

**1999 Project Abstract**  
*for the Period Ending Juine 30, 2001*

## FINAL REPORT

**TITLE:** Accelerated Transfer of New Forest-Research Findings

**PROJECT MANAGER:** Barbara Coffin

**ORGANIZATION:** Sustainable Forests Education Cooperative  
coordinated by the Institute for Sustainable Natural Resources  
College of Natural Resource, University of Minnesota

**ADDRESS:** 250 NRAB, 2003 Upper Buford Circle, St. Paul, MN 55108

**FUND:** Minnesota Environment and Natural Resources Trust Fund

**Legal Citation:** ML 1999, Chap. 231, Sec. 16, Subd. 7 (b).

**APPROPRIATION AMOUNT:** \$115,000

LCMR funding accelerated the transfer of new forest-research findings through educational programming coordinated by the *Sustainable Forests Education Cooperative*. The Cooperative, a public/private partnership of natural resource agencies, industry, and non-profit organizations, offers a new model in collaborative continuing education. The formation of the *Sustainable Forests Education Cooperative* recognized the need to structure educational opportunities in an interdisciplinary and collaborative environment. Educational programming of the Cooperative encourages an integrated, systems approach to resource management where social, economic, and ecological values must work together to sustain healthy, productive forest systems.

Workshops (15 serving over 600 natural resource professionals), an international conference (220 participants from Canada, United States, and Mexico), and the development of educational components for the publication/manual *Tying Forest Stands to Landscapes* were products of the acceleration of funding for the Cooperative. LCMR funding played a critical role in launching this new experiment in collaborative education—the *Sustainable Forests Education Cooperative*. It is now recognized across the nation as a successful model for how to structure and offer continuing education to multi-disciplinary audiences in natural resources management (see *Journal of Forestry*, September 2001).

# FINAL REPORT

DEC 18 2001

Date of Report: July 1, 2001  
LCMR Final Work Program Report

## I: PROJECT TITLE: *Accelerated Transfer of New Forest-Research Findings*

**Project Manager:** Barbara Coffin  
**Affiliation:** Sustainable Forests Education Cooperative  
coordinated by the Institute for Sustainable Natural Resources,  
College of Natural Resources, University of Minnesota  
**Mailing Address:** 250 NRAB, 2003 Upper Buford Circle, St. Paul, MN 55108  
**Tel. Numbers:** 612-624-4986; **E-Mail:** bcoffin@forestry.umn.edu; **Fax:** 612-624-8701  
**Web Address:** www.cnr.umn.edu/CCE

### Total Biennial Project Budget:

|                        |                   |
|------------------------|-------------------|
| \$LCMR                 | \$115,000         |
| <u>- \$LCMR Spent:</u> | <u>\$ 115,000</u> |
| \$ LCMR Balance:       | \$ 00             |

### A. Legal Citation: ML 1999, Chap. 231, Sec. 16, Subd. 7 (b).

**Appropriation Language:** Accelerated Transfer of New Forest-Research Findings. \$58,000 the first year and \$57,000 the second year are from the trust fund to the University of Minnesota to accelerate educational programming by the sustainable forest education cooperative on the practical application of landscape-level analysis in site-level forest management.

## II and III: FINAL PROJECT SUMMARY

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## IV. OUTLINE OF PROJECT RESULTS:

**Result 1: Special Topic Modules:** (603 attendees have attended 15 workshops)  
Fifteen workshops, forums or discussion groups were offered that focus on practical site-level management within a landscape context, for example: *Methods for Intensifying Timber Production While Reducing Forest Fragmentation* and *Practical Silviculture in an Ecological World: Planning for Ecologically-based Forestry on Private Lands*.

