

# Sustainable Forests Education Cooperative

*Educating Professionals for  
Tomorrow's Resource Challenges*



## Fiscal Year 2011 Annual Report



UNIVERSITY OF MINNESOTA

Driven to Discover<sup>SM</sup>

# Mission

To promote excellence in natural resource management through educational opportunities that bring professionals together to explore current research findings, new technologies and state-of-the-art practices

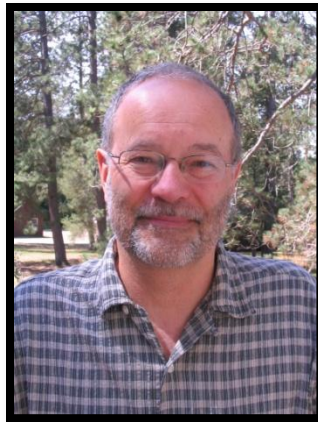
# Executive Summary

## *UMN Sustainable Forests Education Cooperative Highlights for 2011 Fiscal Year (July 1, 2010-June 30, 2011)*

- Had another exceptional year for number and quality of education programs and increased numbers of participants with increased revenues
- SFEC membership increased by 8 new members in FY 2011 to a record 48 members  
These members include:
  - Chisago Soil & Water Conservation District
  - Minnesota Power
  - UMN Forestry Extension
  - Vermillion Community College
  - MN DNR Division of Ecological Resources
  - Wisconsin DNR St. Croix Area Forestry
  - Itasca Community College
  - Forest Capital Ventures LLC
- Hosted 24 programs in fiscal year 2011 (17 in FY 2010) with a potential record of 1,226 participants
- Highlighted programs include:
  - Jack Pine Symposium
  - 8<sup>th</sup> Annual Research Review
  - Intermediate Stand Treatments
  - Forest Products Utilization and Marketing
  - Early Successional Habitat Management for Birds (2 programs)
  - Ecological Classification System Certificate Revised Series (4 programs)
  - Restoration of Permanent Openings
  - Forest Recreational Trail Design
  - Forests and Climate Change: Part II
  - Advanced GPS Training
  - Forest Management Guidelines Training
- Continued Webinar Series
  - Planned 10, hosted 8 webinars in fiscal year 2011 with 241 participants
  - DNR Division of Forestry provided support for DNR staff to attend webinars
- Received two grants: DNR Stewardship Plan Writer Tracking Grant and Blandin Foundation 'Building Capacity' grant
- Completed an SFEC Membership Survey

# Staff

- ▶ Mike Kroenke –  
Program Director



- ▶ Anna McQuade –  
Temporary Program Assistant





## Executive Committee

(L to R front row:) Greg Bernu–Carlton Co. Land Dept., Beth Jacqmain–Aitkin Co. Land Dept., Dave Schipper–DNR Grand Rapids, Lisa Breuer–SFEC Admin. Asst. (L to R back row) Mike Kroenke–SFEC Coordinator, Jim Sanders–USDA FS, Ron Severs–Cloquet Forestry Center Director, Jim Marshall–UPM Kymmene, Adrew Arends–MN DNR–St. Paul, Kelly Smith–Carlton Co. SWCD, Steve Olson–Fond du Lac Reservation

## Education Advisory Committee

(L to R front row) Mike Kroenke, Coordinator, SFEC; Lisa Breuer, Program Assistant, SFEC; Rob Slesak, MN Forest Resources Council; Rick Klevorn, MN DNR; Kelly Smith, Carlton County SWCD (L to R back row) David Chura, MN Logger Education Program; Adam Sutherland, UPM–Kymmene; Eli Sagor, University of MN; Paul Dickson, Dickson Forestry; Robert Krepps, St. Louis County Land Dept. (Not Pictured: Tony D’Amato, University of MN; George Host, NRRI; Jeff Lightfoot, MN DNR; Robert Lintelmann, Bureau of Indian Affairs; Kathleen Preece, MN Forest Research Partnership; Carrie Pike, MN Tree Improvement Coop.; Mary Shedd, USDA FS, Superior NF)



## Cloquet Forestry Center Director, Ron Severs




## Intermediate Stand Treatment Committee



(Left to Right) Grant Domke, University of MN; Tony D’Amato, University of MN; Cheryl Adams, UPM Kymmene; Mike Kroenke, Coordinator SFEC; Rick Klevorn, MN DNR; Eli Sagor University of MN MN; David Chura, MN Logger Education Program

# History of the UMN SFEC

- ▶ By Act of Minnesota State Legislature
  - ▶ Sustainable Forest Resources Act of 1995
  - ▶ This Act Formed:
    - MN Forest Resources Council (MFRC) to advise the Governor
    - Sustainable Forests Education Cooperative (SFEC)
    - MN Logger Education Partnership (MLEP)
- 

# History of the UMN Cloquet Forestry Center

- ▶ Oldest continuing university forestry research facility in the United States (100+ years)
- ▶ 3-Pronged Mission of CFC UMN
  - Research
  - Undergraduate educational field camp
  - Continuing education outreach
- ▶ Home of Two Cooperatives
  - Sustainable Forests Education Cooperative
  - Minnesota Tree Improvement Cooperative

- ▶ SFEC was organized in 1998 through the University of Minnesota, College of Natural Resources, Center for Continuing Education
- ▶ Presently under the College of Food, Agricultural and Natural Resource Sciences and under the supervision of the Cloquet Forestry Center Director
- ▶ The Sustainable Forest Education Cooperative was fashioned after other successful University of Minnesota research cooperatives
- ▶ SFEC may have been the first and only forestry and natural resource continuing education cooperative in the United States.
- ▶ Very similar to UM Extension in it's mission and how it works



# Membership

- ▶ SFEC began in 1998 with approximately 25 member organizations
- ▶ Currently at 48 members including county, state, federal, non-profit and private agencies including: Superior and Chippewa National Forests, MN DNR, Divisions of Forestry and Wildlife, County Forestry Commissioners, County SWCD, Tribal Offices, Blandin Foundation, UPM-Kymmene-Blandin, Sappi, Boise, Potlatch Paper Mills and MN Power

