

women in

Volume 16, Number 4 June 1995

NATURAL RESOURCES



for professionals in
forestry, wildlife, range,
fisheries, recreation,
and related social sciences

*Focus on Rural Economic
and Community Development*

Interview: Jean Mater and Catherine Mater
of Mater Engineering

Retirement Migration

Sustainability

Development Projects in Arizona, Maine,
Arkansas, Nebraska, Montana,
Wisconsin, Idaho

Guest Editorial

Lynn Jungwirth

I have lived all my life in small timber towns in southern Oregon and northern California—spotted owl territory. That life has been long enough to allow me to look back a good distance.

The way I see it, women have always been an instrumental part of rural development, the focus of this issue of WiNR. Along with birthing the population and raising the next generation of farmers and loggers and miners, we have sent our daughters off to school to become the botanists, wildlife specialists, and planners who have helped determine the fate of rural communities. And of course, since the beginning, we were the partners.

As farm women we partnered with our husbands and planted and harvested and met with the banker. Logger's wives kept the books, cooked for the hands, ran for parts, planted and tended the truck gardens, learned to drive tractors and "cats" and loaders and pitched in wherever we were needed.

Forest Service wives and rancher's wives taught in the rural schools and served as public health nurses. Our communities had better education and recreation and health care because of that partnership. Rural women have always known that the health of our families depended on the health of our towns and our land.

But the 60s and 70s brought the consolidation of industry, and in my county, sawmills decreased from 22 locally-owned to four owned by out-of-county large companies. The local cash flow dried up. We had the jobs, but the profits had gone elsewhere. There was no money to re-invest in subdivisions and office buildings. Nobody would carry the paper back on your piece of land to finance your house. Nobody had the money or supplies to build the Little League field or the community swimming pool. The profits that were made from the trees and our work became corporate assets to be invested elsewhere for the best rate of return.

Then the environmental movement started and the landbase we could work on started shrinking. Miner's wives and rancher's wives and logger's wives became para-professionals in the fields of law and lobbying. We became adept at writing "comments" to land management plans. We left our husband's sides and went to Congress. We met other women there who were doing the same thing, defending their right to make a living off the land.

Our communities became (in other people's language) "at-risk." Then the government came to help. Institutions came to help but they didn't need us as partners. Rural economic development was done with Economic Development Staff who transplanted the "build it and they will come" urban development strategy into our small rural towns. And they

built it. Industrial parks with sewer and water. "They" did not come. For five years the sole tenant of our Trinity Alps Industrial Park was the county welfare office.

Somehow the economic, social, and environmental issues had become "balkanized," cut into parts. We women had been relegated to the social area. Big business and government and "national interests" took the other parts. We knew, however, and our families knew, that in rural America economic interests and environmental interests were the same thing.

Our instructions were to diversify by creating non-resource based jobs. We felt a synthesis was needed, not a turning away.

The 80s and 90s continued to shrink the land base and the economic opportunity. In Trinity County two more sawmills closed and the Dwyer Decision regarding the threatened and endangered Northern Spotted Owl had closed the forest. Our families were very threatened; our social fabric gave way like worn cloth at the knees. We turned to partnerships with social service providers and health providers and schools to help our children make it through. We helped our husbands develop "multiple income strategies" to keep our families going. We became fairly sophisticated in the ways of the world.

And now I sit in "Federal Eco-system Management" (FEMAT) territory in a county where 83 percent of the land base is National Forest Lands. Of that 1.6 million acres only 200,000 acres can be managed for commercial timber because we must preserve habitat for late seral stage species. We are to rely upon "forest health" management for our livelihood. Now we rely on partnerships to move our community into better health through "ecosystem" management. Those partnerships have been with community colleges for education, with Department of Labor for retraining, with the US Forest Service for contracting service work to local workers, and with colleges and universities for technical expertise necessary for this change from being loggers and sawmillers to becoming anointed stewards of the land.

We still know that the health of our families depends upon the health of the town and the health of the land.

In 1993, the Northwest Economic Adjustment Initiative, President Clinton's Economic Revitalization Plan for the Spotted Owl Territories in Oregon, Washington and Northern California, allowed us access to government programs for economic development. In one program we found a partner. The US Forest Service Community Assistance Program actually provides funds and technical assistance to build our capacity for our own plans, for our own ideas, for our own strengths. And we are now building on those plans. Not industrial parks, but high-value herb gardens (because we know how to garden), and niche-market timber

products (we know wood), and various marketing and production cooperatives (because we know ourselves). Now we are back to partnerships.

Only now we have become the business owners, the District Rangers, the County Commissioners, the bankers, the economic development staff, and leaders who forge partnerships. Rural women attend and facilitate "partnership groups": diverse, ornery groups of local environmentalists, logging folks, business folks, community folks, and government folks who decided to just sit down and work out local solutions to these very complicated natural resource management problems. Partners work things out. Partners need *everybody* to succeed.

Rural women became skilled negotiators and communicators. Miner's wives debrief congressional aides, loggers wives research legislation to find small scale technology fitted to sustainable forestry. We have learned about revolving loan funds and joint ventures. We can identify sensitive species and flawed reasoning.

When I look ahead I still see rural America struggling to survive. I also see women providing the steel web of integration, encouraging and providing cooperation. I still see women learning and teaching and caring and sharing. We have always been the partners.

Lynn Jungwirth lives in a small mill town in northwestern California. She is the Executive Director of The Watershed Research and Training Center, a community based organization which formed in 1992 to help the community get access to the education and training necessary to do the research and forest practices of the new land management policies for the federal forest. Her Bachelor's in English Literature is from the University of Oregon. Previously she partnered in J-3 Logging and Lumber, Jungwirth Consulting, and Bear Wallow Honey Company.

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WOMEN IN NATURAL RESOURCES

June 1995

Volume 16, Number 4



FEATURES

4

Sustainability
Ruth McWilliams
Fred Patten

Building on USDA's historic commitment to rural economic and community development, the Forest Service reshapes its approach to rural communities.

8

Arizona's Rural Tourism
Development Program
Kathleen L. Andereck

Look at the ambitious project that one state has put into motion to assist rural communities. Then look at the specific ways that a real community is examined and analyzed in light of assets and potential.

13

Questions and Answers:
Theresa S. Hoffman of MIBA
John Joseph Daigle

The Maine Indian Basketmakers Alliance (MIBA) is a grassroots organization representing the interests of four Maine Indian tribes.

18

A Depression Girl Scout Camp is Reborn
as an Arkansas County Recreation Site
Jane Hunt

A great example of 1930s WPA and CCC construction is being saved from certain decay by the determined effort of volunteers and the Forest Service

21

Hudson-Meng Bison Kill Site
Patricia Noonan Irwin

The determination to find an explanation for buried bones led a Nebraska cattle rancher and an amateur archaeologist to one of the most amazing archaeological finds in this country. The resulting developments are still unfolding.

DEPARTMENTS

2

Letters & Opinions

17

Book Review of
Paul Hawken's
The Ecology of Commerce
Amelia Jenkins

34

Publications

48

On the Grow
A Management Column by
Barb Springer Beck

53

News & Notes

57

Kiosk and
Information for subscribers,
advertisers, and contributors

Inside front cover

Guest Editorial
Lynn Jungwirth

The cover photo

The executive staff and
owners of
Mater Engineering, Ltd.
From left to right,
Catherine Mater,
Scott Mater,
and Dr. Jean Mater
Photo by David Grubbs

FEATURES

24

Interview: The Maters
Jean and Catherine
Karen Lyman

Mater Engineering, Ltd., has been servicing worldwide forest product clients for 50 years, specializing in the design and engineering of wood processing facilities and technologies as well as in the identification of market opportunities for new product development.

35

Retirement Migration:
An Economic Development Tool
Linda Kirk Fox

Planners ought to pay attention to those factors that will push or pull the relatively well-off, over-fifty crowd to greener pastures.

43

Planning a Step by Step Revitalization
Barbara A. F. Ott

Economically depressed small towns are often paralyzed by apathy, wounded pride, or lack of organization. This Montana town is hurting economically, but the town is actively working on a plan with concrete goals.

46

Wisconsin's Huge Natural Resource Base
is a Matchup for a Large RC&D
John R. Witherspoon

Resource Conservation and Development (RC&D) assumes that local, rural people know what they want for development projects.

50

Finding a Way to Use the Woods—
Volunteers Are the Heroes Here.
MaryAlice Stoner

When tiny Elk City, Idaho, decided to embark on economic development projects, planners instinctively knew that they also had to pay attention to retaining the workforce's quality of life.

I was very interested in the article by Laurel Marcus (WiNR 16:3) about beneficial dredging and removal of clean dredge from a port in Oakland to form marshes in San Francisco Bay. It was a collaborative effort that benefited habitat and economic conditions at the port. In our state of Texas we did something similar on the Aransas National Wildlife Refuge—home of endangered whooping cranes. The US Fish and Wildlife Service and Mitchell Energy—an oil company that needed to dredge a channel on the Gulf Intracoastal Waterway—and probably there were lots of other collaborators who worked on it too) used the dredged materials with concrete

pads and other innovative stuff to construct a new marsh habitat. The result every one agrees is a creative way to use the material while establishing new sea grass areas which attract more food and habitat for cranes.

Estelle R. Rosecourt, Dallas, Texas

Hey, that picture of those farm operators and NRCS women on the combine (Marlene Muchow's article WiNR 16:3 page 35) was wonderful. All the generations were represented there and those women looked like they all knew how to work hard, lean on the machines at time, and talk business.

Carla Williams Burton, Aurora, Colorado

I had to react to your editorial (WiNR 61:3) concerning what affirmative action/equal opportunity programs have brought to all of us. Many of us who are minorities live with the notion from others that we got where we did because of AA/EOM. That isn't true and it hurts us with our colleagues as much as it helps. We know that we have met the standards and that the standards weren't lowered for us. To me, the biggest help AA gives is that there is wide-ranging public recruitment for public jobs and that the skills and education that are called for are spelled out for the most part fairly. I don't want to see it done away with, but the statistics show that

FISH AND WILDLIFE PROGRAM DIRECTOR

The New York State Department of Environmental Conservation is seeking a Director for our Division of Fish and Wildlife. The Director will play a key role in the protection, management and enhancement of New York State's fish and wildlife resources.

The candidate we seek must have a Bachelor's or advanced degree in fisheries or wildlife science and 8 years of professional experience, including 3 years in a senior management capacity as well as 3 years related to natural resources management/protection. Preference will be given to candidates with academic credentials and professional experience in fisheries or wildlife management.

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Aquatic Ecologist

Marine Advisory Services Specialist

The Illinois-Indiana Sea Grant Program and Purdue University are seeking an aquatic ecologist (Ph.D. preferred) for an administrative professional position in Biological Sciences at Purdue University Calumet beginning January 1996. Candidates should have background and experience in water quality; experience or training in toxicology or bioremediation is desired.

The Specialist will devote 70 percent effort to extension service focusing on water quality and restoration of coastal ecosystems. This encompasses the education, outreach and technology transfer mission of the Program to state agencies, industries, commercial personnel, citizens and communities along southern Lake Michigan. The position interacts with the Purdue Cooperative Extension Service and includes a 30 percent teaching and research responsibility in the Department of Biological Sciences at Purdue University Calumet. The campus enrolls over 9,000 students in more than 80 associate, bachelor's and master's degree programs in 16 academic departments. The campus is situated on 180 wooded acres in northwest Indiana, less than one hour by car or train from Chicago. The Department of Biological Sciences offers programs leading to a B.S. degree and an M.S. degree in Biology.