The target audience is natural resource professionals (foresters, wildlife biologists, ecologists, planner, etc.) that work for governmental agencies, nonprofit organizations, or industry in and with Minnesota's forest systems. They were recruited by working closely with the training personnel and management staff of each organization, through the semi-annual calendar-of-events issued by the Institute for Sustainable Natural Resources, and through direct mail announcements.

|                        |                  |
|------------------------|------------------|
| <u>Original Budget</u> |                  |
| LCMR Budget:           | \$58,000.00      |
| LCMR \$ Spent:         | <u>58,000.00</u> |
| Balance:               | \$00.00          |

**Result 2: Regional Conference: (220 attendees)**

A conference entitled, 3<sup>rd</sup> North American Forest Ecology Workshop: Issues of Scale from Theory to Practice was held at the Duluth Entertainment Center on June 24-27, 2001. This conference attracted local as well as national and international participation.

|                |                    |
|----------------|--------------------|
| <u>Budget</u>  |                    |
| LCMR Budget:   | \$26,000.00        |
| LCMR \$ Spent: | <u>\$26,000.00</u> |
| Balance:       | \$00.00            |

**Result 3: Educational Publication: (intended audience 1000-3000 individuals)**

Funding for this result has supported the research and development of specialized for the publication tentatively titled, *Tying Forest Stands to Landscapes*. Funding originally intended for the printing of this publication has been used on the development of specialized components—a checklist, decision-tree, and ecological model for forest management plan preparers—for inclusion in the publication. The final printing of this publication will be completed with non-LCMR funds after the end of this grant following outside peer review.

|                |                    |
|----------------|--------------------|
| <u>Budget</u>  |                    |
| LCMR Budget:   | \$31,000.00        |
| LCMR \$ Spent: | <u>\$31,000.00</u> |
| Balance:       | \$00.00            |

**V. DISSEMINATION:**

Broad-based mailings and newsletter announcements reached over 1000 natural resource professionals in Minnesota and an even larger numbers throughout the upper Midwest that announced each workshop, conference or other educational program sponsored by this funding. In addition to these forms of dissemination, the educational publication of result 3 is targeted specifically for professionals that work with private landowners in the MN Forest Stewardship Program.

**VI: CONTEXT**

**A. Significance:**

This project supports the vision of the Minnesota Sustainable Forest Resources Act of 1995 and the goals of the Forest Resources Council. The Act recognizes continuing education as an important component of sustainable use, protection and management of the state's forest resources. The Act which is an outgrowth of Minnesota's GEIS (Generic Environmental Impact Study on Timber Harvesting and Forest Management) recommends that a continuing education program be institutionalized to provide natural resource professionals access to new knowledge and new technologies. The MN Forest Resources Council, in carrying out the direction of MNSFRA has identified landscape-level responses as one of the two most important strategies for mitigating significant impacts.

Accelerating the transfer of new forest-research findings to resource professionals and citizens is vital to the long-term sustainable use of Minnesota forests. The increasing pressures for natural resource commodities and the complexity of instituting sustainable resource management practices are formidable challenges. The formation of the *Sustainable Forests Education Cooperative* as a public/private partnership recognizes the need to structure educational opportunities in an interdisciplinary and collaborative environment. Funding that accelerates this educational programming allows the Cooperative to reach both resource professionals and citizen teams that are asked to comply with the goals of the MNSFRA 1995. All educational programming of the Cooperative encourages an integrated, systems approach to resource management where social, economic, and ecological values must work together to sustain healthy, productive forest systems.

**Time:** This is a one biennium project; it is expected that Cooperative members will provide on-going funding for needed educational programming.

**Budget Context:** The legislatively funded GEIS (1993), oversight by LCMR, called for continuing education for natural resource professionals. The Cooperative is an outgrowth of this recommendation. Cooperative members are providing \$35,400 in FY 99, non-LCMR funds, to the operational budget of the Sustainable Forests Education Cooperative.

## 1. BUDGET

### Personnel:

|                                       | <u>1/31/01</u> | <u>6/30/01</u> |
|---------------------------------------|----------------|----------------|
| Project Coordinator (50-75%)          | \$55,774       | \$54,131       |
| Contract Personnel/Instructor Expense | \$12,000       | \$11,350       |

### Other:

|  |                  |                  |
|--|------------------|------------------|
| Space Rental, Maint. & Utilities                 | \$8,320          | \$ 3,576         |
| Printing & Advertising                           | \$9,000          | \$ 7,441         |
| Communications, Tel., Mail, (and Workshop Exp.). | \$5,906          | \$22,106         |
| Workshop Expenses*                               | \$9,000          |                  |
| Travel in Minnesota                              | \$4,000          | \$5396           |
| Instructor Honorarium/Travel Exp/Cont. Pers.     | \$11,000         | \$11,000         |
| <b>TOTAL</b>                                     | <u>\$115,000</u> | <u>\$115,000</u> |

\*Workshop Expenses include the cost of workshop materials/handouts including duplicating charges; workshop refreshments; workshop design and planning expenses.