# Sustainable Forests Education Cooperative

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## SFEC Members 2011

- MN Association of County Land Commissioners
- Boise Cascade
- County Land Departments
  - Aitkin; Beltrami; Carlton; Cass; Clearwater; Crow Wing; Hubbard;
  - Koochiching; Lake; St. Louis
- Forest Capital Partners, LLC
- Itasca Community College
- Minnesota Chippewa Tribes – Tribal DNRs
  - Fond du Lac; Grand Portage; Leech Lake; White Earth
- Minnesota DNR
  - Division of Ecological & Water Resources
  - Division of Forestry
  - Wildlife Management Section
- MN Forest Resources Council
- MN Forest Stewardship Program
- MN Power
- The Nature Conservancy, Minnesota Chapter
- Potlatch Corporation
- Red Lake Tribal DNR
- Sappi Fine Paper
- Soil and Water Conservation Districts
  - Aitkin County; Carlton County; Chisago County; Crow Wing County;
  - Itasca County; South St. Louis County (CCLNS Joint Powers Board #3);
  - Wadena County
- St. John's University Arboretum
- University of Minnesota
  - College of Food, Ag. & Natural Resource Sciences
  - Department of Forest Resources
  - Extension Forestry Program
  - Natural Resources Research Institute
- UPM Blandin Paper Mill
- USDA FS National Forests
  - Superior; Chippewa
- Vermilion Community College
- Wisconsin DNR – St. Croix Area Forestry Program

**For more information or to begin membership, contact  
Mike Kroenke – Program Director at the UMN Cloquet  
Forestry Center (218-726-6404 or  
mkroenke@umn.edu).**

# Funding Sources

- ▶ SFEC is funded by the University of MN, membership dues and program revenues at approximately  $\frac{1}{4}$ ,  $\frac{1}{4}$  and 40% with the remaining 10% income generated from grants
- ▶ \$145,000 annual budget with 1.75 FTE including a Program Director and Program Assistant. Increased demand and workload necessitated increasing the Program Assistant position from .50 to .75 FTE for Fiscal Year 2011
- ▶ A grant from the DNR Division of Forestry helps to offset program initiatives including a DNR Stewardship Plan Writer Tracking Grant renewed annually and a webinar grant

# Structure

SFEC provides for interdisciplinary and interagency learning. Member organizations contribute annually with a dues structure of \$125 per participating member, to support program development, administration and overhead. In return, members receive reduced rates on registration fees (\$65 member rate vs. \$135 non-member rate). Members help to identify continuing education programs that meet their professional development needs

# Program Offerings

- ▶ SFEC has developed a broad base of programs during its 13 years of existence and has received continued support from the University of Minnesota and base organization members, serving approximately 2000+ professional natural resource land managers in MN
- ▶ During the 2011 fiscal year (July 1, 2010–June 30, 2011) SFEC developed and delivered 24 programs to its members (17 in fiscal year 2010) to 1,226 participants
- ▶ Eight of these programs were webinars

# **Examples of successful SFEC programs in FY 2011 include:**

Annual Research Review

Jack Pine Symposium

Early Successional Habitat for Birds

Forest Products Utilization and Marketing

Intermediate Stand Treatments Series

Climate Change: Part II

Advanced GPS

Forest Recreational Trail Design

Ecological Classification Silviculture

Course Series

Forest Management Guidelines Training

Series of Successful Webinars



# 8<sup>th</sup> Annual Research Review Symposium

**Registration**

Online:  
<http://sfec.cfans.umn.edu>


Or Contact:  
Lisa Breuer  
lmbreuer@umn.edu  
218-726-6403

**Sponsors:**

- Sustainable Forests Education Cooperative
- Superior National Forest
- UMN Dept. of Forest Resources
- USDA Forest Service Northern Research Station
- UMD Natural Resource Research Institute

**Cloquet Forestry Center**  
175 University Road  
Cloquet, MN 55720  
tel: 218-726-6404  
fax: 218-879-0855

Mike Kroenke, Program Director/  
Coordinator  
Sustainable Forests Education  
Cooperative  
[mikroenke@umn.edu](mailto:mikroenke@umn.edu)



**8<sup>th</sup> Annual Research Review Symposium**

**Educating Professionals for Tomorrow's Resource Challenges**

**Tuesday, February 22, 2011**  
**UMN Cloquet Forestry Center**  
**175 University Road**  
**Cloquet, MN**  
**8:00 am—3:30 pm**  
**\$65 SFEC (\$135 Non-Members)**  
**Estimated at 6 CFE Credits in Cat-1**

An opportunity to learn about the latest research and results from researchers from the USFS Northern Research Station, USFS National Forests, UMN Depts. of Forest Resources and Conservation Biology, University of Minnesota, Duluth - NRRI, The Nature Conservancy and researchers from Wisconsin.

Targeted audience includes foresters, wildlife biologists, natural resource managers and others who are actively involved in managing forested lands in MN and the Midwest. Past participants have found this event extremely valuable in informing them about the wide array of research projects taking place in their areas of interest and staying abreast of the latest knowledge in their field.

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# Jack Pine Symposium

*Jack Pine Symposium: Overcoming Challenges to Forest Regeneration while Managing for Timber, Wildlife and Multiple Benefits*

Tuesday, January 18<sup>th</sup> 2011

Cloquet Forestry Center

Co-sponsored by the Sustainable Forest Education Cooperative (SFEC) & The Minnesota Tree Improvement Cooperative (MTIC)

8:00 - 8:30 Registration

8:30-8:45 Welcome from meeting Coordinators Mike Kroenke (SFEC), Carrie Pike (MTIC)

**Jack Pine and its Ecological Associations:**

8:45-9:15 Wisconsin Ecological Classification System  
*John Kotar, Professor Emeritus, University of Wisconsin, Madison WI*

9:15-9:45 Jack Pine on the Edge: the Minnesota Picture  
*John Almendinger, MN DNR*

9:45-10:15 The Shifting Sands of Jack Pine Regeneration: Perspectives from Ontario, Canada  
*Bill Towill, Ontario, Canada*

10:15-10:30 BREAK

**Regeneration Challenges and Implications to the Landscape:**

10:30-11:00 Trends in Jack Pine Resources Across the Region  
*Alan Ek, Professor and Head, Depart. of Forest Resources, University of MN, St. Paul*

11:00-11:30 Jack Pine Budworm  
*Jana Albers, MN DNR*

11:30-Noon Jack Pine Regeneration Issues in Northwest MN  
*Mike Locke, MN DNR*

Noon-1 LUNCH (provided)