Applications should include a curriculum vitae, transcripts, a statement of interest in extension, research and teaching, and three letters of recommendation. Closing date for applications is September 1, 1995, or until a suitable candidate is found. Applications should be addressed to: Chair, Search Committee, Biological Sciences, Purdue University Calumet, Hammond IN 46323.

Purdue University Calumet is an EO/AE. Women and minorities are encouraged to apply.

minorities haven't benefited as much as white males think.

Robert Haroldson, St. Paul, Minnesota

AA rules especially benefited educated white females in a large number of arenas. In natural resources work that is especially true. Those who want to abolish affirmative action insist that it has failed in its goals which were to assist disadvantaged people get jobs—which is nonsense, it was never designed as a welfare program. It has to do with fairness. We all pay the taxes and tuitions and want our views and cultures reflected in public universities and government. Of course the regulations need looking at, but WiNR is right on saying women in natural resources ought to be supporting it. AA didn't give us the moon, but at least we have blasted off toward it. The gravitational pull of discrimination is strong though and could suck us all the way back if we ignore the warning signs.

Melanie Moviler, New Orleans, Louisiana

The magazine still wows me every quarter with your great interviews, articles and shorter stuff. However, I miss your cartoons and humor which seemed to be sprinkled more plentifully in years past. Don't get too serious on us.

Marilou Barnes, Santa Barbara, California

Restoration & Management Notes

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ANIMAL SCIENCE: Assistant Professor, Ruminant Nutrition. Animal and Range Sciences, New Mexico State University—Las Cruces. Position will involve approximately 55 percent teaching and 45 percent research with research emphasis on utilization of grazed and harvested forages. Teaching may include Feeds and Feeding, Advanced Animal Nutrition or other courses depending upon departmental needs and candidate's expertise. Tenure track, 12-month position. Ph.D. in Animal Nutrition with emphasis in ruminant nutrition and strong interest/experience with beef cattle and/or sheep required. Evidence of teaching proficiency and ability to interact with students should be provided. Reply to Dr. Mark K. Petersen, Animal & Range Sciences, Box 30003/Dept. 31, New Mexico State University, Las Cruces, NM 88003-0003 by July 17 or until filled. Include resume, transcripts, list of publications and four letters of reference. *The university is an EO/AE.*

DIRECTOR MIDWEST SCIENCE CENTER National Biological Service

The Midwest Science Center (formerly the National Fisheries Contaminant Research Center), National Biological Service, is seeking an individual for the position of Director. The Center, located in Columbia, Missouri, is an internationally respected research center with multi-disciplinary expertise in environmental toxicology, aquatic ecology, and environmental/analytical chemistry. In addition to the 33-acre Columbia facility, the Center also maintains field research stations in Jackson, Wyoming, and Yankton, South Dakota. The Director leads and manages the Center's scientific program and national and international research partnerships. Desired qualifications include a Ph.D. in biological sciences, chemistry, agriculture, natural resource management, or related disciplines and experience in leading a multi-disciplinary research program. The Columbia area offers a high quality of life with state-of-the-art medical facilities, progressive public school programs, strong university influence, and diverse recreational opportunities. The salary range for this GS-15 position is \$70,482 to \$91,629. Position open until filled. Interested candidates should contact **Linda Goetting, National Biological Service, Midwest Science Center, 4200 New Haven Road, Columbia, Missouri 65201. Phone 314-875-5399, or for application details, email linda_goetting@nbs.gov for procedures.** All candidates will receive consideration without regard to age, race, religion, color, national origin, sex, or other non-merit factors.

Texas A & M

Two positions Herpetologist

A 12 month/year tenure track, Assistant Professorship, jointly appointed with the College of Agriculture and Life Sciences and the Texas Agricultural Experiment Station, begins January 1996, or later.

Ph.D. required to teach undergraduate and graduate courses in herpetology, advise students, develop a research program, and serve as Curator of Herpetology for the Texas Cooperative Wildlife Collections.

Letters of application, including teaching and research goals; curriculum vitae and names of three references will be accepted by Dr. John D. McEachran, Search Committee Chair, phone 409-845-5777 (address below) until September 15, 1995—or until position is filled.

Caesar Kleberg Chair in Wildlife Ecology

A 12-month/year, tenurable position, jointly appointed with the College of Agriculture and Life Sciences and the Texas Agricultural Experiment Station, as Professor and Caesar Kleberg Chair in Wildlife Ecology beginning January 1996 or later.

Requirements include a Ph.D., 10 years post-doctoral experience, an appropriate publication and grantsmanship record, teaching experience, and a strong commitment to an academic program integrating theoretical and applied aspects of ecology, conservation, and management.

Letters of application, curriculum vitae, statements of teaching philosophy and research interests, and the names of three references will be accepted by Dr. Nova J. Silvy, phone 409-845-0598 (address below) by October 1995—or until position is filled.

Address for both positions:
**Department of Wildlife and
Fisheries Sciences
Texas A & M University
College Station TX 77843-2258.**

*The University is an AA/EO
Employer and welcomes applications from
women and minority candidates*

BUILDING ON USDA'S HISTORIC COMMITMENT TO RURAL ECONOMIC AND COMMUNITY DEVELOPMENT, THE FOREST SERVICE RESHAPES ITS APPROACH TO RURAL COMMUNITIES.

SUSTAINABILITY

RUTH McWILLIAMS
FRED PATTEN

Discussions about sustainable development date back at least to 1987 when the World Commission on Environment and Development issued *Our Common Future* in which sustainable development was defined as that which "meets the needs of the present without compromising the ability of future generations to meet their own needs." Only more recently, however, have discussions about rural development within the Federal government—and Forest Service, in particular—focused on sustainability and how to help the nation foster a sustainable future.

For more than 100 years the Federal government has tried to improve rural conditions. The General Accounting Office (GAO), in its 1994 rural development report, identified a patchwork of over 600 programs spread throughout the Federal system within the United States Departments of Agriculture, Commerce, Interior, Transportation, and elsewhere. GAO grouped the programs into four types of assistance: Economic development; Agriculture/natural resources; Human resources; and Infrastructure.

For its part, the US Department of Agriculture (USDA) Forest Service (FS) is involved in natural resource management activities on public and private lands and recognizes the link to rural economies. In the past, however, "rural development" was seen as a byproduct or derivative of land management activities. Now the agency is taking a more active, coordinated, and comprehensive approach to strengthening rural America by providing technical and financial assistance to rural communities for sustainable rural development purposes.

In 1989, the FS participated in a Department-wide review of rural development efforts designed to sharpen the focus of USDA's rural policy and programs and strengthen USDA's capacity. In June of that year, Secretary Clayton Yeutter released the results in a report titled *A Hard Look at USDA's Rural Development Programs* which recommended the Department clarify its commitment to rural development, strengthen coordination of rural programs, improve its ability to implement those programs, and enhance the Department's capacity for strategic action.

Forest Service strategy

After the Secretary completed the review, the FS formed its own National Rural Development Task Force to assess the agency's capability and develop a plan. In June 1990, the agency released its national rural development strategy for the 1990's titled *Working Together for Rural America*. The strategy contains a revised rural development definition, policy, and set of goals for the FS. "Rural development" is defined as "the management of human, natural, technical, and financial resources needed to improve living conditions, provide employment opportunities, enrich the cultural life, and enhance the environment of rural America." And the agency explicitly recognizes in the strategy that rural development, as defined, is accomplished through partnerships.

The policy states:

The FS will provide leadership in working with rural people and communities on developing natural resource-based opportunities and enterprises that contribute to the economic and social vitality of rural communities. The FS can make lasting improvements in rural America by helping people solve their local problems in ways that enhance the quality of the environment in accordance with our existing authorities.

By focusing on "community vitality" rather than "community stability," as previously envisioned by policy makers, the agency is taking a much broader view of how it can help communities consider their options and the tradeoffs. Generally, in working with communities the FS uses a "community of place" concept, leaving it up to the people in a place to define "community" for themselves unless a specific definition is otherwise legislated.

The six goals focus on:

- Communicating to both FS employees and the public that rural development is a key part of the FS mission;
- Including rural development in agency resource decisions to achieve long-term economic development and improved quality of life;

- Participating actively in community rural development efforts;
- Understanding and integrating the needs of diverse communities;
- Strengthening participation in cooperative USDA efforts at the local level; and
- Providing timely and current research and resource information.

Several key principles underly implementation of the strategy. They include:

- Focusing on community-led, and community-based efforts in rural America (the whole community, not just its business sector);
- Being part of a comprehensive approach and working collaboratively;
- Taking strategic action to address local needs (needs-driven, not program-driven assistance);
- Acting for long-term, sustainable solutions versus the quick-fix approach;
- Accomplishing objectives through partnerships;
- Helping communities capitalize on their natural resource-based potential and assets;
- Strengthening communities through economic diversification;
- Improving the integration of environmental and economic concerns and opportunities (since sustainable ecosystems depend on sustainable communities and vice versa); and
- Using broad-based planning as a prerequisite to implementation of local actions.

Implementation of the 10-year strategy has now been underway for five years. Since its release, a number of key implementation steps have been taken—all of which are directly linked to the goals and implementation responsibilities outlined in the strategy.

1990. The FS helped the Secretary of Agriculture launch pilot rural development councils at the national and State levels to improve coordination of Federal, State, and local efforts; now the National Rural Development Partnership includes 39 State councils. In November 1990, the agency received additional, and new permanent authority to assist rural America. The new authority

focuses on National Forest-dependent rural communities—helping to diversify their local economies and improve their economic, social, and environmental well-being.

1991. A national workshop was held in March, in Spokane, Washington, to formally introduce the national strategy to employees and partners.

1992. The agency began a national awards program to annually recognize outstanding rural development efforts.

1993. The FS revised its mission statement which now explicitly recognizes a sustainable rural development responsibility.

1994. The agency's leadership reaffirmed the importance of rural community assistance by sending a letter to all employees and releasing a set of questions and answers about the proper use of funds to participate in rural community assistance activities. In January, at a National Conference on Developing Partnerships for Forest Stewardship and Rural Economic Development, FS Associate Chief David Unger stated that "Our overall goal is to facilitate and foster sustainable community development—linking community assistance and resource management."

Agency commitment

The Forest Service believes it is well positioned to help because it:

- Has a presence and vested interest in communities with a natural resource base;
- Carries out land management responsibilities which affect the opportunities available to local communities;
- Has professional expertise needed by communities; and
- Can provide seed money to catalyze local action and leverage other resources.

As the FS continues to develop an agency-wide approach to helping rural communities, all parts of the agency and levels of the organization are getting involved. A core set of programs within the State and Private Forestry (S&PF) branch serves as the foundation of the overall Rural Community Assistance effort. Authorities for the core programs are found in the Cooperative Forestry Assistance Act of 1978, as amended in 1990; and in the National Forest-Dependent Rural Communities Economic Diversification Act of 1990. The flexibility of these authorities allows the FS to assist rural communities in a variety of ways (e.g., helping organize local efforts, developing plans for their future, and assisting with projects). The National Forest-Dependent Communities Act does, however, contain eligibility criteria.

Effective participation in community-based activities on the part of FS employees goes beyond these authorities. It also involves being able to interact with people and communities through a variety of community service and leadership activities—most im-

portantly, technical assistance to address specific issues and problems. Since 1993, the annual appropriations law has given the agency some needed flexibility by allowing the FS to use appropriated funds for "interactions with and providing technical assistance to rural communities for sustainable rural development" purposes. The intent and purpose of the appropriations language has been shared with all employees via a letter from the Chief.