## 2. See Attachment A (budget detail)

## VII: COOPERATION:

Members jointly fund a portion of the baseline-operational budget of the Cooperative. LCMR funds allowed for the acceleration of the Cooperative's educational programming. Member pledges for biennium 2000-2001 totaled \$70,800. During this biennium 12 new members have joined the Cooperative: Crow Wing County, Lake County, Carlton County, MN Forest Stewardship Program, Potlatch Corp., Red Lake Tribal DNR, The Nature Conservancy, Natural Resources Research Institute, Wolf Ridge Environmental Learning Center, MN Chippewa Tribes, Institute for Agriculture and Trade Policy, and Crow Wing SWCD.

Cass County, \$2,000  
 St. Louis County, \$2,000  
 DNR Division of Forestry, \$20,000  
 DNR Division of Fish & Wildlife, \$10,000  
 Hedstrom Lumber CO., \$600  
 Beltrami County, \$1,000

Chippewa National Forest, \$2,000  
 Superior National Forest, \$2,000  
 FRC, Landscape Program, \$10,000  
 College of Natural Resources, Uof MN, \$20,000  
 Blandin Paper Co., \$600  
 Hubbard County \$600

**VIII. LOCATION:** The work had direct impact on all forested regions of the state. The workshops and regional conference were held in Grand Rapids, Cloquet, Winona, and Duluth, Minnesota. Workshops in Cloquet were held at the Cloquet Forestry Center and those held in Grand Rapids at the North Central Experiment Station. Both of these facilities are operated by the University of Minnesota. The regional conference was held at a commercial facility, the Duluth Entertainment Conference Center (DECC) in Duluth.

|  |                  |                  |               |               |                           |
|--|------------------|------------------|---------------|---------------|---------------------------|
| <b>LCMR Project</b>  |                  |                  |               |               |                           |
| <b>Accelerated Transfer of New Forest-Research Findings (401-9009)</b> |                  |                  |               |               |                           |
| <b>PI: Barbara Coffin</b>  |                  |                  |               |               |                           |
| <b>TOTAL AWARD: \$115,000</b>  |                  |                  |               |               |                           |
|  |                  |                  |               |               |                           |
| <b>LCMR and University Budget Categories</b>                           | <b>Budget 00</b> | <b>Budget 01</b> | <b>Result</b> | <b>Budget</b> | <b>Status<br/>6/30/01</b> |
| <b>Staff</b>   | \$55,500         | \$55,774         |               |               |                           |
| <i>7000 University Personnel</i>                                       |                  |                  |               |               |                           |
| Bcoffin salary-\$14,400: Coordinator (FY00)                            |                  |                  |               |               |                           |
| Louise Yount-\$6,700: Project Leader(FY00)                             |                  |                  |               |               |                           |
| BCoffin salary-\$14,832: Coordinator (FY01)                            |                  |                  |               |               |                           |
| Louise Yount-\$6,901: Project Leader(FY01)                             |                  |                  |               | \$42,833      | \$43,026                  |
| <i>7100 Fringe Benefits</i>  |                  |                  |               |               |                           |
| Lyount (\$1,849); Bcoffin (\$3,974)                                    |                  |                  |               |               |                           |
| Lyount (\$1,905);Bcoffin(\$4,093)                                      |                  |                  |               | \$11,821      | \$9,985                   |
|  |                  |                  |               |               |                           |
|  |                  |                  | 1             | \$27,639      |                           |
|  |                  |                  | 2             | \$6,410       |                           |
|  |                  |                  | 3             | \$20,605      |                           |
| <i>7010 Civil Service</i>  |                  |                  |               |               |                           |
| J. Johnson   |                  |                  | 1             | \$1,035       | \$1,035                   |
| <i>7103 Civil Service Fringe Benefits</i>                              |                  |                  |               |               |                           |
| J. Johnson   |                  |                  | 1             | \$85          | \$85                      |
| <b>Contract Personnel &amp; Inst. Honorarium</b>                       | \$6,500          | \$12,000         |               |               |                           |
| <b>Instructor Honorarium</b>   | \$9,000          | \$11,000         |               |               |                           |
| <i>7201 Purchase Professional Services</i>                             |                  |                  |               | \$23,000      | \$22,350                  |
|  |                  |                  | 1             | \$5,648       |                           |
|  |                  |                  | 2             | \$9,957       |                           |
|  |                  |                  | 3             | \$7,395       |                           |
| <b>Space Rental*</b> (\$6,000 of budget)                               | \$6,000          | \$8,320          |               |               |                           |
| <b>Workshop Expenses</b>   | \$0              | \$9,000          |               |               |                           |
| <b>Comm, Tel. Mail, *</b> (\$4,390 of budget))                         | \$3,500          | \$5,906          |               |               |                           |
| <i>7300 General Operating Supplies</i>                                 |                  |                  |               | \$17,500      | \$19,500                  |
| <i>7301 General Operating Services</i>                                 |                  |                  |               | \$1,890       | \$776                     |