**Field Perspective and Regeneration Successes:**

1:00 - 1:30 Beyond Kirtland's Warbler: Multi Species Benefits to Jack Pine Ecosystem Management  
*Greg Corvax, USFWS-Seney National Wildlife Refuge, Michigan*

1:30 - 2:00 Jack Pine Regeneration Efforts in NW Wisconsin (Polk County)  
*Paul Heimstead, WI DNR*

2:00 - 2:30 Adaptive Management in Bemidji  
*Harvey Tjader, MN DNR*

2:30 - 3:00 Management of the Moquah Barrens in Bayfield County, WI  
*Scott Posner, Chequamegon-Nicolet National Forest, WI*

3:00 - 3:30 Jack pine - Proposed Seed Zones in a Brave New World  
*Carrie Pike, UMN, MN Tree Improvement Cooperative*

3:30-3:45 Wrap up/Evaluations





# Intermediate Stand Treatments

## Sustainable Forests Education Cooperative

Educating professionals for tomorrow's resource challenges

# Intermediate Stand Treatments

The day long program will be a review of intermediate treatments for natural resource professionals, loggers and landowners. Participants will see examples of traditional and non-traditional uses of these treatments, learn about operability for these processes plus view examples of equipment, and learn about the economics of doing the treatments from short term to long term perspectives. The program is only an introduction for the more extensive field days that will occur in the future. The program will provide an overview of a variety of intermediate treatments with reference to different cover types/plant communities. A definition of intermediate treatments will lead into technical aspects of individual types of treatments and assist participants in using the same terminology when working on intermediate stand treatments.

**Instructors:** Tony D'Amato, Assistant Professor  
UMN, Silviculture and Applied Forest Ecology

Cheryl Adams, Forest Ecologist  
UPM, Blandin Paper Mill

**Co-Sponsors:** MLEP, MN DNR, MN Woodland Advisors, UPM-Kymmene,  
Aitkin County and UM-Dept. of Forest Resources



### Register Online:

<http://sfec.cfans.umn.edu>

### Or Contact:

Lisa Breuer  
[lmbreuer@umn.edu](mailto:lmbreuer@umn.edu)  
218-726-6403

Cloquet Forestry Center  
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Cloquet, MN 55720  
tel: 218-726-6404  
fax: 218-879-0855

Mike Kroenke, Coordinator  
[mikroenke@umn.edu](mailto:mikroenke@umn.edu)

Tuesday, September 14, 2010  
Cloquet Forestry Center (Auditorium)  
175 University Rd, Cloquet, MN

8:30 am—4:00 pm

\$65 SFEC Members (\$135 Non-Members) Includes Lunch  
Approximately 6 CFEs in Category I-CF

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## Intermediate Stand Treatments

Tuesday, September 14, 2010  
Cloquet Forestry Center, Auditorium

**Objectives:** To provide a basic review of intermediate treatments for natural resource professionals and loggers. We will review terminology, discuss traditional and non-traditional uses of treatments, discuss operability, and discuss short- and long-term economic considerations. This is an introduction for the more extensive field days to follow.

### AGENDA:

#### Registration

Welcome/Review of Agenda, *Mike Kroenke, SFEC Coordinator*

Wireless Poll of Participants, *Eli Sagor, UMN Extension*

9:15 a.m. Video: Logger perspectives on IST: General Considerations

9:20 a.m. Workshop Introduction: *Cheryl Adams, Forest Ecologist, UPM-Kymmene*. Overview of a variety of intermediate treatments

9:30 a.m. Technical Aspects of Intermediate Treatments: *Tony D'Amato, Asst. Professor, Silviculture and Applied Forest Ecology, UMN*

10:30 a.m. Break

10:45 a.m. Aitkin County film segment

11:00 a.m. Intermediate Treatments by Cover Type/ Plant Communities:

- Northern Hardwoods (Sugar maple/ basswood and red oak), *Dave Hensel, UPM-Kymmene*

- Pine Types, *Brian Bignall, Potlatch*

- Mixed Species and Aspen, *Cheryl Adams*

(Wireless poll follows each presentation)

12:00 p.m. Lunch

1:00 p.m. Wildlife: Use of intermediate treatments for habitat enhancement. How wildlife and forestry can collaborate for a win-win situation. *Jeff Hines, MN DNR Wildlife*

1:30 p.m. Video: Logger perspectives on IST: Operational Considerations

1:35 p.m. Operations: Small scale intermediate treatments that private landowners can utilize *Paul Dickson, MN Association of Consulting Foresters, Alex Bildeaux, Logger, Marcus Edlin, Logger*


2:05 p.m. Video: Logger perspectives on IST: Economic Considerations

2:15 p.m. Economics: Making it work for the contractor as well as the landowner. *Al Ek, UMN Dept. of Forestry, Dave Hensel, Blandin*

2:45 p.m. Feedback on field sessions, written evaluation, and Q&A

3:10 p.m. Adjourn

# Restoration of Permanent Openings



*Educating professionals  
for tomorrow's resource  
challenges*

**Sustainable Forests Education Cooperative**

## Restoration of Permanent Openings

While the science of managing and restoring forest, wetland and prairie habitats in the upper Midwest continues apace, land managers are in the position of managing thousands of acres of land devoted to other uses that must be maintained in an open, non-forested condition. For example, the Chippewa National Forest manages thousands of miles of roadside, trails and utility corridors, and is now facing the challenge of managing openings 100 yards wide by fifty miles long with the new pipeline corridor and high voltage transmission line. Tom Heutte - Chippewa National Forest, Rachael Shetka - Enbridge Pipeline, Jon Schultz - Boreal Natives and other restoration experts will share experiences and touch on a variety of issues and challenges of restoring these permanent openings.

