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“SCIENCE AS A FOUNDATION FOR DECISION-MAKING”

This was the theme of the 6th Annual Forest Co-op Science Day held in Sault Ste. Marie on Wednesday, November 2, 2011. The day began with a provocative keynote address by Dr. John Innes, Professor and Dean, Faculty of Forestry, University of British Columbia entitled “Forest Science – A Crucial Investment”. Dr. Innes reminded the audience of some 80 Forest Co-op partners and friends that impartial, relevant science is important but distilling the science to the ‘essence’ that answers policy makers questions (whether they have thought of the questions or not) is paramount. Translating and communicating peer-reviewed science to target audiences is key to the uptake or impact of quality science. Through the balance of the day, lead researchers and partners made presentations on the advancement of their Forest Co-op projects and programs, highlighting the applicability and value of their work to today’s decision-making. Copies of the presentations are available at www.forestco-op.ca.

A full week of activities was planned in conjunction with Forest Co-op Science Day. The Forest Co-op Growth and Yield Science Unit meeting and a full-day workshop entitled “Squeezing Value from Trees” that started the week are discussed on page 4. Details of the Forest Co-op Fish and Wildlife Science Unit workshop held in collaboration with the Ontario Ministry of Natural Resources on the day after Forest Co-op Science Day are highlighted on pages 2 and 3.

To all our presenters and participants, we extend sincere thanks for making these four very full days such a resounding success.

“PLANNING FOR THE FUTURE”

The Forest Co-op Annual General Meeting was held directly following Science Day on Wednesday, November 2, 2011. At that meeting, Frank Kennedy (Ontario Ministry of Natural Resources), Kandyd Szuba (EACOM Timber Corporation) and Matt Wilkie (Miitigoog LP) were re-elected to the Board of Directors with continuing members Rick Groves (AbiBow Canada Inc.) and Al Thorne (Tembec Enterprises Inc.). Congratulations!

Kandyd Szuba, Chair of the Board of Directors, invited all members to provide thoughts and ideas regarding the strategic direction of the Forest Co-op. To assist in this process a form was circulated entitled “Planning for the Future”. The form was also e-mailed to partners after the meeting for those who may have missed receiving a paper copy. The Directors, at future Board meetings, will review responses. Sixteen responses have been received to-date with ideas or themes regarding future directions that include:

- endorsement of the idea of expanding our membership to related sectors that work on the same landscape such as mining and power
- the potential for aboriginal engagement
- the importance of our core business and the forum that we provide, networking government, industry and the science community
- concerns regarding future funding and leverage opportunities.

Thank you to those who provided their comments. The Board appreciates your input.



FOREST CO-OP FISH & WILDLIFE SCIENCE UNIT (FWSU)

Project Updates – At Forest Co-op Science Day on November 2nd, 2011 in Sault Ste. Marie, project leads highlighted their research programs (copies of the presentations are available at www.forestco-op.ca).

First up was John Fryxell with an update on the *Forest Co-op Caribou Habitat and Population Project*. John reported that two manuscripts were submitted based on data from the project. The first describes movement of caribou in relation to habitat permeability, forage availability, and predation risk during winter and summer. The second assesses activity rates of caribou in relation to habitat productivity, snow depth, and ambient temperature. There are now 171 caribou with GPS collars, and 18 with video camera collars on the 3 study areas. Video clips are being analyzed to understand foraging behaviour and to compare forage selected to that obtained from DNA barcoding of food items in caribou scats from the work of Dr. Steven Newmaster on the *Forest Co-op Lichens and Caribou VMAP Project*. Some results from this project based on Troy McMullin's Ph.D. thesis were published in two recent papers: McMullin, R.T., I.D. Thompson, S.G. Newmaster. 2011. Estimating the biomass of woodland caribou forage lichens in boreal Ontario. *Canadian Journal of Forest Research* 41: 1961–1969; McMullin, R.T., F.W. Bell, and S.G. Newmaster. 2011. The effects of triclopyr and glyphosate on lichens. *Forest Ecology and Management* 264: 90–97.