|  |           |           |   |           |           |
|--|-----------|-----------|---|-----------|-----------|
| <i>Note: Expenses for facility rental; wkshp handouts; refreshments, design team expenses fall into these University categories, however, at times depending on the specific charge the expense will be posted to categories listed below.</i> |           |           |   |           |           |
|  |           |           | 1 | \$16,070  |           |
|  |           |           | 2 | \$3,320   |           |
| <b>Printing &amp; Advertising</b>  | \$31,500  | \$9,000   |   |           |           |
| 7310 Printing  |           |           |   | \$9,000   | \$7,441   |
|  |           |           | 1 | \$2,737   |           |
|  |           |           | 2 | \$3,263   |           |
|  |           |           | 3 | \$3,000   |           |
| <b>Comm, Tel, Mail*</b> (\$1,516 of budget)  |           |           |   |           |           |
| 7341 Postage   |           |           |   | \$1,156   | \$1,792   |
| 7350 Telephone   |           |           |   | \$10      | \$25      |
| 7351 Telephone/Fax   |           |           |   | \$350     | \$13      |
|  |           |           | 1 | \$1,294   |           |
|  |           |           | 2 | \$222     |           |
| <b>Travel</b>  | \$3,000   | \$4,000   |   |           |           |
| 7600 Travel  |           |           |   | \$4,000   | \$5,396   |
|  |           |           | 1 | \$2,672   |           |
|  |           |           | 2 | \$1,328   |           |
| <b>Space Rental*</b> (\$2,320 of budget)   |           |           |   |           |           |
| 8030 Rental  |           |           |   | \$2,320   | \$3,576   |
|  |           |           | 1 | \$820     |           |
|  |           |           | 2 | \$1,500   |           |
| <b>Total</b>   | \$115,000 | \$115,000 |   | \$115,000 | \$115,000 |
| <b>Result 1: \$58,000</b>  |           |           |   | \$58,000  | \$58,000  |
| <b>Result 2: \$26,000</b>  |           |           |   | \$26,000  | \$26,000  |
| <b>Result 3: \$31,000</b>  |           |           |   | \$31,000  | \$31,000  |
| * LCMR budget category represented by more than one University budget category   |           |           |   |           |           |

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*for the Period Ending June 30, 2001*

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**PROJECT MANAGER:** Barbara Coffin

**ORGANIZATION:** Sustainable Forests Education Cooperative  
coordinated by the Institute for Sustainable Natural Resources  
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# Sustainable Forests Education Cooperative



Dave Hansen

## *An Experiment in Collaborative Continuing Education*

Barbara A. Coffin, Louise Yount, and Steve Daley Laursen

### ABSTRACT

The Minnesota Sustainable Forests Education Cooperative was formed to provide a forum for technology transfer between scientists and practitioners and to enhance interdisciplinary interaction. This cooperative model is an ongoing experiment that recognizes the importance of continuing education that brings resource professionals together from a variety of resource disciplines and employer groups. The inherent strengths and efficiencies of the cooperative structure must be supported by careful attention to ongoing challenges, including funding.