**Cost**  
\$65 SFEC Members  
\$135 Non-Members  
*(Includes lunch)*

**Registration**  
**Online:**  
<http://sfec.cfans.umn.edu>

**Or Contact:**  
Lisa Breuer  
lmbreuer@umn.edu  
218-726-6403

**Cloquet Forestry Center**  
175 University Road  
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fax: 218-879-0855

Mike Kroenke, Program Director/  
Coordinator  
Sustainable Forests Education  
Cooperative  
[mikroenke@umn.edu](mailto:mikroenke@umn.edu)

**Tuesday, March 15th**  
8:00 am - 3:30 pm  
Bemidji State University  
Hobson Memorial Union  
Bemidji, MN

**Topics to be explored include:**

- Lessons learned from previous re-vegetation projects
- Recommended regimes for mowing, brushing and fire to maintain these areas
- Best species for seeding after construction
- Inputs for maintaining and getting the best ecosystem services out of these areas
- Wildlife that use these areas and protections needed for them

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Direct requests to 218-726-6404 or 218-879-0855  
Funded in part by the Minnesota Department of Natural Resources

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# Forests and Climate Change: The Minnesota Picture

Dr. Lee Frelich

## Climate Change Workshops

Delivered by the UMN Sustainable Forests Education Cooperative  
Targeting professional foresters and natural resource land managers



By Michael Kroske, Program Director  
University of Minnesota  
Sustainable Forests Education Cooperative  
mkroske@umn.edu 612.726.4444  
Cloquet Forestry Center  
125 Forestry Road, Cloquet, MN 55720

### Education Program Highlights

Climate change has been an emphasis within programs delivered by the UMN Sustainable Forests Education Cooperative in 2009 and 2010.

**Dates:**  
• Feb 17, Nov 4 (2009)  
• April 14 & 15, Nov 3 (2010)

**Titles:**  
• Forests and Climate Change: The Minnesota Picture  
• Forests and Climate Change Part II: Management Implications

#### Presenters:



**Agenda Topics:**  
Science of Climate Change, Current Evidence of Change and Projected Future Climates, Climate, Tree Ranges and Biomes, Climate and CO<sub>2</sub> Effects on Physiology and Productivity, Multiple Impacts of Climate, Insects, Disease, Invasive Species, Deer, and Disturbance on Forests, Climate Change Adaptation Planning in Forests, Extreme Events and Thresholds, Storms, Fires, Droughts & Herbivores, Tree Genetics and Climate Change and Ecosystem Classification and Analogs.

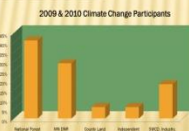
### Program Conclusions and Implications

**Participants:**  
Ninety eight foresters and natural resource land managing professionals from Minnesota and University Wisconsin DNR person attended the 2009 and 2010 SFEC workshops.

**Comments:**  
• This is what I wanted for the program - Simply excellent  
• Informal feel of the whole program as well as the valuable science presented  
• End of the day discussion was of utmost value.

**Requests for Future Climate Change Topics:**  
• Adaptive Management  
• Field Applications to Help Prepare for Future Climate Change Impacts

**Evaluations:**  
Showed a high degree of satisfaction with the content, delivery and knowledge gained by the participants.



### Other SFEC Climate Change Programs in 2011

Feb. 22nd 8th Annual Forestry, Wildlife & Natural Resources Research Review  
One presentation was entitled:

'Overview of the Spruce Project - A Large-Scale Study of Increased Temperature and Carbon Dioxide Effects on a Northern Peatland Bog'



**B4 WARMED EXPERIMENT**  
Boreal Forest Warming at an Ecotone in Danger  
How will B4 tree species respond to a warming climate?

Located at the Cloquet Forestry Center and Hubachek Wilderness Research Center



Stacie Sobeyan, Research Hydrologist  
CI for Research on Ecosystems Change  
USDA Forest Service  
Grand Rapids, MN

**Comments included:**  
• Fascinating Project  
• This will be a very interesting project to follow  
• Incredibly large and expensive project - obviously will be interested in future developments

April 19th Phenology & Climate Change: How Timing of Biological Activity Affects Forests Now and in the Future (Webinar)  
- Rebecca Montgomery, Assistant Professor, University of MN

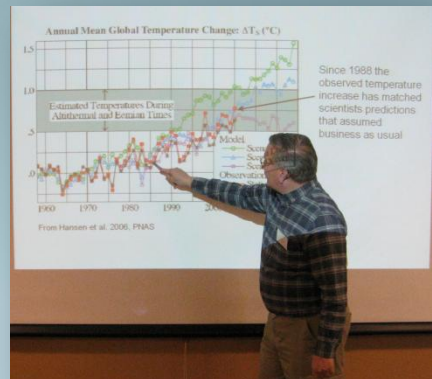
May 10th MN State Natural Areas: Their Role in Managing for Climate Change (Webinar)  
- Ann M. Pierce, Natural Resource Program Supervisor, MN DNR

The Sustainable Forests Education Cooperative (S FEC) is a unique interagency/industry non-profit partnership of over 1800 professional foresters and natural resource land managers in Minnesota and the surrounding states.

**Mission:**  
To promote excellence in natural resource management through educational opportunities that bring professionals together to explore current research findings, new technologies and state-of-the-art practices.

**Member Organizations:**  
Buckeye State Land Commission (OH)  
New South  
California Department of Forestry, Fire and Aerial Resources  
Colorado Department of Natural Resources, State of Colorado  
Minnesota Department of Forestry, State of Minnesota  
Michigan Department of Natural Resources, State of Michigan  
New Jersey Department of Environmental Protection, State of New Jersey  
New York Department of Environmental Conservation, State of New York  
North Carolina Department of Forestry, State of North Carolina  
Ohio Department of Natural Resources, State of Ohio  
Oregon Department of Forestry, State of Oregon  
Rhode Island Department of Environmental Management, State of Rhode Island  
Texas Department of Forestry, State of Texas  
Vermont Department of Forests, Water and Parks, State of Vermont  
Washington Department of Natural Resources, State of Washington  
Wisconsin Department of Natural Resources, State of Wisconsin

UNIVERSITY OF MINNESOTA



Nationally  
renowned  
climate change  
expert

**B4 WARMED EXPERIMENT:  
Boreal Forest Warming at an Ecotone in Danger**

How will Minnesota tree species respond to a warming climate?

Principal Investigator: Peter Reich PhD.  
Co-investigators: Rebecca Montgomery PhD., Roy Rich PhD., Sarah Hobbie PhD., and Jacek Oleksyn PhD.

This is a closed research facility operated by the University of Minnesota. Only authorized personnel are allowed to be on the research site.

If you have not been issued a key to the site, you are not permitted to be here without supervisory personnel present. No entry is permitted without notifying supervising personnel. Please contact:

**Roy Rich -**  
651-328-4391  
richo475@umn.edu

**Artur Stefanski -**  
952-838-5915 or  
stefa066@umn.edu

Hubachek Wilderness Research Center  
218-3654336

#### Site Rules:

- Visitors are not permitted onsite without supervising personnel.
- No personnel are permitted to work in research plots while an individual plot is energized.
- No entry to visitors is permitted during inclement weather.
- Access inside research electrical enclosures or datalogger enclosures is not permitted except by supervisory technicians or investigators.