Phase 2 of the *Forest Co-op Wetlands and Waterbirds Project* was presented by Van La (Ph.D. Student with Dr. Tom Nudds), who established 73 sampling sites in Algonquin Park and collected over 1400 hours of audio recordings from both harvested and naturally disturbed sites. A second field season is being planned for 2012. This winter, Van will verify models developed in Phase 1.

Dr. Dave Kreutzweiser updated the *Forest Co-op Bio-Indicators of Forest Stream Health Project*. He noted that there are detectable differences in streamside forest structure and some in-stream habitat features by 5-15 years after disturbance, but many bio-indicator metrics will likely show little or no difference in structure or function of the invertebrate community among disturbed and reference watersheds.

FWSU Meeting – November 3, 2011 – Collaborations that tackle problems efficiently are more important than ever when corporate & institutional budgets are tight. At the 14th meeting of the FWSU, chaired by Jim Baker (MNR – Applied Research & Development Branch), opportunities for MNR and other Forest Co-op members to collaborate on projects of mutual interest were discussed in a 2-part workshop. First, Joe Churcher, Rob Rempel, Brian Naylor, Rob Mackereth, Glen Brown, and Doug Reid described MNR's Guide Effectiveness Monitoring program (GEM), including its background & history, ongoing research, and research priorities. Part 2 of the meeting, led by Kandyd Szuba of EACOM Timber Corporation, focused on new projects and additions to existing projects that could provide additional value.

As well as MNR's priorities, participants were asked to consider issues important to the forest industry, including whether project outcomes could help to address:

- **Legal requirements** - effectively & efficiently
- **Certification requirements** - monitoring, effectiveness, stakeholder involvement
- **Company policy objectives** - for sustainability, engagement of others, effectiveness
- **FMP requirements** - engaging others; achieving objectives for landscapes, wood supply, species at risk, biodiversity; reducing complexity of the FMP
- **Operational needs** - flexibility in areas of operation, costs, red tape, compliance

Participants agreed that pooling resources and knowledge can make important projects happen. Joe Churcher (MNR – Forest Policy) explained that all new information will be valuable for the next review of forest management guides in 2015.

Rob Mackereth (MNR – CNFER) discussed a potential collaboration with **Dave Kreutzweiser** (CFS) that would investigate whether new guides effectively emulate natural disturbances from the perspective of cumulative aquatic effects measured at the Landscape Scale. Catchment scale effects have been issues during development of FMPs. An initial estimate of \$13,500 via a 2-year Master's thesis program through **Lakehead University** was proposed. At the session, \$5,000 cash was offered by industry, so more is needed to make this project happen.

FOREST CO-OP FISH & WILDLIFE SCIENCE UNIT (FWSU) CONTINUED...

Steve Newmaster (University of Guelph) described a program that, with **Iain Davidson-Hunt** of the University of Manitoba, would develop a “bio-cultural design network”. It would aim to more effectively understand Aboriginal views of resources and help to integrate concerns into management planning. The science team will apply to Social Sciences and Humanities Research Council of Canada (SSHRC), and sought from industry, letters of support for the concept and commitments to attend 3 workshops over 2 years. All industry representatives at the session offered their support.

Steve Holmes (CFS) described 2 options for a project with **Stephen Mills** (MNR – NESI) and **Brian Naylor** (MNR – Forest Policy) that would consider whether direction for individual tree retention in forest management guides effectively emulates naturally disturbed habitats, particularly for cavity-nesters, raptors, and species at risk. One approach would monitor plots over time in harvested and burned sites, and the other would be retrospective. Since scattered trees could affect silviculture, effects of clumping would be tested. \$20,000 of support was offered by MNR and industry, but more is needed.