The programs at work

In providing rural community assistance, the agency has determined that *its first priority is to target available technical and financial assistance to communities adversely affected by changes in the availability of natural resources or by changes in natural resource policy*. Given the existing strategy, authorities, programs, and the focus, the FS was ready in 1994 to assist the President in implementing the Economic Revitalization Plan for the Pacific Northwest (which includes northern California and western parts of Oregon and Washington). Currently, over half of the agency's Rural Community Assistance funds which total \$23 million are directed toward the Pacific Northwest.

In 1994, more than 925 rural communities received direct assistance from the FS, as compared to 185 communities in fiscal year 1992 (the first year in which the FS received funds to assist National Forest-dependent rural communities). These numbers include assistance provided to communities under the President's Plan for the Pacific Northwest; and to nearly 100 minority communities and tribal governments. A variety of efforts are underway with communities throughout the United States; and a number are highlighted in the publication Working Together: Rural Communities and the Forest Service. The examples include using special forest products to diversify the local economy in Hayfork, California; creating a wood technology business incubator in Elkins, West Virginia; and increasing tourism opportunities in Klawock, Alaska.

The full extent of the agency's efforts goes beyond the core programs; and includes other FS programs administered by S&PF, the National Forest System, Research, and other parts of the agency. Communities report that one of the most valuable contributions the FS makes is the technical assistance provided *by employees who live and work in or near their communities*, and by the various partners. The partners include State forestry organizations and economic development agencies, local government agencies, Resource Conservation and Development Councils and Economic Development Districts, community-based organizations, and a variety of other government and non-government interests.

As the agency moves ahead, a conscious effort is being made to keep the actions aligned with the agenda of current administrations. In a newly released statement from USDA Secretary Dan Glickman, a set of eight principles guiding the Clinton Administration's agriculture and rural agenda includes expanding rural economic opportunities, fostering sound stewardship of our natural resources, and promoting sound science for the next century. The 17 accomplishments cited focus on community empowerment and homegrown solutions through the establishment of empowerment zones and enterprise communities, fostering business development in the Pacific Northwest through economic diversification, finding common sense solutions to environmental policy debates, improving government-to-government relations with Native American tribal governments, and more.

Link with other national and international efforts?

The diversity of FS programs and partners gives the agency the flexibility to focus on a broad set of sustainable development strategies or goals, such as those identified by the World Commission on Environment and Development. The World Commission placed great importance on changing the quality of growth, meeting essential human needs, conserving and enhancing the resource base, reorienting technology, and merging environment and economics in decision making.

More recently, discussions within the US have focused on defining the basic concepts of sustainability, fostering a national conservation ethic, institutionalizing a Federal commitment to sustainability, coordinating government actions at all levels, harnessing market forces, and more.

The President's Council on Sustainable Development (PCSD) was created in 1993 to develop bold, new approaches to integrate economic and environmental policies in the U.S. The 25-member Council does its work through eight task forces: Principles, Goals, and Definitions; Public Linkage, Dialogue, and Education; Population and Consumption; Natural Resources Management and Protection; Sustainable Agriculture; Energy and Transportation; Eco-efficiency; and Sustainable Communities. Later this year, the PCSD will recommend a national strategy to the President—establishing goals and providing additional guidance to agencies like the FS.

In October 1994, FS Chief Jack Ward Thomas released "The Forest Service Ethics and Course to the Future" document which sets forth land and service ethics for the agency, and outlines a set of strategic priorities for sustaining healthy ecosystems, vital communities, and a multicultural organiza-

tion over the long term. The strategic priorities focus on protecting ecosystems, restoring deteriorated ecosystems, providing multiple benefits for people within the capabilities of ecosystems, and ensuring organizational effectiveness.

In January 1995, Chief Thomas chartered a National Sustainable Development Team to help institutionalize within the FS a commitment to sustainable development and sustainable forest management. At a national workshop in Nebraska earlier this year, the team gathered input on the sustainable development concept from two vantage points: communities of interest and communities of place. At a local level, community refers to the diverse group of people who share a common place. At higher scales, it is defined by those who share common interests.

Sustainability does reframe the overall development question. The FS, along with others, is fostering a variety of community-based actions aimed at increasing the collective understanding of our social, cultural, economic, and natural needs and resources, and the opportunities available to recouple environmental and developmental goals. Examples of each follow.

•Coordinating government actions.

In Oakridge, Oregon, the local economy has been tied to timber for much of the 20th century. During the last 20 years, local sawmills have closed; and during the 1980's the town lost virtually all of its timber-related jobs. Wes Hare, city manager of Oakridge, credits the FS with helping Oakridge work through its economic crisis. Employees participated in planning efforts and worked on development projects; and helped the community cope with the changes taking place. Funds received from the FS, according to Hare, created the opportunity for Oakridge to receive much larger funding from other Federal agencies (including the USDA Rural Development Administration, now renamed; and the Economic Development Administration) to redevelop a former sawmill site into an industrial park and incubation center for small businesses. This was the first package

of Federal economic assistance distributed under President Clinton's Plan for the Pacific Northwest. Collaboration and coordination among Federal, State, and local agencies and organizations in the Pacific Northwest is being done through State Community Economic Revitalization Teams.

•Improving decisions through sound planning and capacity building.

Throughout the country examples of the FS helping people develop shared visions about their communities and mobilize resources to achieve meaningful outcomes can be found. In the Overhill region of eastern Tennessee, the entire community is involved in implementing a broad based plan to develop cultural tourism based upon the unique heritage of the three-county area. By creating a "museum without walls," covering more than 100 miles to highlight railroads, mining, logging, and textile manufacturing, four local governments have come together and improved their working relations with two predominantly Black communities. "Museum" projects include the renovation of a historic theater in preparation for the 1996 Olympics.

In Southwest Colorado, a multi-agency/multi-community partnership involving five counties, 10 towns, and two tribes began as an effort to confront land management agencies about the impact of their policies and decisions on the local people. Now the communities are focusing their efforts on developing a "community stewardship ethic" based on the relationship between community and ecological sustainability. The strategies being employed include understanding and practicing the relationship between community and ecological sustainability, sharing resources and knowledge, bringing together science and human values, transforming polarization into constructive action, and reinventing Federal-community-environmental-private sector practices. Over the past three years, the partnership has undertaken a variety of initiatives, culminating in the current effort to take a community-based approach to revising the San Juan National Forest Plan.

•Support local enterprise through financial and economic development investments: economic diversification, value added, recycling, and others.

Examples range from helping tribes, to local resource councils, to economic development corporations. The projects tend to emphasize financial and economic development investments, but the communities report other benefits including building trust and a sense of pride and purpose. In Louisiana, members of the small, non-Federally recognized Clifton-Choctaw Tribe, received assistance to construct a small tree nursery and start a pine straw baling operation. Although the projects are small scale, members agree they help generate needed incomes and create opportunities for the tribe in culturally-sensitive ways. The tribe's skill base also has broadened and the economy, which relies on making and selling crafts, is becoming more diversified.

In Arkansas, the Newton County Resource Council identified ecotourism as a means to keep their natural resources intact yet reap the benefits from increased tourism associated with the Ozark Mountains. The Council's project focuses on job creation and business development through locally-controlled enterprise. Local residents, for instance, are being trained as ecotour guides. Then in Pennsylvania, the Clarion County Economic Development Corporation has developed a business plan for a locally-owned multi-million dollar fiberboard plant, and is now recruiting more than 100 employee. A medium density fiberboard will be made from sawdust, wood chips, and other waste wood from sawmills and loggers in the region. The fiberboard will be used to manufacture furniture, cabinets, shelving, and high load flooring.

•Developing feedback loops that support learning and adaptive management.

At the local, Regional, and national levels, the FS is embarking on a variety of monitoring and evaluation efforts. During the last two years, national activity reviews have been conducted in the Southern and Rocky Mountain Regions to learn about agency performance directly from community members. In addition, more indepth analyses are underway in places like Kremmling, Colorado. The FS is working with Kremmling to learn what it means to be successful and identify indicators of sustainable development. Information is being gathered through on-site interviews, meeting participation, observation, and a community survey. The research indicates, as might be expected, that collaboration among Federal, State, and local partners increases the success rate of community efforts. The Kremmling project

continued on page 53



Many people are helping frame the sustainability concept. Some managers and researchers see international and intra-community links.

In rethinking rural development policy, Bill Schweke from the Corporation for Enterprise Development, believes that communities must not only focus on *what* is done but on *how* development is done to achieve environmentally-compatible development. Not all problems, he claims, can be solved at home; and policies must support the need for regional efforts that recognize the inter-relationships between urban and rural areas. He also sees a growing need to build the capacity of communities to think and act strategically. Since Federal and State governments cannot intervene in all places, he advocates they build the capacity in communities to understand options, make sound choices, identify appropriate resources, and work in concert with federal/state policy.

As President of the National Association of Counties (NACo), Barbara Sheen Todd also proposed that sustainability is a process for bringing people, ideas, and values together to create an agreed upon vision of the future. NACo used and adapted a set of principles developed in Minnesota to guide the development of its sustainable development plan and its work with the PCSD. The principles focus on interdependence, collaboration, stewardship, diversity, prevention, equity, effectiveness, education, flexibility, and responsibility.

Dan Kemmis, mayor of Missoula, Montana, explains in *Community and the Politics of Place*, the importance of location to the concept of community; but he extends it to include regional economies in which "cities and their rural environs" realize they are "mutually complementary parts of the enterprise of inhabiting a particular place." He thinks they have a common stake in each other's welfare—he defines place as an "organic household" consisting of both natural and human elements within which inhabitation is a possibility. Kemmis sees the need to revitalize civic culture and responsibility; and advocates the use of collaborative approaches to problem solving.

As Forest Service employees learn more about sustainability, they also are realizing that sustainable communities and sustainable ecosystems share a great deal in common. Mike Znerold of the San Juan and Rio Grande National Forests says that "sustainable communities meet their social and economic needs in harmony with diverse, healthy, and productive ecosystems; and in turn sustainable ecosystems provide the base upon which social and economic needs are

met and diverse, healthy, and productive communities are maintained." Researchers in Fort Collins, Colorado, propose a new paradigm for ecosystem management that ties the needs of society to ecosystem sustainability in a hierarchical manner, and couples ecosystem management with forest planning and rural community assistance.

As a rural sociologist, Cornelia Flora, believes that sustainable rural development links the overall health of the community to its resiliency. Resiliency, in turn, she says depends in part on the resources available to a community. She identifies four forms of capital within communities—human; physical/financial; natural resource; and social capital. Important and needed resources also come from outside the community. Networks are a crucial part of the social capital—through horizontal networks communities establish linkages with others in similar circumstances and learn from each other; and through vertical networks, they get access to diverse sources of experience, knowledge, resources, and markets beyond the community limits.

While serving as chair of the World Commission on Environment and Development, Gro Harlem Brundtland saw the need to address poverty as central to the issue of sustainable development. In 1987, the World Commission identified poverty as a major cause of global environmental problems; and today the Worldwatch Institute reports that over 20 percent of the world's people live in absolute poverty. Now USDA reports in *Understanding Rural America* that major pockets of persistent poverty exist in over 500 rural counties in the US. These counties are heavily concentrated in the Southeast, Appalachia, and the Southwest, with others scattered on Native American reservations in the North and West.

