small Streams and Standing Water Bodies with Intensive Forest Management”.

Streams are important to study because they are the links between ecosystems. They cycle nutrients and water, carry pollutants and soil, and thus affect soil composition and tree growth.

Dr. Prepas received funding on March 4 from the Living Legacy Trust to begin the project. Its immediate goal is to describe a wide range of streams within the project area using characteristics such as stream size and slope, sinuosity, and base and peak flows.

Eventually, four or five of these streams will be used as two-year monitoring sites, and as 20-year sites with another six streams.

To better understand how forest ecosystems function, we need to know the links between water and land components of watersheds. Selected watersheds will be inventoried. Then the associated streams including channel morphology and water flow will be studied intensively.

Water samples, collected weekly, will be analyzed at Lakehead University for key nutrients and biologically relevant parameters such as total, dissolved and soluble reactive phosphorus; total, dissolved and inorganic nitrogen and dissolved silicate; suspended solids; and water temperature and flow.

The results will be used to link forest disturbances such as intensive silviculture, wildfire, harvesting and insect outbreaks with stream water quality. Given the global importance of water quality, the knowledge gained will prove invaluable to both industry and the public.

Mara M. Spriceniaks



To receive this newsletter by email, please contact the Editor at colleen@queticocentre.com.

PRESENTING...



Dr. Reino Pulkki is chair of the Legacy Forest Steering Committee, a professor and dean of the Faculty of Forestry and the Forest Environment at Lakehead University.

Dr. Pulkki's expertise is in forest engineering, with a special interest in wood flow logistics and supply chain management. Other research areas include environmental impacts of logging, forest workers and ergonomics.

In 1999/00, Dr. Pulkki held the chair in Forest Engineering at the University of Stellenbosch in South Africa where he has been appointed extraordinary professor in the Forest Science Department. In 1997, he worked in Rome on the Global Fibre Supply Strategy project at the FAO as a visiting scientist.

Currently, he is a member of the Registration Committee of the Ontario Professional Foresters Association, Finnish Society of Forest Science, the International Journal of Forest Engineering's editorial board, and several other professional associations.

LINKING SCIENCE TO ACTION

A major challenge facing society is how to use the results of scientific research to better manage our planet.

The key to making science work is to create and open lines of communication between researchers and stakeholders. Each group has to let the other know their concerns and what information they need. Dialogue must be both transparent and sustained to achieve a successful outcome!

Ideally the dialogue should begin at the research planning stage to help assure that all groups will get the information they need to carry out their responsibilities.

But the challenges do not stop there. After the research is done and the results are in...what then?

The answer is using the results to make decisions and create actions that will reflect the new knowledge. If the research is planned together, this step will be easier. Without it, the research data may be shelved as unfortunately happens all too often.

With relevant and pertinent information, planners and others can develop effective action plans to implement new procedures that take current environmental conditions into account.

Bridging the gap between groups requires flexibility and a willingness to work cooperatively. Therefore the Legacy Forest project includes planning and communication activities.

The Strategic Planning workshop held at Quetico Centre on March 29 - 30, 2003 was the first of these activities.

Gordon Ringius



BIRDS AND FORESTRY

Bird Studies Canada, a national, non-profit research organization in Port Rowan, Ontario, will study birds and bird habitats in the Legacy Forest this summer as part of its multi-year project in northern Ontario. The goal of the project is to determine whether bird communities in managed landscapes are similar to those in landscapes subject only to natural disturbances.

Last summer, the Bird Studies Canada project covered much of northeastern Ontario. By the end of the 2003 field season, the study will be one of the largest landscape-level studies of forest management in the province.

Initial analysis indicated that bird diversity tended to be greater in old harvested landscapes than in old burned or protected landscapes. In contrast, fewer species were found in protected landscapes as opposed to old harvested and old burned landscapes.

Bird Studies Canada has agreed that all data collected in the Legacy Forest this summer will be added to our data warehouse and made available for future research projects.