Dave Morris (MNR – CNFER) described a project with **Scott McPherson** (MNR – SSI), **Art Groot** (CFS), and other specialists that would determine if the site disturbance restrictions in the Stand and Site Guide (SSG) result in acceptable growth of regeneration. Existing plot networks would be used (G&Y, FOIP, SEM) and sensitive soils would be the focus. Potential approaches include high resolution photos, retrospective work, and use of FOIP reports that can lead directly to sites formerly considered to have been rutted. If there is interest, more work will be done to develop this project. Please call Dianne Miller to express your interest in this work.

Brian Naylor (MNR - Forest Policy) discussed an approach, with MNR – CNFER (**Art Rogers and Rob Rempel**), MNR – SSI (**Lynn Landriault**), and others to test direction on moose emphasis areas (MEA) in the SSG. Are MEAs needed at all? MEAs require specific proportions of summer and winter cover that has specific attributes. Brian explained that much of the work could be done in-house, and more details must be worked out. It was agreed that this work will be important once more MEAs are established, and that preliminary feedback now on implementation of MEAs would help. The FWSU looks forward to future discussion.

Tom Nudds (University of Guelph) and **Jim Baker** (MNR – Applied Research) described projects that would investigate effective, efficient management of species at risk. **SAR Branch** and **Brian Naylor** (MNR – Forest Policy) would be involved. They highlighted 2 areas of uncertainty: (i) pre-listing issues (bias, rigor, repeatability, process & criteria, evidence), and (ii) post-listing issues (managing species individually vs. as groups with a combination of coarse and fine filter approaches (an ecosystem approach)). There was great interest and \$10,000-\$20,000 was offered at the session by MNR and industry, but it was agreed that funding sources and potential approaches (including use of **Lynn Landriault's** matrix of bird needs vs. habitat provision in the guides, modeling done already for the Landscape Guide, info available from the Wetlands & Waterbirds project, workshops) must be pinned down. Champions are needed to facilitate collaboration by SAR Branch & other stakeholders. **Cam Mack** agreed to discuss these potential projects with MNR directors and senior government staff.

Tom Nudds (University of Guelph) discussed what he and **Van La** need to finish phase 2 of phase 2 of the Wetlands and Waterbirds Project. Van's energy and clarity of thought had charmed and impressed the audience earlier at Science Day. Collaboration with Rob Rempel's effectiveness monitoring work so far resulted in a cost-effective project. At the session, \$18,000 to \$23,000 was offered toward the \$35,000 needed for another field season.

Other Potential Projects: Rob Mackereth explained that the Shoreline Harvesting Decision Support System (with **Paul Sibley** – at University of Guelph) is still on the table for \$19,000, providing an NSERC application is successful. **Doug Reid** (MNR – CNFER) explained that he and **Steve Newmaster** would develop a road classification system using the new eFRI, with a view to understanding the potential for old roads to provide lichen for caribou. With NSERC and University of Guelph contributions, the Forest Co-op would need to provide only \$13,500 for 2 years to cover 2 students.

FWSU meeting participants are asked to submit one-pagers describing their projects and budgets to **Dianne Miller** who will circulate them and canvass potential partners for support in the coming months. *Please contact Dianne for more information on any of these worthwhile projects - none can happen without the support of members and partners!*

Forest Co-op Membership

Active Members

AbiBow Canada Inc. —
Rick Groves / * John Lawson

Domtar Inc. —
Janet Lane

Dryden Forest Management Company Ltd. —
Jack Harrison / * Karen Carpenter

EACOM Timber Corporation —
Kandyd Szuba / * Brian Nicks

FPInnovations —
Mark Ryans / * Brad Sutherland

GreenForest Management Inc. —
Joe Ladouceur / * Ryan Murphy

Miitigoog LP —
Matt Wilkie / * Bob Boyce

Ontario Ministry of Natural Resources—
Wayne Fiset / * Bill Cole
Tricia Greer / * Bill Towill
Ed Iwachewski / * Pat Furlong
Joe Kapron
Eva Kennedy / * Brian Batchelor
Frank Kennedy
Hugh Loughheed / * Taylor Scarr
Rob McAlpine / * Al Tithecott
Mary-Ellen Stoll / * Bob Watt
Tim Sullivan / * Steve Kingston