The US problem, according to the USDA Economic Research Service (ERS), is not simply one of unemployment, but of low-skill, low-paying jobs; and the lack of basic necessities such as education and healthcare. ERS further reports that the nation's working poor are more likely to live in rural areas than urban; and that higher than average proportions of rural Blacks and Hispanics live in counties with persistent poverty. Such concerns about the future of minority and low-income communities led to the signing of an Executive Order (EO) on "Federal Actions to Address Environmental Justice" in February 1994. The EO seeks to focus attention on human health and environmental conditions, foster non-discrimination in Federal programs, and provide for greater public participation and information.

Northampton County, Virginia, is a persistent poverty rural county; but with support from

the National Oceanic and Atmospheric Administration, received NACo's Presidential Leadership Award for Sustainable Development. Northampton County is located on the peninsula of Virginia's Eastern Shore. For hundreds of years, Native Americans, European Americans, and African Americans subsisted with agriculture and seafood industries as their mainstay.

By using a sustainable development visioning process, the county developed a sustainable development action strategy which has led to a variety of economic development actions being taken that maintain the rural character of their community and their cultural diversity. County Supervisor, Arthur Carter, says that the exercise was above all else an exercise in community empowerment. The county had to bridge culture and class gaps, and create a new framework for the empowerment to occur. He says that "what is novel is a partnership with the disenfranchised, underemployed, low- and moderate-income citizens to encourage them to organize within their communities in order to identify problems and their corresponding solutions."

The concept of livelihood also provides new insights. At the North American Regional Consultation on Sustainable Livelihoods, the discussion focused on developing meaningful work rather than jobs to fulfill the social, economic, cultural, and spiritual needs of community members. The key principles of sustainable livelihoods that were discussed include: nurturing a sense of place and connection to the local community; stimulating local investments; using appropriate technologies; and promoting equity between and among generations, races, genders, and ethnic groups.

One of the challenges ahead, according to Sherry Salway Black of First Nations, is to change how successful development is measured. She says we must incorporate sustainability and cultural relevance into our concepts of development and find new ways to measure changes and improvements. The elements of development used by First Nations provides a framework for tribes to develop their own indicators and measurements of success; and to guide their decision making. The four key elements are: assets, kinship, personal efficacy, and spirituality. Two key assumptions underlie use of the framework: balance is necessary, and development comes from within.

Ruth McWilliams and Fred Patten

LOOK AT THE AMBITIOUS PROJECT ONE STATE PUT INTO MOTION TO ASSIST RURAL COMMUNITIES. THEN LOOK AT THE SPECIFIC WAYS THAT A REAL COMMUNITY IS EXAMINED AND ANALYZED IN LIGHT OF ASSETS AND POTENTIAL.

ARIZONA'S RURAL TOURISM DEVELOPMENT PROGRAM

KATHLEEN L. ANDERECK



Drastic changes in rural America occurred during the 1980s as a result of declines in agriculture and resource extraction industries (Somersan 1988). As a result, there has been a recent focus on the revitalization of rural America. Originally this revitalization was oriented toward traditional economic activities such as energy development and mining (Allen, Hafer, Long and Perdue 1993). In recent years, however, more attention has been given to alternative forms, e.g., tourism and recreation development (Allen et al. 1993; Lui and Var 1986). Tourism is seen as a provider of income, jobs, tax revenue, and economic diversity to rural communities (Long, Perdue and Allen 1990).

The ultimate goal of tourism development is increased quality of life for the residents of a community (McCool and Martin 1994). Ideally, rural economic development balances the preservation of residents' life styles with economic diversification while providing increased opportunities for income, employment, and improved community services. Communities have realized the importance of tourism's economic impacts for some time, but are only recently recognizing the negative environmental, social and cultural effects that also result (Lui, Sheldon and Var 1987). Increasingly, communities realize that they must consider all of tourism's potential effects and take a comprehensive, planned approach to tourism

development, with the inclusion of public input by community residents (Ross 1992; Long et al. 1990; Marsh and Henshall 1987).

Frequently, the major tourism resources available to rural communities are natural and cultural resources and these communities are recognizing the potential of using these resources to promote recreation and tourism experiences (Allen et al. 1993). In response to this trend, many land management agencies have become involved in rural economic development that is based on natural and cultural resources.

In Arizona, a survey at the 1993 Governor's Rural Development Conference asked representatives of rural communities what needed to be done in the state to facilitate rural tourism development. The responses suggested that: 1) state and federal agencies with responsibilities in tourism, recreation, resource management and community economic development work together, and 2) a rural tourism development program be established to provide assistance to communities. As a direct result of this expressed need, state and federal agencies in Arizona formed an organization, the Arizona Council for Enhancing Recreation and Tourism (ACERT), to facilitate recreation and tourism development (listed in Table 1).

Arizona Council for Enhancing Recreation and Tourism

ACERT is unique in that it brings together a diversity of

agencies and organizations working "to improve recreation and tourism in Arizona and to foster increased cooperation and coordination among Federal and State agencies, Indian Nations, and private industry" (Leyva and Sem 1995, p.4). During its first year, ACERT's Steering Committee developed goals, objectives, and a program of work to guide its activities. One of the major programs ACERT is developing is a statewide coordinated and planned rural community tourism development program for Arizona to address the need for such a program expressed by rural communities.

The Rural Tourism Development Program

Purpose of the program Presently in the pilot stage, the Rural Tourism Development Program (RTDP) is a statewide program with a focus on tourism development and management for rural communities. The purpose of the program is to assist communities in the development, management, and marketing of tourism with the assistance of ACERT and other interested agencies and individuals. The scope of expertise available to communities is quite broad due to the number of agencies involved. The RTDP is under the direction of ACERT and administered by a program manager housed in the Arizona Department of Commerce.

Although ACERT itself has no budget, several of the cooperating agencies have contributed financial resources

Table 1.
Member agencies of the Arizona Council for Enhancing Recreation and Tourism

Arizona State Agencies
Department of Commerce
Office of Tourism
State Parks
Game and Fish Department
Department of Transportation
Commission of Indian Affairs

Federal Agencies
Forest Service
Bureau of Land Management
Bureau of Reclamation
National Park Service
Bureau of Indian Affairs
Fish and Wildlife Service

Native American Nations
Navajo Nation

Universities
Arizona State University
Arizona State University West
University of Arizona
University of Arizona Cooperative Extension Service
Northern Arizona University

to administer the RTDP (Table 2). The funds are used to pay the salary of the program manager, to pay half the salary of the administrative assistant, and to cover the cost of visits to the communities to provide technical assistance. Additional funds have also been allocated to the program on a one-time basis, including \$10,000 from the Arizona Hispanic Chamber of Commerce, and \$9,500 from internal research grant programs at Arizona State University West and Arizona State University to study investigating community residents' attitudes toward tourism development.

The nature of assistance and community tourism development goals are not predetermined by the program; rather, they are specific to individual communities based on needs identified by community residents and technical assistance providers.

Six basic principles have been developed by the RTDP design team to guide the program (Leyva and Sem 1995, p.6):

1) Comprehensive. It must cover all aspects of tourism development and management. The program must provide a total tourism package.

2) Sustainable. It must promote activities that meet the desires of current generations for a tourism industry while protecting future options, but ensuring that resources and development are consistent with capabilities of the natural setting and preservation of community values.

3) Low Cost. It must be financially maintained by the community and be supportable by the participating agencies over the long term.

4) Customer Oriented. It must be designed as a hands-on program that is customer service oriented and backed with state-of-the-art processes.

5) Fiscally Positive. It must encourage economic activities within the community that increase the tax base and revenues for local residents.

6) Technically Sound. It must be designed with follow-up technical and grant assistance. Once the program is in place, it should help communities access the resources of a variety of governmental and university programs.

The teams

Specific activities of the RTDP are carried out by ACERT, the program manager, and four teams. Each has different responsibilities and times for involvement. In addition to ACERT, the following all have roles in the RTDP process.

•Local Community Action Team. Clearly the program cannot be effective without dedication on the part of the community. To qualify for the RTDP, communities must make several specific commitments. A team representing concerned groups must be organized to carry out the program. The team is constituted of elected officials, and tourism, business and civic leaders. They must submit a resolution of support from community groups with an interest in tourism development, the local government, and development organizations. Communities are required to commit to: long-term, comprehensive tourism development; a collaborative approach to working with organizations and groups that may be affected by tourism development; and sufficient resources to support tourism development. The team completes a Pre-Acceptance Diagnostic Tool in which they evaluate the community's capacity to implement a successful tourism development program. Finally, they assist with details such as scheduling the visits of other teams and specific tourism planning activities.

•Reconnaissance Team. Those assigned to this team are representatives of ACERT agencies who have expertise pertinent to the issues a community is facing. This team receives training on the RTDP and on tourism assess-

ment through workshops. The team conducts initial interviews with community leaders, confirms issues and opportunities as described in the Pre-Acceptance Diagnostic Tool, and makes recommendations to the resource team.

•Resource Team. This team is made up of ACERT agency representatives and invited private sector individuals with the appropriate expertise. The team attends workshops on the RTDP and tourism assessment. The team conducts an in-depth assessment of communities' strengths and weaknesses for tourism development in cooperation with the Local Community Action Team. Once the assessment is complete, recommendations are made to the community at an open meeting, and a written report is presented to the Community Action Team. Team members are also available for technical assistance.

•Facilitation Team. For the most part, this team consists of "field officers" of the ACERT agencies with the expertise needed to serve as technical advisors to the community regarding program implementation. After attending workshops on the RTDP and tourism assessment, the facilitation team provides advice to the Community Action Team with respect to technical assistance, completes a review and analysis of the tourism assessment, aids in the formation of goals and action plans for tourism development, and assists with project evaluation.

Stages of the program

Communities go through several stages as part of the RTDP. The RTDP manager and ACERT oversee the entire process with involvement of the teams at the appropriate times (Figure 1).

•Community pre-acceptance. The community first develops the Community Action Team. The team completes the Pre-Acceptance Diagnostic which asks the community to describe and evaluate several community attributes including: 1) tourism development organizations and their effectiveness, existence of paid staff, and existing plans and strategies involving tourism; 2) recreational tourism resources; 3) ability to accommodate additional visitors; 4) infrastructure with respect to tourism needs (e.g., highway access, signage, water and sewer systems, etc.); 5) ways in which community residents can be involved in planning and decision-making; 6) the commitment of local political leadership to economic development programs; 7) ability of local businesses to adapt to tourists; and 8) resolutions from the town council and other organizations supporting tourism.

•Community selection. Based on the community Pre-Acceptance Diagnostic, ACERT's subcommittee on tourism development selects communities to participate in the program. Initially, preference has been given to communities that are affected by changes in federal land use

Annual Budget for FY 1995

Table 2

Arizona Office of Tourism	\$94,000
Forest Service	30,000
Bureau of Land Management	20,000
Bureau of Indian Affairs	10,000
Arizona Dept. of Commerce In-kind support*	
TOTAL	\$154,000

*Includes office space and clerical support

policies, that have ACERT agency field staff in close proximity, that presently have or exhibit potential for tourism development, are culturally diverse, that have demonstrated a commitment to collaborative development initiatives, and that have politically stable governmental and organization structures in place. Additional criteria may be added in the future.

- Reconnaissance Team visit. The Reconnaissance Team reviews the Pre-Acceptance Diagnostic and plans a visit to the community to lay the ground work for the Resource Team visit. The Program Manager makes arrangements for the visit. During this preliminary visit, team members meet with leaders and review the information in the diagnostic. They then use the findings of the visit to prepare the resource team for a more in-depth visit.