**Keywords:** research; technology transfer

Research cooperatives have a long tradition in the natural resources professions. Why not use a similar structure for professional continuing education? In 1998, the College of Natural Resources Center for Continuing Education at the University of Minnesota did just that. For many of the same reasons that research cooperatives were born, the center found that a cooperative structure supported successful technology transfer,

interdisciplinary interaction, ownership of educational programming by each member organization, and a commitment to shared operational funding.

The roots of Minnesota's (and possibly the nation's) first membership-funded education cooperative began in roundtable discussions that preceded the codification of Minnesota's Sustainable Forest Resources Act of 1995. The act recognized that natural resource

professionals face increasingly complex issues and myriad new research findings. Indeed, in 1998 the USDA Forest Service alone published nearly 2,800 research articles (USDA-FS 1999). Add to this the rapid development of information and communication technologies, swiftly changing societal values, and volatile economic times (Hobbs et al. 1993; Lautenschlager 1999; Côté et al. 2001). In many instances the information that professionals need to do their work well is not found in publications, and opportunities for direct information-sharing between researchers and resource managers becomes even more important (Adams 1993). Given these considerations, establishing a con-

**Above:** Lee Frelich of the University of Minnesota College of Natural Resources teaches a workshop on windstorm ecology.

tinuing education program for natural resource professionals was recognized as an important effort, and matching funding of \$150,000 over a four-year period was provided by the state of Minnesota.

In the early years, the new continuing education program was supported by funding from the University of Minnesota's College of Natural Resources and the matching funds from the state. But the start-up funding did not last forever, and the college's Center for Continuing Education staff and the employee groups who had benefited from the educational programs of the new center began to contemplate how they might sustain a continuing education program. Thus the Sustainable Forests Education Cooperative was born.

### Bringing Ideas Together

Natural resource professionals are challenged to manage for a variety of goods and services from ecosystems. Interaction is essential between wildlife biologists, foresters, and other natural resource professionals, for example, in planning and implementing resource management activities (Hanley 1994). A 1998 survey by the Pinchot Institute found that many forestry employers support a strong technical emphasis in undergraduate education followed by the development of integrative skills—now considered so important to the practice of professional forestry—through graduate study and continuing professional education (Sample et al. 1999).

Just as important is the need to bring together research scientists and natural resource practitioners. More regular interaction between forest managers and researchers is critical to obtaining practical results that address the day-to-day issues faced by forest managers (Coté et al. 2001).

A continuing education program that brings resource professionals together in a format that mixes resource disciplines (foresters and wildlife biologists, practitioners and researchers) and employer groups (county, state, federal, nonprofit, and private) can play an important role in shaping how resource managers do their jobs. The

**Table 1. Minnesota's Sustainable Forests Education Cooperative, Member Organizations, 2000–01.**

#### County Government

Association of County Land Commissioners

Minnesota counties: Beltrami, Carlton, Cass, Clearwater, Crow Wing, Hubbard, Lake, St. Louis

#### Federal Government

USDA Forest Service, Chippewa National Forest

USDA Forest Service, Superior National Forest

#### State Government

Department of Natural Resources (DNR), Division of Ecological Services

DNR Division of Forestry

DNR Division of Wildlife

Soil and Water Conservation District, Crow Wing County

#### Forest Industry

Boise Cascade Corporation

Hedstrom Lumber Company

Potlatch Corporation

UPM Kymmene Corporation

#### Nongovernment Organizations

Community Forestry Resource Center

The Nature Conservancy

Wolf Ridge Environmental Learning Center

#### Tribes

Minnesota Chippewa Tribes: Bois Fort, Fond du Lac, Grand Portage, Leech Lake, Mille Lacs, White Earth

Red Lake Tribal Department of Natural Resources

#### University of Minnesota

College of Natural Resources, Department of Forest Resources

Extension Service

Natural Resources Research Institute

cooperative provides a structure for continuing education that facilitates this interaction and communication.