Funding and Support for the Experiment provided by:  
United States Department of Energy  
College of Food, Agriculture and Natural Sciences, University of Minnesota  
Minnesota Department of Natural Resources  
Wilderness Research Foundation

B4WARMED  
Global Warming  
Research Site



# Advanced GPS Training

Educating professionals for tomorrow's resource challenges

Sustainable Forests Education Cooperative

## Advanced GPS Training

SFEC is teaming up with UPM Blandin Forestry and North Point Geographic Solutions to update forest land managers on current and upcoming GPS technology. The morning session of the course is a must for all GPS users wanting to integrate mapping software to improve their efficiency in the field. This includes using GPS for running property lines, cruising timber, and general timber sale layout. The afternoon session will include a field trip to demonstrate how GPS, in the cab of a Cut-to-Length processor, can improve the quality of a timber harvest as well as the efficiency for both operator and forester.

### COST

\$65 SFEC (\$135 Non-Members) *Includes lunch*

### Registration

Online  
<http://sfec.cfans.umn.edu>

or

Contact  
Lisa Breuer  
[lbreuer@umn.edu](mailto:lbreuer@umn.edu)  
218-726-6403

**Tuesday, April 12, 2011**  
North Central Research & Outreach Center  
Grand Rapids, MN  
8:30 am–3:30 pm

SFEC  
tel: 218-726-6404  
Mike Kroenke, Program  
Director / Coordinator  
[mkroenke@umn.edu](mailto:mkroenke@umn.edu)

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# Stewardship for Early Successional Habitat Birds Within MN's Forested Regions

Sustainable Forests Education Cooperative  
Educating professionals for tomorrow's resource challenges

## EARLY SUCCESSIONAL HABITAT MANAGEMENT FOR BIRDS OF MINNESOTA'S FOREST REGION



The Sustainable Forests Education Cooperative is teaming up with the Minnesota DNR, US Fish & Wildlife Service, Ruffed Grouse Society, Wildlife Management Institute, Natural Resource Conservation Service and the Deep Portage Learning Center to educate professional land practitioners about sharp-tailed grouse, ruffed grouse, American woodcock, and golden-winged warblers' habitat needs as well as identify opportunities to design and implement habitat management activities.

An afternoon field tour will feature "on the ground" examples of management aimed at benefiting these bird species.

<b>DATE:</b>	Friday, June 10, 2011
<b>TIME:</b>	9:00 am - 4:00 pm
<b>PLACE:</b>	Deep Portage Learning Center Hackensack, MN
<b>CFEs:</b>	Estimated at 5.5 CFEs in Cat 1-CF
<b>COST:</b>	\$65 SFEC Members/\$135 Non-Members (includes lunch)

Register Online: <http://sfec.cfans.umn.edu>  
Or Contact: Anna McQuade ([amcquade@umn.edu](mailto:amcquade@umn.edu))

Cloquet Forestry Center  
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Sharp-Tailed Grouse, American Woodcock and Golden-Winged Warblers



# Forest Products Utilization & Marketing:

**Sustainable Forests Education Cooperative**  
Educating professionals for tomorrow's resource challenges

## Forest Products Utilization and Marketing: Timber Markets

This one day workshop focuses on utilization and marketing of forest products as a tool to help accomplish forest management and provide revenue to landowners and land managers. The morning session will include updates on current resources and markets for traditional forest products, biomass, carbon credits and agro-forestry. Also included will be technology options for informing product appraisal and sorting decisions. The afternoon will consist of a field session at a logging site to discuss utilization & marketing items such as timber sale terms, assimilation of new technologies, logger decisions on marketing and sorting, and how to get full value for timber from your forest management operation in light of current market conditions and emerging biomass markets.

**Tuesday, July 27, 2010**  
**8:00 am — 4:00 pm**

**Blandin Foundation Auditorium**  
**100 N Pokegama Ave**  
**Grand Rapids, MN**

**\$30 FPS Members**  
**\$65 SFEC Members**  
**\$135 SFEC Non-Members**

**Co-sponsored by SFEC,**  
**MN DNR, UM, UMD, USFS and**  
**Forest Products Society**

Register Online: <http://sfec.cfans.umn.edu>

Or Contact: Lisa Breuer [lbreuer@umn.edu](mailto:lbreuer@umn.edu)  
218-726-6403

**Cloquet Forestry Center**  
175 University Road  
Cloquet, MN 55720  
tel 218-726-6404  
fax 218-879-0826

Mike Kroonke, Coordinator  
[mikroonke@umn.edu](mailto:mikroonke@umn.edu)



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**UNIVERSITY OF MINNESOTA**



# Ecological Classification System Certificate Course Series

Sustainable Forests Education Cooperative  
Educating professionals for tomorrow's resource challenges

## Ecosystem Silviculture Certificate Course Series

Register Online: <http://sfec.cfans.umn.edu> Or Contact: Lisa Breuer (218-726-6403) [lmbreuer@umn.edu](mailto:lmbreuer@umn.edu)

\$65.00 for each full-day session and includes all meals and travel to and from the field sites.  
Pay as you go! Those wishing to do so, please register for the "Certificate Course Series" during the initial sign-up for Session One.

The objective of this course is to facilitate the application of ecosystem classification to silvicultural and stewardship planning and to forest management operations. The course will support the maintenance or restoration of sustainable, healthy forest ecosystems to enhance economic productivity of Minnesota's forests.

The full "Certificate Series" will provide approximately 30-33 CFE credits over a two-year period for MN Stewardship Plan Writers and SAF Certified Foresters. Preference will be given to those who enroll in the entire six-course series, although openings for individual sessions and field days may be available to others.