- Resource Team visit/Community assessment. Once the Resource Team has been briefed by the Reconnaissance Team, a two to three day visit is made to the community to conduct an in-depth community assessment in conjunction with the Community Action Team. The assessment is conducted using written materials, on-site visits to facilities, observation, interviews, and focus groups. Specific aspects of the following community attributes are considered: organizational structure, community infrastructure, tourism resources, tourism businesses, marketing program, community involvement, leadership, community design, and sustainability. A report of recommendations is written by the team and submitted to the community.

- Community tourism values and mission. Based on

the assessment and recommendations by the Resource Team, the Community Action Team determines if a tourism development program is consistent with the values of the community. If so, tourism development mission and goals are developed to guide the program.

- Action plan. The action plan details the nature and extent of tourism development. Based on the community assessment, mission, and goals, the Community Action Team develops a program of action with the assistance of the Facilitation Team and the Program Manager.

- Strategic design/Implementation program. Specific strategies to support the action plan are devised by community leaders. Working cooperatively, the ACERT agencies and communities implement the program of action.

- Technical assistance. As communities begin to implement tourism development, workshops and consultants will be available to facilitate the program. Additionally, individuals from the ACERT agencies will provide technical assistance as the need arises. Assistance may be required for issues such as visitor profiles, attraction development or improvement, and minimizing negative impacts.

- On-going evaluation/Accreditation. Evaluation is a critical component in any development program, and will be conducted on an on-going basis. In this way, any needed program changes can be identified and implemented. Communities will also be able to apply for accreditation based on standards developed by the RTDP design team.

State of the Program

At this time, six pilot

GLOBE and

Project members take a look

The first pilot community in which the Rural Tourism Development Program is being implemented is Globe-Miami. Globe and Miami are actually two separate communities about 90 miles east of Phoenix in the Cobre Valley, but they are contiguous and share many characteristics.

The population of Globe is about 6,300 and Miami is about 2,100 while the Greater Globe-Miami area has about 22,700. The community is completely surrounded by public land, including the Tonto National Forest, Bureau of Land Management areas, and the San Carlos Indian Reservation.

The Community Pre-Acceptance Diagnostic revealed several important considerations with respect to Globe-Miami:

- 1) Tourism development organizations and their effectiveness, existence of paid staff, and existing plans. Several tourism groups exist, with the lead being taken by the Chamber of Commerce which has a history of good planning and follow-up.

At this point the existing plans that need to be considered by the RTDP include: a marketing plan for the Old West Highway Association, a marketing plan for Historic Globe, a Globe Area Strategic Plan for Economic Development, and the Globe-Miami Chamber of Commerce Plan of Work for 1994-95.

- 2) Tourism activities already in place. Tourism resources that were identified by the Diagnostic include: a) the Gila County Historical Museum, which is in need of some improvements such as

additional hours and full time staff; b) Cobre Valley Center for the Arts, also in need of improvement such as special programs and better marketing; c) Besh-Ba-Gowah Ruins Archeological Park which needs trained staff and improved marketing; d) Cobre Valley Country Club and Golf Course which needs an additional nine holes added; and e) Historic Downtown which needs a new walking tour brochure and building restoration.

Globe-Miami's two festivals, Apache Day and the Historic Home Tour, both need improved marketing. A new festival, Arizona Golden Age Days, is seen as a possible addition.

- 3) Accommodations for additional visitors. At this time, according to the diagnostic, Globe-Miami can handle a large increase in day-visitors, but overnight visitors need to visit on weekends when motel occupancy is lowest.

- 4) Infrastructure with respect to tourism. The area needs better signage for attractions and larger signs in the downtown area, more highway pull-offs, and a look-out point for a mine overview.

- 5) Community resident involvement. There are a number of opportunities for volunteers to get involved in the community with various groups and local government who are seeking out concerned citizens for projects.

- 6) Local political leadership commitment to economic development programs. All governments adopted the Globe Area Strategic Plan for Economic Development. Besh-Ba-Gowah Park is funded by the city of Globe and a bed tax is used for economic development. Gila County



MIAMI ARIZONA: PROJECT EXAMPLE

has a planning office and funds economic development.

7) Local businesses adaptation to tourists. No major problems to overcome, though change could be slow.

8) Town council and other organizations official support. None at the time.

Based on this information, Globe-Miami was accepted as a participant in the RTDP. The next stage, a Reconnaissance Team visit, was completed on March 15, 1995. The visit included an initial briefing with the manager of the Greater Globe-Miami Chamber of Commerce; meetings with Cobre Valley Arts Center members, the mayor, city council members, county officials, Globe-Miami Tourism Commission members, and Chamber of Commerce Board members; and finally a debriefing with the Chamber manager and Reconnaissance Team.

The Reconnaissance Team confirmed the information provided in the Pre-Acceptance Diagnostic, and compiled additional information. Significant findings include the following:

1) The Chamber wants an in-depth tourism development program that is accountable, focussed, and has a sense of direction—or they are not interested in participating. At this time, Globe, Miami, Gila County, and several tourism industry groups do have interest in the program.

2) The top three industries/income producers are copper mining, followed by government and retail. Tourism is not a major industry, and has been neglected for many years. There is much

more interest in tourism development now, and it is perceived as an economic diversification strategy. A good volunteer base with an interest in tourism development exists.

3) Accommodations (300 rooms) during the week are on average 90 percent full due to business travelers; additional rooms are needed. A new hotel has plans to build soon. On weekends, however, room occupancy falls off. One goal is to improve weekend stays.

4) The "old mining town" image is not the one the town prefers. They want to diversify while still incorporating mining history into the tourism product. Although the mines are well known, none offer tours at present due to liability concerns. The Chamber would like to see a surface tour implemented and is working toward this end. Opening the Old Dominion Mine as a museum is also being investigated.

5) To increase the diversity of tourism resources, the old county jail is being renovated. Also, local artists are renovating the old court building into an art center with space for performing arts, exhibits, and retail. The Community Players and the Artists Guild see a need for improved marketing to heighten interest in local arts. Clustering of art galleries and antique shops was a suggestion to improve retail in downtown, much of which was hurt by a Wal-Mart located near the highway.

6) Other tourism resources that could be emphasized or capitalized on to benefit Globe-Miami:

•A casino was built in December, 1995 on the San Carlos

Indian Reservation. The effects on Globe-Miami are yet to be seen, but the casino itself is full to capacity most of the time and is already planning an extensive expansion.

•Theodore Roosevelt Lake, part of Tonto National Forest, is near Globe-Miami and a new recreation development has recently been built at the Lake. Globe-Miami needs to consider mutual promotion with them as beneficial.

•White water rafting on the Salt River is an activity that might attract people to Globe-Miami, but needs more promotion.

•Travelers down the region's roads should produce visitors. U.S. Highway 60, known as the Old West Highway, is the primary route from the Phoenix area to Globe-Miami. Found there is the Boyce Thompson Arboretum exhibiting over 6,000 varieties of plant life that will survive in the Sonoran Desert. Globe-Miami is the eastern terminus of State Highway 88, also known as the Apache Trail, a scenic and largely dirt road skirting Roosevelt Lake, Apache Lake, and Canyon Lake, all of which offer recreational opportunities. The Apache Trail also provides access to Tonto National Monument and Lost Dutchman State Park.

Given the information gathered by the Diagnostic and reconnaissance visit, several recommendations have been developed. The Reconnaissance Team felt that the strengths of Globe-Miami with respect to tourism development are its history, cultural resources, and proximate outdoor recreation opportunities. It appears that Globe-Miami's main needs are marketing and

promotional in nature. A theme for the area needs to be developed along with a way in which to package the community. A secondary need is assistance with the development of heritage and cultural tourism, including setting up a mine tour and potentially a mine museum.

Accordingly, the Resource Team will be composed of individuals with expertise in: 1) heritage and cultural tourism, 2) historical and cultural interpretation, 3) historic preservation/signage (likely an architect), 4) mining and mining history, 5) outdoor recreation planning, 6) federal land management agencies (Forest Service and BLM), 7) hotel/motel/bed and breakfast development, and 8) the Main Street program (a downtown rejuvenation program housed in the Arizona Department of Commerce). Individuals with marketing expertise will be assigned to the Facilitation Team.

Globe-Miami is a community with groups and individuals that are very interested and concerned with tourism development. As a result, ACERT expects to see very successful implementation of the RTDP. Although the entire process has not yet been carried out, at this point the program results of this first pilot community are very encouraging. Globe-Miami seems on its way to increased economic diversity through planned tourism development with the assistance of the Arizona Rural Tourism Development Program.

communities have been chosen. The six communities include: the First Mesa Villages on the Hopi Indian Reservation in north-eastern Arizona; the Hualpai Indian Reservation on the south-western side of the Grand Canyon; Williams south of Grand Canyon National Park; Parker on the Colorado River; Globe-Miami east of Phoenix; and Douglas in south-eastern Arizona on the Mexico border. These communities provide a diversity of cultures, attractions, and geographic locations, all of which are especially important in the pilot phase of the RTDP.

Much of the document preparation is finished: a training manual to be used by most of the teams; a briefing notebook containing community information and the Pre-Acceptance Diagnostic for the Reconnaissance and Resource Team members. A "toolbox" of additional materials, such as articles on tourism assessment and marketing, has been compiled and will be a valuable resource for team members.

The first workshop to train Reconnaissance and Resource team members on the RTDP and community tourism assessment was conducted on February 6, 1995 and attracted over 60 participants from

throughout Arizona who represented numerous public and private organizations. The first Reconnaissance Team visit was conducted on March 15, 1995 to Globe-Miami (see sidebar) with a Resource Team visit scheduled in late April.

Thus far, the Arizona Rural Tourism Development Program has been very successful and well-received by rural communities. The pilot phase of the program is well underway and promises to be a positive experience for all involved. The program is one example of the involvement of state and federal agencies in rural community assistance.

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Photos these pages:

Page 8, the author, Kathleen Andereck

Page 10, downtown Williams, Arizona, in front of the Grand Canyon Railway building. Pictured are members of the team with community representatives.

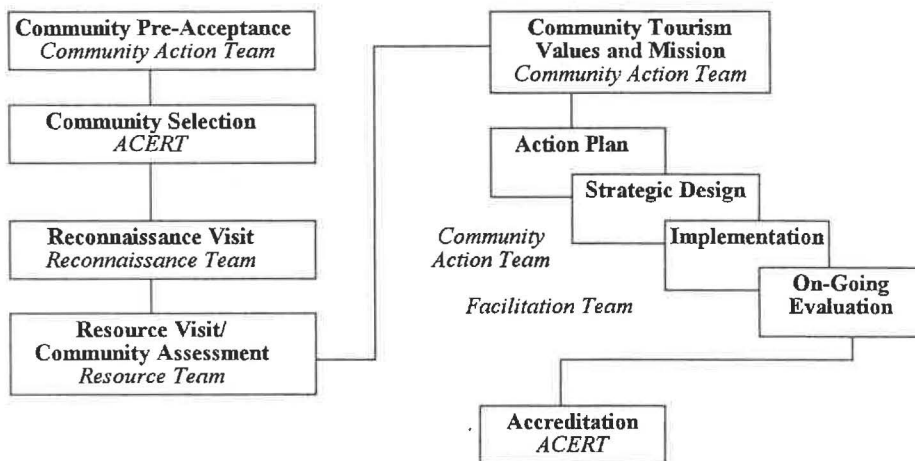


Figure 1. The Arizona Rural Tourism Development Program

Questions for and answers from Theresa S. Hoffman

Theresa S. Hoffman is the staff geologist in the Department of Natural Resources for the Penobscot Indian Nation located in Old Town, Maine. She was involved in creating the Maine Indian Basketmakers Alliance (MIBA), a grassroots organization representing the interests of four Maine Indian tribes (Maliseet, Micmac, Passamaquoddy, and Penobscot). As executive director of MIBA, she talks about some of her life experiences and projects that have been initiated to help pass on Maine's Indian cultural heritage through basketry. She was interviewed in her office on Indian Island.