Study results will enable both industry and government to evaluate the impacts of current forestry practices on avian biodiversity and baseline data for future comparison.

Dr. Ryan Zimmerling



WHITE PINE REGENERATION

Old growth white and red pine provided timber for building the early towns and cities of eastern Canada and the Lake states. Now, only a few scattered stands remain. One of these, a superb undisturbed old-growth white pine forest, is in the Legacy Forest.

In the mid-1970s, industry and government foresters identified this site as having potential for biological research and special forestry education. Officially reserved in 1992, the 811-hectare forest was formally designated as the Greenwood Lake Conservation Reserve. A rule to establish the reserve was that the forest remain undisturbed by humans and suffer no alteration by research, educational or recreational activities.

Trees of the reserve range from 250 – 350 years of age with many exceeding 1 metre in trunk diameter, and more than 40 metres tall. With numerous standing snags and down trees, the impressive pines provide habitat for a variety of plant, animal, and bird species. These features make it valuable as a potential research site. For example, research of the stand by the Ontario Ministry of Natural Resources showed the presence of the pine warbler – a species common only in old growth white and red pine forests.

A new project to start this year will study pine and associated species regeneration in five forest cover conditions at the Greenwood Lake Conservation Reserve.

Dr. Will Carmean

Tourist: "How do you get your lakes so blue?" Park staff: "We take the water out in winter when it's frozen, and paint the bottom." - "Oh."

Contributed by Natasha Todorovic

EVENTS



EIT Meeting February 17, 2003

The Education and Innovation Team (EIT) defined a potential media strategy, confirmed web page changes, and identified ways to integrate the Legacy Forest into the curricula at both Lakehead University and Confederation College.

Stratification Meeting February 18, 2003

The Stratification Committee agreed on a final set of criteria for the division of the Legacy Forest into zones of differing silvicultural intensities.

Steering Committee Meeting February 21, 2003

Ulf Runesson gave a status report on the data warehouse to Steering Committee members. Participants also reviewed a proposed membership structure of the Legacy Forest.

Sault Ste. Marie Presentation February 26, 2003

Kevin Crowe presented the Legacy Forest to representatives of the CFS and OFRI and worked to recruit new projects.

Collaboration Meeting February 29, 2003

Reino Pulkki and Kevin Crowe discussed future collaborations with representatives of the Lake Abitibi, Eastern Ontario and Manitoba Model Forests.

Software for Image Analysis March 10, 2003

Ulf Runesson investigated the efficiency of image processing software by Leica Geosystems.

Data Exchange adds Member March 11, 2003

Ryan Zimmerling, Bird Studies Canada, became a member of the data exchange agreement. The "*Birds and Forestry*" article of this issue explains his project.

Mapping Techniques Meeting March 14, 2003

Ulf Runesson and Shawn Mizon explored species mapping techniques with representatives of the Natural Resources Research Institute at the University of Minnesota.

Steering Committee Member March 17, 2003

Neville Ward, Impact Assessment Biologist of the Department of Fisheries and Oceans, accepted an invitation to serve on the Legacy Forest Steering Committee.

Data Exchange adds Member March 18, 2003

Rafael Munoz, University of Waterloo, became a member of the Legacy Forest data exchange agreement. He plans to use the Legacy Forest as a case study in the project "Identification of

climate change related land use conflicts and climate change adaptive strategies in North-western Ontario" for which he is the principal investigator.

Planning Workshop March 29 - 30, 2003

The first Legacy Forest Planning Workshop was held at Quetico Centre near Atikokan. Participants from industry, academia, government and various non-government organizations defined research priorities for recruiting new projects and future funding.

Progress Report April, 2002

Our progress report is due to be submitted to Living Legacy Trust. A copy will be posted at www.legacyforest.ca.

Quetico Centre Presentation April 26, 2003

Kevin Crowe will present the Legacy Forest to members of the Northwest Region Joint LCC/RAC meeting on Sustainable Resource Management.



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