*"Certificate Series" participants must complete ALL 6 Sessions to receive a Certificate of Completion.*

### Classroom Sessions:

- Ecological Classification System**  
*Date:* Wednesday, August 4, 2010  
*Instructors:* John Almendinger & Dan Hanson, MN DNR  
*Location:* Grand Rapids, MN
- Soils & Landforms**  
*Date:* Wednesday, October 13, 2010  
*Instructors:* Dan Hanson, MN DNR & Art Norton, The Nature Conservancy  
*Location:* Grand Rapids, MN
- Silvicultural Applications**  
*Date:* Tuesday, May 3, 2011  
*Instructors:* Tony D'Amato, UMN & Cheryl Adams, UPM Blandin Paper Mill  
*Location:* Grand Rapids, MN

### Field Day Sessions:

- Pine Field Day**  
*Date:* Wednesday, June 29, 2011  
*Instructors:* Brian Paik, John Almendinger & Dan Hanson  
*Location:* Cutfoot Experimental Forest, Grand Rapids, MN
- Wetland Management Field Day**  
*Date:* Wednesday, September 28, 2011  
*Instructors:* Rick Dahlman, John Almendinger & Dan Hanson  
*Location:* To be determined
- Oak Management Field Day**  
*Date:* Wednesday, October 19, 2011  
*Instructors:* Tom Kroll, John Almendinger & Dan Hanson  
*Location:* St. John's University, Collegeville, MN

### Co-Sponsors

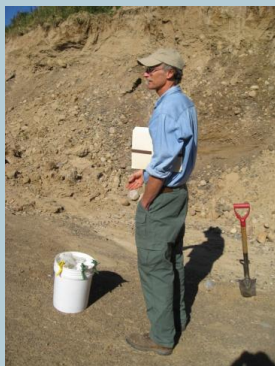
- SPEC
- MN DNR
- UPM Blandin Paper Mill
- UMN Dept of Forest Resources
- The Nature Conservancy



Cloquet Forestry Center  
175 University Road  
Cloquet, MN 55720

Mike Kroenke, Program Director/Coordinator  
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# Recreational Trail Design

**Sustainable Forests Education Cooperative**  
Educating professionals for tomorrow's resource challenges

## Recreational Trail Design



Participants will learn how to design and build trails to meet user expectations while minimizing impacts on natural and cultural resources. The focus is on trails used for hiking, horseback riding, mountain biking, cross-country skiing, snowmobiling, and all-terrain vehicles. Design concepts apply to interpretive trails, but the workshop will not cover interpretation techniques. Participants will learn how to determine trail use, select the trail corridor, establish trail design standards, mark the trail location, clear the trail, construct the tread, cross obstacles in the landscape, sign the trail, select facilities that support trail users and identify potential funding sources.

**Tuesday, August 24, 2010 - Rosemount**  
UMore Park  
Park Administration Office, Conference Room  
9:00 am—4:00 pm

**Thursday, August 26, 2010 - Cloquet**  
Cloquet Forestry Center  
Stine Room & Jay Cooke State Park  
9:00 am—4:00 pm

**\$65 SFEC Member or \$135 Non-Member (includes lunch)**

Cloquet Forestry Center  
175 University Road  
Cloquet, MN 55720  
tel: 218-726-6404  
fax: 218-879-0855  
Mike Kroenke, Coordinator  
mkroenke@umn.edu

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Register Online: <http://sfec.cfans.umn.edu>

Or Contact: Lisa Breuer [imbreuer@umn.edu](mailto:imbreuer@umn.edu) 218-726-6403

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Dated 8/24/10 to 10/26/10. Please see website for complete  
page with attached to second publication material.





# Monthly Webinars

Online interactive educational seminars that reach our intended audience without having to leave their desks! Featuring content specialists from the lake states –



**Sustainable Forests Education Cooperative**

Providing online educational opportunities to meet the needs of professional land managers in Minnesota

## Webinars

**Register Online:** <http://sfec.cfans.umn.edu>

**Or Contact:** Lisa Breuer (lmbreuer@umn.edu)  
218 726-6403

**Cost Per Webinar:**

\$20 SFEC Members

\$30 Non-Members

**1.0 CPE Credit Per Webinar!**

**Cloquet Forestry Center**  
175 University Road  
Cloquet, MN 55720  
tel: 218-726-6404  
fax: 218-879-0855

**Mike Kroenke, Program Director/Coordinator**  
SFEC  
mkroenke@umn.edu

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**Prescribed Burn Liability**  
Tuesday, March 8, 2011, 9:00-10:00 am  
Instructor: Doug Rigdon, C.D. Rigdon & Associates, Ltd.

**Forest Management Concepts in Asia - Will the Tigers Survive?**  
Tuesday, March 22, 2011, 9:00-10:00 am  
Instructor: Dave Smith, UMN Professor, Dept of Fisheries, Wildlife & Conservation Biology

**Phenology & Climate Change: How Timing of Biological Activity Affects Forests Now and in the Future**  
Tuesday, April 19, 2011, 9:00-10:00 am  
Instructor: Rebecca Montgomery, UMN Assistant Professor, Dept of Forest Resources

**MN State Natural Areas - Their Role in Managing for Climate Change**  
Tuesday, May 10, 2011, 9:00-10:00 am  
Instructor: Ann M. Pierce, Natural Resource Program Supervisor, MN DNR

**A Scientist's Spicy Potion Deters Deer**  
Tuesday, June 21, 2011, 9:00-10:00 am  
Instructor: Tom Levar, Scientist, UMD Natural Resources Research Institute

**Non-Timber Forest Products and the MN Harvesters Handbook**  
Tuesday, July 19, 2011, 9:00-10:00 am  
Instructor: David Wiley, UMN Extension Educator, Natural Resource Mgmt & Utilization

**Important Interactions with Landowners to Promote Good Land Stewardship**  
Tuesday, August 16, 2011, 9:00-10:00 am  
Instructor: Alyson Brownlee Muth, Ed.D, Forestry Stewardship Program Associate, University of Pennsylvania Extension

**Family Forest Landowner's Guide to Ash Management: A Tool for Land Managers**  
Tuesday, September 20, 2011, 9:00-10:00 am  
Instructor: Angela Gupta, Forestry Extension Educator, UMN Extension

**Forest Management Guidelines Audit Updates**  
Tuesday, October 18, 2011, 9:00-10:00 am (tentative)  
Instructor: Dick Rossman, MN DNR, Division of Forestry

**Forest Insects, Disease Updates and Climate Change Impacts on Insects**  
Tuesday, November 15, 2011, 9:00-10:00 am  
Instructors: Mike and Jana Albers, Forest Health Specialists, MN DNR



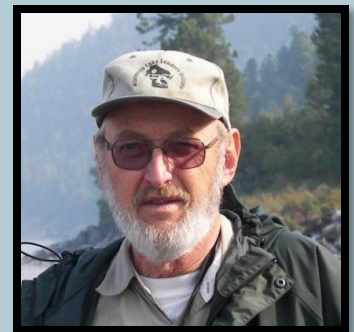
Dick Rossman



Tim Quincer



Dr. Tony D'Amato



Dr. Lowell Klessig

And many more...