John Joseph Daigle



Q: Would you talk a bit about your early life?

A: I did not grow up on Indian Island (Penobscot Indian reservation). I grew up in South Portland, Maine, along the coast. I remember spending much of my time playing outside with my five brothers. I learned about my Indian heritage as a child when we visited my grandmother here at Indian Island. My grandmother and mother were raised here and she always had me actively involved in cultural events. She organized the Indian pageants where people who lived on and off the reservation would come to sing and dance. She used to make beautiful dresses for me to wear at the pageant dances. I remember meeting my relatives and other friends and playing around the houses and the Penobscot river.

Q: When you were growing up you spent much of your time outdoors. Did this influence your career working in natural resource management?

A: Yes, I'm the staff Geologist for the Penobscot Indian Nation. As you can see on the computer print outs, I'm integrating a soils data map to overlay on other computerized information for Indian Island and other smaller Islands along the Penobscot river.

Q: Can you tell us about your educational background?



A: I attended the University of Southern Maine after graduating from high school. I received a bachelor's degree in Earth Sciences with a concentration in Geology. I went on to the University of Wisconsin at Madison for my Masters in Economic Geology.

Q: What were some of your early jobs?

A: During school I worked for a couple of mining companies. I also worked for the Mobil Corporation in California. In 1984, I joined the Penobscot Indian Nation to head up the Minerals assessment program.

Q: Had you always wanted to return?

A: I was definitely thinking about it. The Penobscot Nation was starting to purchase land as a result of the 1980 Maine Indians Land Claim Settlement Act. I had an interest in providing some expertise in minerals assessment. Also, contributing knowledge into the Indian community was a premise for one of my graduate fellowships. As it turned out, I was actually called and offered the job from the Natural Resource Program Director who learned there was a tribal member finishing up a Masters program.

Q: Was the transition easy for you?

A: My first assignment was to reprimand a couple of individuals for ruining a skidder in

one of the areas where we were doing mineral assessment. They had pulled out a big moose with one of the skidders. These were people who lived on the reservation all their lives and hunted all their lives. I was new to the area, I had no office space, desk, or chair, and I was to reprimand these guys? As it turned out, they were fairly polite about the situation.

Q: What were some your early experiences with Maine Indian baskets?

A: My mother had a few of my great grandmother's baskets. I remember visiting my great grandmother at Indian Island when I was young and her whole house smelled of sweet grass and Ash. Basket making was something you associated with her.

Q: My own grandparents are basketmakers and one of my earliest experiences of them is going into their work room and seeing all the different colors and shapes of Maine Indian baskets. When did you start making baskets?

A: Seven years ago. My great grandmother's blocks and gauges for making baskets sat in storage at a relative's home in Tennessee. The blocks and gauges were just sitting there waiting for a basket maker in the family to come along.

Q: Did someone on Indian Island teach you how to make baskets?

A: I had taken some language classes (Penobscot) from an elderly basket maker. I knew she was interested in teaching the culture, so I asked if she would teach me basket making. I worked with her through a formal program sponsored by the Maine Arts Commission funded by the National Endowment for the Arts called a Traditional Arts Apprenticeship Program. This is a state wide program that encourages Master artists to share their tradition with other members. Several basket makers had been involved in the program.

Q: Do you only use certain trees?

A: Basket trees are known by basket makers as Brown Ash; however, the botanical

name is actually Black Ash (*Fraxinus Nigra*). These straight trees are slow growing and provide the best natural material for making splints, the thin strips of wood used for weaving baskets. Once the tree is found, it is felled, taken out of the woods, then trimmed and peeled. The trunk is pounded repeatedly with the blunt edge of an ax, causing the wood to separate along its annual growth rings into thin layers that can be trimmed by “gauges” into strips for weaving. One moderate-size Brown Ash tree, thirty to forty years old, can yield over a hundred baskets.

Q: How did the idea form of creating a Maine Indian Basketmakers Alliance (MIBA)?

A: I became familiar with a person in the Maine Arts Commission who had worked with several basket makers state-wide. She thought basket makers should think about organizing because many had similar concerns about the Ash supply and about carrying on the tradition of basket making.

Q: When was your first meeting and how did other basket makers react to forming an alliance?

A: Our first meeting of MIBA was held in the Fall of 1992. It was strategically planned to coincide with the Maine Arts Commission’s photographic art exhibit of “Basket Trees, Basket Makers.” At the first meeting, you know how Indian people are, they are very quiet, very reserved, and really do not like to speak out in public at all, especially in a group. That’s how the first meeting was, a little chatter back and forth. We had a board meeting last November and I thought about the progress we’ve made since the first meeting. We now have a board consisting of two basket makers from each of the four Maine tribes (Maliseet, Micmac, Passamaquoddy, and Penobscot). As the executive director, I’m

being told what to do by the board which is the way it’s suppose to work. We have several defined projects we are working on. They ask, “What have we done about this problem.” I’ll say, “Well, we talked about it last year and we really have not taken any action on it.” A person will respond, “Well, I make the motion we work on that.”

Q: What are some of MIBA’s projects?

A: We have multiple projects tied into preserving the tradition of Indian basket making. Most projects are designed to encourage our younger tribal members. Our MIBA newsletter, for example, shows a schedule of our basketry teaching sessions at the Maliseet, Micmac, Passamaquoddy, and Penobscot Indian reservations. We rotate meetings to the four reservations. Also, people have the opportunity to learn about basketry at our annual festivals. We have a big two-day Native American festival and gathering in July at the College of the Atlantic in Bar Harbor, Maine. Last year we had 35 basket makers demonstrating and selling their work. Over 2,500 tourists attended our last festival.

Q: Can you explain the activities at these festivals?

A: The first day is basically for basket makers. We had Mohawk basket makers, some from California, representatives from the Smithsonian Institution, people from the Abbe and other local museums, as well as forest service officials—but pretty much it’s a time for basket makers to come together to discuss issues. This year it will be similar only less intensive. I had too many speakers last year and after awhile basket makers want to be outside making baskets and socializing. They do not want to be in a room for an entire day listening to talks.

Our focus at our next annual meeting will be marketing baskets. We are looking at what the Cherokee Nation has done and think there is marketing potential in setting up a retail outlet or cooperative where baskets are retailed through a shop as well as mail order. Also, we are exploring the possibility of solely a mail order business. The natural goal is to establish the Alliance as being a self-sufficient, self-supporting organization—and we have that opportunity. Currently, we are receiving financial assistance through a series of private, state and federal grants.

Q: The process of making an Ash basket from start to finish requires many hours and I can see why it would be important to obtain a fair price.

A: Many tribal members are not going to be encouraged to make baskets if they are going to spend all day and earn \$20. You know full well from your grandparents who are basket makers, those sales are gone. Richard Silliboy, a board member of the Alliance, talked about he and his mother going door to door in northern Maine letting people set the price. He has an old basket she made with a price tag of \$1.79. He remembers being embarrassed and ashamed for the low price compared to the amount of time and effort involved to make the baskets.

We have initiated marketing programs to elevate the tradition of Indian basket making to an art form. Posters, literature, and art exhibits are starting to attract collectors who have purchased Indian baskets from Arizona and California. These collectors are interested in exclusive limited pieces of art, for example, Clara Keezer’s strawberry basket. We can guarantee they are going to be one of 20 people who purchases one of those types of baskets by her in an entire year.

Q: Does actually limiting the number of baskets produced increase the value?

A: Yes. It is important to educate basket makers because they don’t believe—or they are unaware of—people who are willing to pay \$600.00 dollars for a basket they are currently selling for \$25.00.

Q: My grandfather spends many hours pounding Ash. It is tremendous work preparing strips of wood prior to the actual weaving of baskets, isn’t it?

A: It is difficult these days to find someone to pound a stick of Ash. I’m supplied by Eugene Loring who is in his late 70’s. He still gets into the canoe, paddles up the Penobscot river and gets his Ash on the islands. He’s not going to be here forever. There are about 70 basket makers on my mailing list.



There are three or four people supplying most of us state-wide with Brown Ash.

Q: Have you had workshops on collecting and preparing Brown Ash before weaving baskets?

A: Yes. People need to know what they are looking for in the woods. We have had workshops on pounding Ash; however, people find out early it's very hard work. In our opinion, if prices do not change, then the tradition is not going to survive.

Q: I have heard from my grandparents there is a noticeable decline in the quantity and quality of Brown Ash.

A: Our Alliance has organized a Brown Ash Task Force consisting of traditional basket makers working together with a number of agencies including tribal, state, and federal foresters. We are working together to determine why there is a decline in the quality and quantity of Brown Ash. Most Brown Ash trees are not suitable for weaving baskets because the growth rings are paper thin. When the stick is pounded, you are unable to pull layers to make strips for weaving baskets. We can utilize some of these trees to carve wooden pieces for hoops and handles. Our task force is also examining the issue of accessing other basket making materials such as sweet grass. Last year I had a hard time finding sweet grass (*Hierochloe Odorata*). Access and finding materials is becoming increasingly difficult for some basket makers.

Q: Are you aware of the cooperative efforts created among the California Indian basket makers and the National Forests?

A: Yes. I attended a Native American gathering two years ago in California. They had over 200 basket makers. I found it interesting because the materials they use are not similar—the baskets don't look at all the same—however, the problems are the same. They worked with the Stanislaus National Forest because the Indians collect and use many different types of reeds, grasses, and woods for their traditional baskets.

Q: Has the Maine Indian Basketmakers Alliance created more visibility to the importance of basketry? And if so, does that increase the financial rewards?

A: I think so. We've developed special tags to identify baskets made by members of the Alliance. It certifies the person is a Maine Indian who made the basket. We have received recognition from the National Endowment of the Arts and private organizations such as the Lila Wallace-Reader's Digest

Community Folklife Program. We are becoming more visible on a national scale. We have had a visit from the Director of the National Museum of the American Indian in New York City. Mary Gabriel, a Passamaquoddy basket maker in her late eighties, won a National Heritage Fellowship last year. It is a folk arts award from the National Endowment for the Arts. It's pretty incredible for a basket maker. She was one of 11 people in the entire country and the only person from New England. It elevated Maine Indian basketry to a higher level. Collectors are now buying her baskets for hundreds of dollars for each basket. Also, another basket maker has won an individualist artist award. She was one of six people with over a hundred applicants. People are realizing how unique and special Maine Indian baskets are and the tangible expressions they reflect of Indian culture.

Q: To what extent are you involved in preparing grants and special recognition?

A: I do all of the grant writing. We have a diverse portfolio of private, state, and federal grants to support our projects. It's amazing how much time and effort is required to administer grants, write reports, and keep up with the accounting. Recently, I've reduced my involvement with MIBA because I've been appointed a member of the Maine Arts Commission. I'm one of the few, if not only, traditional artist on the commission. I'm excited about the possibilities of working on issues state wide affecting localized traditionalized activities.

Q: What drives basket makers to work so hard?