Ontario Ministry of Northern Development,
Mines and Forestry —
Kathleen McFadden / * Jason Koivisto

Tembec Enterprises Inc. —
Al Thorne / * Don Bazeley

Wagner Ontario Forest Management Ltd —
Jiska Westbroek / * Mike O'Neill

Contributors

Natural Resources Canada (CFS) —
Art Groot / * Peter Newton
Rod Smith
David Nanang

Associate Members

CCS Central Computer Services Inc. —
Dennis Tofinetti / * Stuart Dunlop

Confederation College of Applied Arts &
Technology —
Brian Kurikka / * Dave Archibald

Lakehead University
Ulf Runesson / * Mathew Leitch

Sumac Forest Information Services Ltd.
Dave Carr / * Todd Domney

TECO Natural Resource Group Limited
Craig Robinson

University of Guelph —
John Fryxell

* Denotes—Alternate

FOREST CO-OP GROWTH & YIELD SCIENCE UNIT (GYSU)

The Forest Co-op GYSU recently held their fall meeting in Sault Ste. Marie on October 31, 2011. This very well attended meeting included updates on current Forest Co-op GYSU activities as well as some related initiatives from OMNR. The participants also heard from researchers about recent developments and activities related to several growth and yield models and decision support tools including Croplanner and FVSOntario.

The Forest Co-op GYSU PGP program wrapped up another year of field work. During this year's activities, the Forest Co-op GYSU PGP Program completed re-measurements on 266 PGPs. This total included the re-measurement of 242 plots in the Boreal region along with 24 plots in the south-central region of the province. In terms of numbers of measurements per plot, these 266 re-measurements were comprised of 119 second measurements and 147 third measurements. All field work and data entry is now complete and all of the plot tallies have been captured electronically. Efforts are currently underway to incorporate all of the new PGP information into the master databases. Although the program was not able to complete all of the Forest Co-op PGPs currently scheduled for re-measurement, significant efforts were taken by our partners and contractors to maximize productivity. The 2012 field program will prove just as challenging as there are more than 500 PGPs coming due for re-measurement on their 5-year cycle in addition to the plots outstanding from the current year.

In conjunction with the Forest Co-op GYSU Meeting and Forest Co-op Science Day and in support of the Forest Co-op Fibre Optimization Project, the Forest Co-op held a full day workshop on November 1, 2011 entitled "**Squeezing Value from Trees**". The workshop, which was attended by more than 60 participants, was wonderfully moderated by David Milton. Divided into panels, the workshop addressed three focus areas. Speakers for these panel topics included:

Mill Requirements & Wood Supply - Francois Robichaud (FPInnovations), Jason Linkewich (Tembec Inc.), and Alex Rapoport (HALCO Software Systems Ltd.)

Knowing your Fibre Resource for Decision-Making - Murray Radford (OMNR), Murray Woods (OMNR), and Todd Domney (Sumac Forest Information Services)

Scaling Solutions - Craig Robinson (Consultant), Peter Henry (OMNR) and Dan Rouillard (MNDMF), and George Breummer (Canadian Wood Fibre Centre)

Phil Green (First Resource Management Group) provided a wrap-up at the end of the event. Additional information from the workshop is available on the Forest Co-op website at www.forestco-op.ca.

The next meeting of the Forest Co-op GYSU is tentatively scheduled for early May, 2012 and will include a full day meeting as well as a half day field trip. The location for the meeting is still to be confirmed but is planned for the northwest region. Details of the meeting will be made available closer to the event.

Happy Holidays Everyone!

We wish you a festive season and a happy, healthy New Year.

- All the best for 2012 -

Dianne, Dave and Janeece