# Menominee Indian Reservation Forest Tour

Sustainable Forests Education Cooperative  
*Educating professionals for tomorrow's natural resource challenges*

## Menominee Indian Reservation Forest Management

**May 24-26, 2011**  
**2 1/2-Day Bus Tour**  
 Depart Tues, May 24th 2:00 pm  
 Return Thurs, May 26th 4:30 pm  
 Cloquet Forestry Center

<p><b>Amherst, WI</b></p> <ul style="list-style-type: none"> <li>Schabel Restoration Woodlot Tour</li> </ul> <p>35 Years of Managing Northern Hardwoods Towards a Near-Natural Forest</p> <p>Professor Hans Schabel, (Retired) UW Stevens Point</p>	<p><b>Keshena, WI</b></p> <ul style="list-style-type: none"> <li>Menominee Forests Tour</li> <li>Menominee Sawmill</li> <li>Northern Hardwood Management</li> <li>Oak/Fire Management</li> <li>White Pine and White Cedar Management</li> <li>Historic Logging Museum on the National Wild &amp; Scenic Wolf River</li> </ul> <p>Marshall Pecore, Chief Forester and Menominee Foresters</p>	<p><b>Watersmeet, MI</b></p> <ul style="list-style-type: none"> <li>Sylvania Tract Tour</li> </ul> <p>Research findings on large tree Northern Hardwoods and deer impacts</p> <p>Professor Hans Schabel, (Retired) UW Stevens Point</p>
---	--	---

Learn from the experts about large tree sustainable forestry management including White Pine, Red Oak, Sugar Maple, Basswood, Hemlock, White Cedar and related species.

**Cloquet Forestry Center**  
 176 University Road  
 Cloquet, MN 55720  
 tel: 218-726-6404  
 fax: 218-978-0855

**Registration:** Online at <http://sfec.cfans.umn.edu>  
 Lisa Breuer, [lbreuer@umn.edu](mailto:lbreuer@umn.edu)  
 218-726-6403

**Cost:** \$150 Members (\$300 Non-Members)  
*(Includes all transportation, breakfasts, lunches and refreshments)*

*Dinner both nights is on your own. Hotel reservations will be made through SFEC, but individuals will need to make payments directly to each hotel at time of check in. (\$79.45 Night One; \$71.40 Night Two — taxes included; single or double occupancy)*

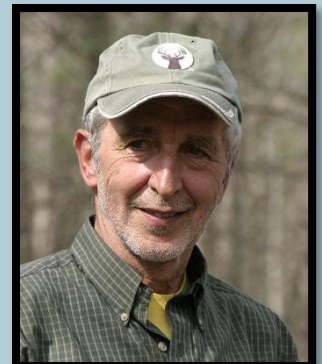
**Mike Kroenke, Program Director**  
[mikroenke@umn.edu](mailto:mikroenke@umn.edu)  
 Sustainable Forests Education Cooperative

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Dr. Hermann Rodenkirchen

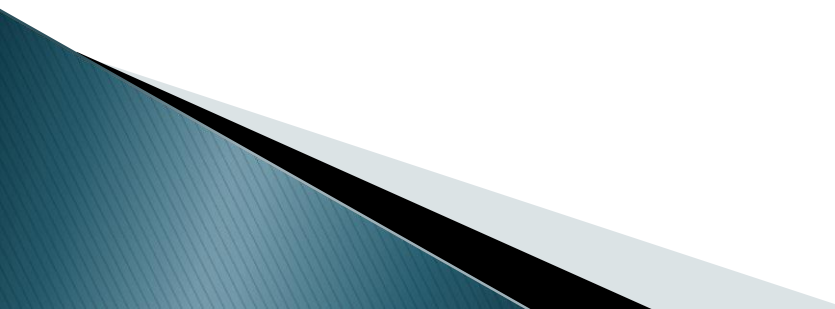


Dr. Hans Schabel

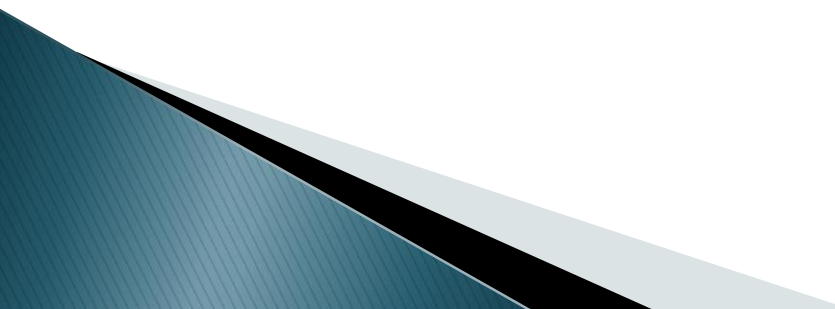
# Success of SFEC is based upon:

- ▶ A need for continuing education by professional foresters and natural resource land managers in Minnesota
- ▶ A recognition by members that cross-programming and interdisciplinary programming is beneficial to all of them for learning and networking
- ▶ A connection with University faculty/research associates to stay abreast in the field and have input into cutting edge research and new knowledge transfer
- ▶ Access to professional UM staff who understand and deliver on educational needs, identification, program design, marketing, delivery and evaluation for the continuing education needs of the professional natural resource land managers in Minnesota
- ▶ A 13 year history of successful program delivery and positive relationships with member partners
- ▶ Programs offered at a very reasonable cost (\$65 per day or \$35 per ½ day)

# Some Challenges

- ▶ Increasing numbers of professional natural resource programs being developed by other organizations in Minnesota
  - ▶ Need for continued close communication with member partners and other entities offering programs
  - ▶ Need for continued professional program delivery formats to meet partner needs
  - ▶ Continued funding during times of fiscal restraint
  - ▶ Professional staff support for an expanding program with increased technical computer and people skills required
- 

# Future Directions/Programs

- ▶ Continue to improve professional education programs by engaging leading specialists and land managers in Minnesota, the Midwest and Canada
  - ▶ Search for and engage other potential professional natural resource partners (i.e. US Fish and Wildlife Service, Natural Resource Conservation Service and National Park Service)
- 

# A few SFEC programs of interest in 2012

January 11  
Annual Forestry,  
Wildlife and Natural  
Resources Research  
Review, Cloquet  
Forestry Center

**UNIVERSITY OF MINNESOTA**  
Sustainable Forests Education Cooperative

**9th Annual Forestry, Wildlife and Natural Resources Research Review**

The 9th Annual Research Review will be devoted entirely to Wildlife Research and Management.  
Do not miss this exciting educational event!