Q: There are some basket makers, like myself, who make baskets for a hobby. I may give a basket to somebody celebrating a wedding, birthday, or new baby. Recently, however, I came to the realization my great grandmother *had* to make baskets. It was not like she wanted to make baskets. Money from selling baskets was important income because she raised eight children and often times her husband was not working. So basically my grandmother and her siblings were raised on basket money. In those days, basket making was such a big part of the family and culture. They made baskets to pay bills.

Q: Are there families who depend completely on income from selling Indian baskets?

A: For many, it provides an important part of it. Some people still sit down and make baskets because they have a big electric bill one month. Two members of MIBA, Richard Silliboy and David Sanipass, Micmac Indians, grew up in "migrant worker families." They cut wood in the winter season. Their families dig clams in the spring season. They picked blueberries in the summer season and potatoes when in season. Donald Sanipass, David's father, remembers going to camp in the woods with his family during the summer to harvest Brown Ash and to make baskets. David Sanipass was born during a blueberry harvest. Richard Silliboy recalls as a child being in blueberry camps and waking up in bed with



piles of Ash splints they had placed on top of the covers. In many ways, the Micmac are closest to the traditional type of basket maker that would have existed here hundreds and thousands of years ago.

Q: So children experience basket making very young?

A: In some basket making families, such as the Sanipass', the husband and wife, their children, and grandchildren make baskets. One of the first things you do when you grow up is play with Ash on the floor. By the time you are twelve, you are putting Ash baskets together and you are selling them.

Q: Have you taught basket making?

A: I've been a Master basket maker in the Traditional Arts Apprenticeship Program. I've had a total of five apprentices. One person I've taught is now my assistant working half time for the Alliance. She is becoming a good basket maker and also sells attractive jewelry. She likes to go on the Powwow circuit to sell some of her work. I have hope. I feel she will continue to make baskets for many years and develop beautiful collectable work.

One of my other students is Passamaquoddy. She is also a professional woman who does basketry as a hobby. One other woman I've taught is now the judge for the Pequots. We enjoy sitting together and thinking about how it must have been for our grandmothers and great-grandmothers when they had actual sweetgrass braiding parties. People sat down in groups to make baskets. They did not sit by themselves as the only person within miles who had the skills and technology to make a basket.

Q: Can you explain some of the different types of baskets and weaving styles?

A: There are many weaving styles and types of baskets. There are very subtle differences I'm just beginning to understand. Differences can be partly explained by the color and texture of Brown Ash found in northern and southern Maine. Northern Maine Indians use mostly heartwood or the Brown parts of the Brown Ash because its more extensive than the white rind found in southern Maine. I have a Micmac potato basket that has a mixture of Brown with the white colored Ash. Its not inferior wood, but it is a little more brittle. It's not ideal for smaller fancy baskets.

Fancy baskets seem to be more common to the Penobscot and Passamaquoddy tribes. Also, you see much less employment of sweet grass from northern tribes because access to the coast for sweet grass is much more difficult.

When we go to look at older baskets in museums we find that nobody signed their work. I can identify a Penobscot or

Passamaquoddy basket; however, it is sometimes difficult to tell if it is one or the other. There are some distinct styles by families. A Passamaquoddy family makes strawberry, apple and other whimsical baskets, in shapes of fruits and vegetables. Madeline Francis, a Penobscot, did the bookmark logo for the Alliance. You can see a similarity between the bookmark logo and her other baskets. So the sweet grass and some of the weaves in the sweet grass give you hints.

Q: What about tourists and selling baskets to them?

A: The Maine Office of Tourism helped to develop posters to display Maine Indian Baskets. They have funded basketry exhibits at the Bangor International Airport to attract tourists. They are now helping to develop special catalogs to advertise Indian basket making in Maine. The Office of Tourism is aware of how good this can be for Maine Tourism. We've had tourists call us from all over the world trying to find out when our Native American gathering and festival is going to be held and they want to know how they can purchase Maine Indian baskets. Tourists are thinking about coming here, getting their own basket and meeting basket makers, which is good for Maine in general.

Q: Are work baskets more characteristic of the Maliseet and Micmac Indians?

A: Yes, although you need to know there are still a few Passamaquoddy and Penobscot men making pack baskets. It's hard to say just the Micmac and Maliseet are making the work baskets. I just drove past Eugene Loring and he had his pack basket on his back. It looked like he was getting ready to go into the woods to get Ash. He is Penobscot and specializes in making pack baskets.

Maine Indians probably have been making pack baskets since the beginning of time. Much more so than fancy baskets. So, the work basket is very deeply rooted in the culture of all the tribes. Many people think Maine Indians started making baskets when the white man came to the shore or when tourists came to the state of Maine. I think the Ash has always been part of the culture, is as close, as deeply rooted, as the basket makers believe it is. Our creation legend proves this:

"Glooskap came first of all into this country.. into the land of the Wabanaki, next to the sunrise. There were no Indians here then... And in this way, he made man: He took his bow and arrows and shot at trees, the basket-trees, the Ash. Then Indians came out of the bark of the Ash-trees."

Interviewer John Joseph Daigle is a research social scientist engaged in research on rural lifestyles and renewable natural resource use with the Northeastern Forest Experiment Station of the Forest Service at the University of Massachusetts. Prior to that he worked at the USDA Forest Service's Intermountain Research Station. His Bachelor's is in recreation and natural resource management from the University of Maine and his Master's is in recreation resource management from Colorado State University.

Photos these pages: Page 13, Hoffman and an apprentice splitting ash using an ash splitter, and Hoffman splitting a pounded splint apart by hand (Martin Neptune photos). Page 14, twelve inch diameter sweetgrass flat, brown ash standards with braided sweetgrass. Penobscot traditional style, made in 30 hours by Hoffman. Page 15, brown ash candy basket and miniature strawberry basket which has dyed red and green topped brown ash (Erik Jorgenson photos). Page 16, contrasting brown heartwood and whiter sap wood (Martin Neptune photo).



Businessman Paul Hawken had little mercy when writing *The Ecology of Commerce*. The cofounder of Smith and Hawken's tools and author of *Growing a Business* and *The Next Economy* criticizes industry's business practices, economic theory, political power, and individual behavior for their role in environmental problems. With articles published in magazines ranging from *Esquire* to *Inc.* and the *Utne Reader*, Hawken's insight into the complexity of environmental issues is informative reading for Lola Granolas and stuffed shirts alike.

Hawken's principal thesis is that the decline in environmental quality can be mitigated by redesigning business and its supporting institutions. He proposes "integrating economic, biologic, and human systems to create a sustainable method of commerce" (p. xiv). This is essential to our destiny as humans, Hawken asserts, because our survival is bound to all other living things.

To accept Hawken's thesis, the reader must believe prior to reading the text—or be convinced during the reading—that an environmental crisis is upon us and that business is both the cause and the cure. While Hawken makes a convincing argument on the status of the environment and the role of business in its decline, he fails to persuade me that business is the salvation.

The business community will find this book a bitter pill. In fact, it is questionable whether individuals in business will read past the first chapter. Hawken's language is sometimes harsh and inflammatory. He is particularly unforgiving of big business and its political power. In the business realm, he writes, democracy as the founders envisioned it is now in abeyance. All that's left are the mechanisms, the rituals, the all-important image of democracy that is invoked by the very power brokers who would subvert it. In Washington, D.C., corporations act as they do in the marketplace: They play to win. (114-115). Hawken gives numerous examples of tobacco and oil companies influencing regulatory legislation.

Despite the shortcomings of harshness, Hawken's approach is refreshing and innovative. Many similar works concentrate on one cause and one solution for environmental issues, but Hawken beautifully illustrates their complexity by including the social, political, biological, and economic dimensions. In the first part of his book, Hawken blends eye-opening scientific findings with scathing criticisms of business. He boldly proclaims "We know that every natural system on the planet is disintegrating. . . . [B]usiness is destroying the world" (p. 3).

The Ecology of Commerce: A Declaration of Sustainability by Paul Hawken

New York: Harper Business, 1993

Book reviewed by
Amelia Jenkins

Hawken uses a Malthusian type of analysis to support claims of environmental crisis. Malthus preached that human population growth will exceed growth in food production. He predicted death and famine as a result of this imbalance. Hawken uses a similar analysis comparing human consumption and natural systems. He asserts that the rate of growth for commerce and industry is exceeding growth in natural systems. One example of this imbalance might be our consumption rate of forest products exceeding the growth rate of trees. Hawken says the culmination of the imbalances is seen in poor air quality, toxic wastes, clearcut ancient forests, and depleted fisheries.

This process, Hawken argues, can be reversed by an economy based on restoration of the environment opposed to economic growth and resource depletion. He suggests three approaches to achieve a sustainable economy. First, industrial production should be redesigned to eliminate waste. Second, the economy needs to shift away from carbon to a base of sunshine and hydrogen. Finally, Hawken argues for systems that reinforce restorative behavior. Throughout the remainder of the text, Hawken sells his idea of how a sustainable economy is possible and reinforces these ideas with case studies and policy suggestions.

One policy suggestion Hawken spends a considerable time discussing is a "green fee" system. He argues that fees should be placed on goods and services that compromise environmental quality. This, Hawken claims, enables the free market economy to work most efficiently in allocating resources. Under the current pricing structure, the full cost of consuming a good is not paid by the producer or consumer—but by the environment. Thus, the green fee system would act as an incentive to consume goods or services which can be produced with lower environmental impacts.

Using the works of biologist E.O. Wilson, economist Herman Daly, and universal scholar Barry Commoner, *The Ecology of Commerce* integrates science, politics and economics to find solutions

within an existing system. It is this approach that makes the work both original and problematic. Academics will be frustrated with this method. Much controversy surrounds the ideas Hawken uses to support his policy suggestions. For instance, there is disagreement among economists as to the validity of Herman Daly's steady state economics theory. The same is true for E.O. Wilson's contributions to biology.

Hawken's solutions lie on the fine line between revolution and reinvention. This becomes problematic when looking at the actual implementation of his ideas. For instance, Hawken envisions that the regulatory role of government will decrease when green fees and other incentive systems are implemented. Some might argue that government's role in the economy actually increases since it is the entity determining costs. Also, Hawken stresses that the modern democratic state is the means to a restorative economy. I was left to wonder how the incentive system will be implemented if it is politically unpopular.

Hawken's style might also serve as a source of frustration to readers. Although the thesis is clearly stated in the Preface and summarized well in the final chapter, important points are easily lost amid the numerous examples of environmental disasters. Also, no citation marks can be found in the body of text. Instead, there are loosely compiled references in a Notes section found prior to the index.

Professionals in natural resource management will appreciate the enormous amount of research compiled into one text. This book also would be excellent reading for both graduate and undergraduate students because the multi-disciplinary nature of the text would be suitable for courses in environmental studies, economics, business, political science, and natural resource management. Others having an interest in environmental issues will be challenged by Hawken's approach and solutions. *The Ecology of Commerce* could, perhaps, serve as the policy bible for progressive, open-minded businesspersons and politicians.



Amelia Jenkins is a Master's candidate studying environmental science at the University of Idaho. Her research focuses on ecological economics and forest management. Jenkins taught economics at Weber State University and currently she is evaluating economic impacts of forest management practices on rural communities in Idaho.

WOMEN IN NATURAL RESOURCES 17

A GREAT EXAMPLE OF 1930s WPA AND CCC CONSTRUCTION IS BEING SAVED FROM CERTAIN DECAY BY THE DETERMINED EFFORT OF VOLUNTEERS AND THE FOREST SERVICE.