### How It Works

Many educational programs across the country use cooperatives, partnerships, and collaboratives to achieve their goals (Womble 1993). The specific model developed for the Minnesota Sustainable Forests Education Cooperative combines a structure that provides for interdisciplinary and inter-agency learning and interaction, with fee-based membership to enable long-term financial well-being.

The cooperative is an alliance of private, county, state, and federal institutions that cosponsor joint educational training for their employees. Member organizations contribute annually for administrative overhead, receive reduced rates on registration fees, and help to establish educational needs and priorities. Annual membership dues

range from \$50 to \$100 per person and are based on the number of employees served by the cooperative in a given organization.

Cooperative members represent the full spectrum of natural resource professional employers in Minnesota. They include county, state, and federal agencies; private consultants and industry; Native American tribes; and nongovernment organizations (table 1).

The cooperative is administered by the Center for Continuing Education and funded by a mix of funding sources. It is staffed by one coordinator and one part-time assistant. Three years after its establishment, dues-paying member organizations now cover 26 percent of the annual operating budget. The remainder comes from college support, registration fees, and short-term grants. Cooperative members make an initial three-year pledge to the cooperative and then renew their membership annually.

**Table 2. Courses offered by Minnesota's Sustainable Forests Education Cooperative, 2000-01.**

**Basic Forest Management**

Forest Management and Field Skills Short Course

**Exotics in Forest Management**

Biosafety Principles and Assessment Tools  
Identifying Plants to Classify Forest Habitats

**Forest Ecology and Management**

Managing Forests for Wildlife with Views on a Changing Climate  
Managing for Reptiles and Amphibians  
Practical Silviculture in an Ecological World: Strategies for Management Plans by Forest Stewardship Plan Preparers  
Windstorm Ecology

**Forest Management Guidelines**

Introduction to Minnesota's Voluntary Forest Management Guidelines  
Cultural Resources on Forested Lands  
Riparian Guidelines Field Key: A New Tool

**Landscape-Level Planning**

Ecosystem-based Management at Boise Cascade: A Case-Study  
Increasing Forest Productivity while Decreasing Forest Fragmentation

**Natural Resource Policy**

History of Timber Use and Tribal Land Development in Northern Minnesota

**Productivity**

White Spruce Management  
Managing Northern Hardwoods  
Tree Breeding Principles and Strategies: An Overview  
Identifying Plants to Classify Forest Habitat  
Red Pine Management  
Gypsy Moth Silviculture

**Recreation Management**

Recreational Trail Design Workshop

**Resource Assessment**

Quicker Cheaper Stand Assessment

**Technology Transfer**

Using Handheld Personal Computers in Field Forestry  
Global Positioning Systems in Forestry

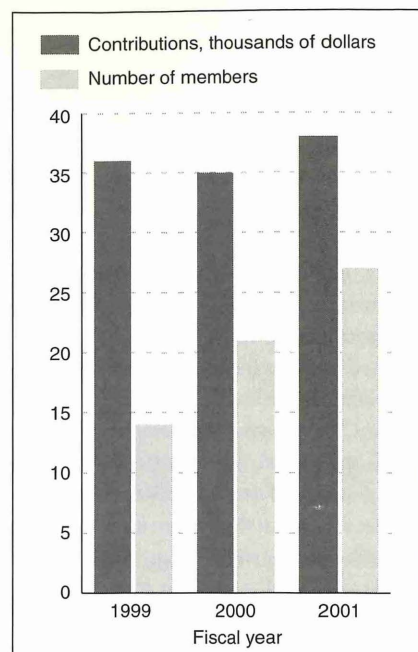
The mechanics of the cooperative are well established, but the structure, operations, and administration of the program must remain flexible to meet the members' needs. A grant from the Legislative Commission on Minnesota Resources [redacted] up, and other grants [redacted] to subsidize the delivery of specific workshops [redacted] of college funds, grants, and income change from year to year, the membership dues may need to be adjusted to cover a different percentage of the operating costs.