**January 11, 2012**  
**Cloquet Forestry Center**  
**8:00 am - 3:30 pm**

**Registration**  
Online:  
<http://sfec.cfans.umn.edu>  
Or Contact:  
SFEC Program Assistant  
sfec@umn.edu  
218-726-6403  
\$65 SFEC  
\$135 Non-Members

**Sponsors:**  
Sustainable Forests Education Cooperative  
Superior National Forest  
UM Dept. of Forest Resources  
USDA Forest Service North Central Research Station  
UMD Natural Resource Research Institute

This is an opportunity to learn about the latest basic and applied research from researchers and practitioners from the MN DNR, USFS Northern Research Station, USFS National Forests, UMN Depts. of Forest Resources and Conservation Biology, University of Minnesota, Duluth - NRRI, The Nature Conservancy and researchers from Wisconsin.



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Mike Kroenke, Program Director  
[mkroenke@umn.edu](mailto:mkroenke@umn.edu)



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**Adaptive Management in the Face of Climate Change**

**Registration**  
Online:  
<http://sfec.cfans.umn.edu>  
Or Contact:  
Program Assistant  
sfec@umn.edu  
218-726-6403  
SFEC \$65  
Non-SFEC \$135

**Tuesday**  
**February 21, 2012**  
**Cloquet Forestry Center**

The workshop is designed for the practicing forestry and natural resource land managers of Minnesota and the Midwest and Canada. Leading applied scientists, university professors and practitioners will provide on-the-ground perspectives of how climate change may be addressed within managed forests. The program will begin with a context for future management and then move on to potential desired future conditions and adaptive management strategies to address these desired future conditions. This will be a really interesting workshop for anyone interested and concerned about the ramifications of climate change and potential scenarios due to climate change.

Cloquet Forestry Center  
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Cloquet, MN 55720

Mike Kroenke, Program Director/  
[mkroenke@umn.edu](mailto:mkroenke@umn.edu)  
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Dr. Tony  
D'Amato

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February 21,  
Adaptive  
Management in  
the Face of  
Climate Change,  
Cloquet Forestry  
Center

# A few SFEC programs of interest in 2012 (continued)

## March 18-28 Sustainable Forestry and Natural Resource Management in Costa Rica, an International Tour

### Forestry and Natural Resource Management in Costa Rica

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MARCH 18-28, 2012

This will be an exciting international trip with Dean Current-Program Director, University of Minnesota Center for Integrated Natural Resources and Ag Management and Tamara Benjamin, PhD, Research Asst. Professor., Purdue University-CATIE Agreement, Cartago, Turrialba, Costa Rica.

The tour is designed for the professional forester and natural resource land manager. You will learn about tropical sustainable forestry, complex and varied ecosystems, ancient indigenous management of natural resources, indigenous use of forests, water issues, renewable energy, leatherback turtles, payment for environmental services, non-timber forest products, and other topics.

#### Registration

Online:  
<http://sfec.fans.umn.edu>

Or Contact:  
Program Assistant  
[sfec@umn.edu](mailto:sfec@umn.edu)  
218-726-6403

*The tour is available on a first come, first serve basis for the first 25 participants who sign up. Spouses and friends are welcome to participate. Sign up deadline will be November 30, 2011. We are working to keep the costs affordable for everyone. More to come on costs and registrations soon. If you have questions or would like more information please contact Mike Kroenke-SFEC Program Director at [mikroenke@umn.edu](mailto:mikroenke@umn.edu), 218-726-6404 work or 218-451-0934 cell.*

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Mike Kroenke, Director  
[mikroenke@umn.edu](mailto:mikroenke@umn.edu)

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### Sustainable Forests Education Cooperative

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## OAK SYMPOSIUM

### Save the Date in 2012!

SFEC will be teaming up with the Minnesota Forest Resources Council, MN DNR, Saint John's Abbey and University, SWCD and the University of Minnesota Extension to update forest land managers and landowners on current information and research related to improving the regeneration of oak across MN and the Midwest. Experts in the field will focus on the management of oak and associated plant communities for timber, wildlife and multiple benefits.

**Wednesday & Thursday  
June 13 - 14, 2012**

Saint John's Abbey and University  
Collegeville Minnesota

#### REGISTRATION WILL BEGIN IN FALL OF 2011

Online  
<http://sfec.fans.umn.edu>  
Or

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Saint John's Abbey  
& University  
tel: 320-363-3126  
Tom Kroll, Land Manager  
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MN DNR  
tel: 651-259-5274  
Rick Klevorn, Forestry Program  
Coordinator  
[Rick.Klevorn@state.mn.us](mailto:Rick.Klevorn@state.mn.us)

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## June 13-14 Oak Symposium, a single species workshop, St. John's University Arboretum

# In Conclusion

- ▶ SFEC continues to be valued and needed and continues to experience strong support from its members
  - ▶ SFEC has a positive future and direction, and will continue to work toward meeting members' professional education needs
  - ▶ SFEC has demonstrated that an 'entrepreneurial' partnership between a university and partner organizations through base university funding, membership fees and program revenues and grants can be successful during times of budgetary restraints
- 



A quote from an SFEC  
member:

*“As we continue to try to do more with fewer staff, we have come to rely on the Cooperative. The Sustainable Forests Education Cooperative is efficient in providing continuing education services to a large number of professionals from a diversity of organizations, and exposes our staff to the world beyond our routine contacts.”*

# *Sustainable Forests Education Cooperative*

University of Minnesota

*Michael Kroenke-Program Director*

*[mkroenke@umn.edu](mailto:mkroenke@umn.edu)*

*218-726-6404*

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**Driven to Discover<sup>SM</sup>**