**The Cooperative in Action**

Developing a successful educational experience depends on knowing your audience (Hobbs et al. 1993). For this reason, the process of identifying

members' educational needs is critical to success. Staff use a multipronged strategy to determine educational needs. At least once a year, staff visit each member individually to discuss current and future continuing education needs. In addition, mail-back surveys are used so that cooperative staff can assess interest in existing programs and propose new ideas.

Opportunities occasionally arise on short notice for a special workshop, and members are polled through e-mail or by phone to determine whether there is enough interest to develop and schedule the program. Recently, a new strategy has been used whereby subgroups of similar member organizations (such as Native American tribes or industry members) meet to identify



**Figure 1.** In the first three years of the cooperative, membership has almost doubled while contributions have stayed level. The cooperative's annual operating budget is vulnerable to the fluctuating budgets of member organizations.

continuing education needs specific to them. In all cases, a designated cooperative member liaison ensures ongoing communication between staff and the member group.

Responses from these various forms of needs assessment define the scope of educational programs for the coming year. If possible, themes are identified and a workshop or cluster of workshops are designed to address the theme. For example, landscape-level analysis was a thematic focus in the cooperative's early years, so a series of workshops addressed issues ranging from new technology (Technology in Forest Management Practice: Site to Landscape Level) to modeling timber sale design (Increasing Forest Productivity while Decreasing Fragmentation).

Information delivery methods are a critical component of a continuing education program (Hobbs et al. 1993). Although many forms of delivery exist (e.g., workshops, symposia, short courses, one-on-one contact, self-study courses, and asynchronous and synchronous formats), the cooperative relies primarily on the one-day workshop



format. Most participants can easily make time in their schedules for a one-day workshop, and this format allows resource managers from across the state and region enough time to interact directly with each other (frequently rated as one of the most valuable parts of the day), absorb new information, and interact with instructors. Most workshops include a field component and classroom instruction.

The cooperative offers a variety of workshops each year. Topics have included forest management guidelines, landscape-level planning, new technologies, and forest productivity issues (*table 2*). Workshops on new theories of land management (e.g., those in the landscape-level planning category) appeal to administrators and planners, and the more applied workshops (e.g., Northern Hardwoods Management, Managing for Reptiles and Amphibians) engage the field forester or wildlife biologist.

Communication with cooperative members occurs formally at the annual

needs assessment meeting, informally at workshops or other meetings, electronically, and through the biannual calendar of events. To date, members have not indicated a need for an annual meeting of all members, but as the cooperative further refines its programming and develops short courses or a certificate program, an annual membership meeting may be necessary to conduct more intensive long-term planning.

### **Tomorrow's Challenges**

The Sustainable Forests Education Cooperative is an ongoing experiment in collaborative continuing education. As a model it offers important strengths. It has become a forum for successful technology transfer, and Minnesota's resource professionals have come to rely on the cooperative to convene educational programs that explore new research findings and new resource management practices. Because of its diverse membership base, learning occurs in an interagency and cross-

disciplinary environment and supports a structure of shared financial commitment and well-being.

The inherent strengths and efficiencies of the cooperative structure must be supported by careful attention to ongoing challenges. Frequent communication using personal contacts, printed calendars, and e-mail is essential to sustaining an educational program that meets members' needs. Successful communication is key to maintaining a quality program that can be relied on to present important new ideas and support a membership base willing to voluntarily commit to a shared educational program year after year.

Although membership nearly doubled in the cooperative's first three years, the level of membership contributions has remained constant (*fig. 1*). Collaborative funding—one of the major strengths of the cooperative—is also one of its greatest weaknesses. Membership in the cooperative has been popular, as has been the idea of

shared funding for a commonly needed service. But during difficult economic times, a cooperative member contribution can be viewed as an expendable item in an organization's budget. Difficult financial times have been a factor in decreased member contributions by some member organizations.

Because membership dues are voluntary, they are vulnerable to shifting budget priorities. Still, there is broad appreciation for the inherent efficiencies of this model. As one member put it,

As we continue to try to do more with fewer staff we have come to rely on the cooperative. The 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.

Because membership dues are a pledge, not a contract, the cooperative operates

under a healthy challenge to provide a valued program responsive to the needs of its members and to be a leader in the presentation of new ideas and research findings.

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