DEPRESSION GIRL SCOUT CAMP IS REBORN AS AN ARKANSAS COUNTY RECREATION SITE

JANE HUNT



Nestled in the Ouachita National Forest only an hour's drive from 1.6 million people—or 67 percent of the population of Arkansas—a small lake and the remains of abandoned Girl Scout Camp Ouachita can be found. Where once laughter and song could be heard, the splash of paddled canoes or campfires crackling at night, the sound now is that of the falling and rotting remains of 41 structures. Like so many camps that have been abandoned due to changing times and financial problems, Camp Ouachita is no different in that regard from many other sites across the South. In other ways, it is distinctly unique.

Built in hard times for fun
Camp Ouachita was built by the Works Project Administra-

tion (WPA). The road in and the dam which created a swimming lake were constructed by the Civilian Conservation Corp (CCC) during the height of the Great Depression. As far as can be documented, the huge camp is the only facility of this type in the nation constructed expressly for Girl Scouts. National queries by the Arkansas Historic Preservation Program have failed to find additional camps of this size.

The onset of the Great Depression brought about a large increase in the number of Girl Scouts in America and during the 1930's many new camps were opened nation-wide for their use. Noting this trend, in early 1935, Little Rock resident, Mrs. M.D. Ogden, approached USDA Forest Service Supervisor Hartman at Hot Springs for a location to build a Girl Scout camp. Hartman responded by agreeing to issue a special use permit. The site was found in Perry County, near Thornburg, on Narrow Creek where a dam was to be constructed to form a lake of approximately 20 acres. Actual construction was begun in 1936, and all buildings were completed by 1938.

While the actual construction was supervised by WPA engineers, single men from two nearby camps, Camp Thornburg, located just to the north of Lake Sylvia, and Camp Hollis, about 20 miles through the woods, provided the labor. Many other roads and structures were built in the surrounding areas by the WPA and CCC. Camp Thornburg disbanded in 1940, and Camp Hollis in 1941, as the war effort absorbed the workforce. Forest Service signs mark these sites today.

The Girl Scout buildings were all designed in Rustic style and seven distinct building types went up: administration buildings (7); unit houses (4); foundations (6); and landscape features (3). Also included are trails, rock walls, and steps for a total of 50 contributing resources.

A public recreation unit across from Lake Sylvia was added later but has since been torn down and it is not considered to be a part of the district. Very little additional construction was ever done after 1938 with only a few minor changes made through the years.

The Girl Scouts maintained and used the facility extensively for summer camps and leadership training until 1972 after they were given a 99-year lease. After 1972, because a health department-approved water supply was unattainable, most of the scouting activities were moved to Camp Story nearer to Hot Springs. Because of the lack of water and the inability to maintain two separate camps, the property eventually reverted back to Forest Service control in 1979.

The buildings were badly in need of maintenance and had received limited usage between 1972-1979. The Forest Service decided they would dismantle all buildings except for the large Ogden Hall and the Caretakers Cabin. Two local residents were given permission to tear down the structures and so they began by tearing down one of the newer buildings and removing many of the flat, flagstone floors. Fortunately for Camp Ouachita, a new district ranger was appointed and immediately stopped the removal of any more materials.

A local development project is born

Approximately five years ago, local residents were contacted—through a series of public meetings held by the Forest Service—to see if there was any local interest in seeing something done with at least part of the camp. I personally became involved with Camp Ouachita during this time. A local non-profit group, known as Lake Sylvia Community Project (LSCP) emerged from these meetings. Because of their experience with rural development, Winrock International was contacted to see if they would act as a partner. They helped formulate the by-laws and did numerous mailings, as well as conduct a training session to help set goals and objectives for the group. They do not provide funding at the present time, but still act in an advisory position when we need them.

The Lake Sylvia Community Project group has entered into Challenge Cost Share agreements with the Forest Service to do much of the renovation. As chairperson of the nine-member board, I am constantly seeking ways to involve more people with the project. It is difficult to recruit local volunteers to donate time and labor because of the long commute many of them have each day. It isn't unusual for people to commute 50-60 miles one way to work in our community. Even with these limitations, however, I am extremely proud to be involved with such a well-organized, close-knit, non-profit group who still have the original goal intact of seeing something done with "our" camp. Forest Service personnel will come and go, but we remain, still dedicated and determined.

Today, the camp, comprised of approximately 36 acres, is listed on the National Register of Historic Places. The Arkansas Historic Preservation Program (AHPP) and the Forest Service carefully monitor all renovation work done at the site. AHPP does not fund renovation work in Arkansas, but is responsible for surveying historical sites and making recommendations to list certain properties on the National

Register of Historic Places. They are also responsible for ensuring that the restoration uses original or duplicated materials to make the structures "architecturally accurate." Renovation of this type is very costly.

At one time it looked as if we were ready to abandon ship because of the lack of communication which caused a lot of misunderstanding between the partners involved. Many verbal promises were made that were not fulfilled. The local ranger did not make clear the intent of the supervisor's office in Hot Springs so that it appeared that LSCP, the Winona Ranger District and the Supervisor's Office in Hot Springs were all working from a different agenda. LSCP was excluded in many of the decisions involving Camp Ouachita. After seeking help from our Congressional delegation, a lot of the misunderstandings have been cleared up. I have no intention of running to our congressman every time things don't seem to go our way but it is nice to know that we do have someone willing to support LSCP if needed. I have also learned to request verbal promises to be put in writing.

Our scenic area needs this project

Driving west of Little Rock on State Highway 10, you are immediately attracted to the

beauty that surrounds you. Tall, stately Southern pine trees—mingled with hardwood species of mostly oak and gum—line the rolling hills around Lake Maumelle, one of two Little Rock area water supplies for the approximately 1.6 million people who live within a 100 mile radius of the camp.

As you cross the Perry County line and soon enter the Ouachita National Forest, it is like entering a totally different world. Perry County, an extremely poor county, has a per capita income of \$11,503, according to the 1990 census. Twenty percent of the population is considered to be below the poverty level. This is a community of families whose ancestors homesteaded much of the land. During the early 1900's, lumber camps and the railroads which served them were common. Some of today's small towns boasted large populations and the economy seemed to be thriving. When all of the timber was harvested, however, little work remained and the people moved on to other areas.

The largest employer today in the county is government at 22.3 percent, followed closely by services and farming at 20 percent each. Nearly 75 percent of the land is in forests. The two largest private forests are owned by Weyerhaeuser and Deltic Farm

and Timber, a subsidiary of Murphy Oil. With no major industry in the county of approximately 8,000 people, most commute to nearby towns for employment.

Local residents are still somewhat resistant to friendships with Forest Service and timber company personnel which own so much of the land. I think the resistance stems from the fact that Forest Service employees are frequently transferred and are not really a permanent part of the community. Sometimes, too, they unconsciously give an impression of arrogance to the local people. For the sake of the project, however, we have found a way to work together.

Forging a coalition and financing the renovations

Maintaining good public relations is vitally important for all partners involved. Everyone must have the same agenda and priorities. When any one of the partners loses sight of the goal and goes on a "wild goose chase," the project suffers. Sometimes a simple explanation is all that is necessary to clear up misunderstandings. With the idea of "reinventing government," recent restructuring within the Forest Service has given us better control of how our grant money is spent, and we seem to be moving at a much faster pace because we have a sense of being "empowered by the government."

Most of the funding for the project comes from memberships, donations, including equipment and materials, and through Challenge Cost Share agreements from the Forest Service. This year, the amount is \$14,000. LSCP buys the materials needed and reimbursement is made by the Forest Service. Most of the labor is volunteered by the group.

Last year, LSCP received a grant from the Arkansas State Forestry Commission for an Economic Development Specialist for the county. This person—selected by the county judge—happened to be a member of the Lake Sylvia Community Project Board.

LSCP is involved in the educational processes of our county. A \$500 grant is awarded annu-



ally for a student entering forestry or a related field. This applicant must write an essay, submit an application, two letters of reference, and a copy of his/her transcript. A personal interview is also conducted by the board. This year's winning student had worked for the Forest Service during the summer and he and his father have since volunteered their help with special projects.

LSCP is involved with recycling. Bins for aluminum cans have been placed in the campground and day use area adjacent to Camp Ouachita. A section of state highway 324 is adopted for litter pick-up.

Another grant provided money for leadership training. LSCP board members felt that leadership training should be expanded to include leaders from all parts of the county. Two meetings were sponsored and stemming from this training, a group known as Citizens for a Better Perry County emerged. This group of leaders have designed a strategic vision for the county.

Camp Ouachita can be the centerpiece for tourism

By the year 2000, the vision includes a strengthened, diversified, and expanded economic base without compromising our rural way of life. Tourism will play a vital role and Camp Ouachita has the potential to be utilized as an environmental education center and for interpretive programs on forest ecosystem management. We see its historical significance featured because of the Girl Scouts of America and the Civilian Conservation Corps ties. It has the potential to give information about the social and recreational activities of the Scouts and young construction workers who passed through there. It is hoped that families, communities, businesses and other groups will use the facility for meetings, as well as festivals and craft fairs.

We already have a reputation for being good hosts. The second week-end of October each year finds the area around Camp Ouachita alive with activity. A National Guard field hospital is set up, communication equipment is brought in and cars



with licenses from many states converge on the area. It is the scene for the Arkansas Traveller 100 Ultra Run. Runners run for 100 miles throughout the forest on a designated route. They have 30 hours to complete the course. This past year, there were 130 entrants from 17 states and several foreign countries. Runners report this as one of their favorite races. Lake Sylvia Community Project members serve a pancake breakfast for the runners on Sunday morning as they are completing their run. In turn, the Arkansas Ultra Runners Association make a sizable contribution to us. Once our facilities are available, more events like this can be scheduled.

A feasibility study is currently being done through a Challenge Cost Share agreement with the Cooperative Extension Service and should be completed by fall. This study should provide us with a clearer sense of direction for Camp Ouachita. It is hoped that we can begin a major fund raising effort once the feasibility study is finished. It is difficult to raise monies for a project when you don't know what the facility will be used for or who will manage it. LSCP would like very much to be involved in the actual running of the facility, once renovation is complete.

An old adage of "where there is a will there is a way" certainly applies to rural development. Trust and commitment are not born overnight but evolve when

people are honest with each other and are included in the planning process. Many times local people have more insight and creativity than government officials because they have local ownership. Given the opportunity to participate, rural development is occurring in its purest sense. Empowering local communities to work toward change and betterment of the community would certainly make our forefathers extremely proud. America was founded upon "government of the people by the people and for the people."

Construction goes on

Currently, we are working on the interior of the caretaker's cottage. New windows will be in place soon; paneling is being cleaned and sanded; new wiring and plumbing are installed. A new deck has been built on the rear; a new split-rail fence has been constructed in front and the new roof is completed. It is hoped that a caretaker can be on the premises by the end of 1995.

Once a caretaker is living on site, our next project will be to renovate the Great Hall—or Ogden Hall—as it's officially named. This is a massive structure with fireplaces in each end, used for large group meetings and a dining hall. This renovation will be quite expensive because of asbestos removal and the installation of a commercial kitchen. Once this building is completed, meetings which do

not require overnight stays—such as large groups, reunions, corporate training, environmental education, and related meetings—can be held.

Where are we going from here? I can envision the camp fully restored and operating; I can hope that jobs will be created; I can dream about everything that needs to be done, but it will never happen if I only sit and criticize those who are trying to create change. I constantly remind myself to think about the good things we are accomplishing and let the negative things go. I can plan for tomorrow but today demands that I stay involved and watch the project grow—board by board, roof by roof, and building by building. I have a deep satisfaction in knowing that I have a vital role in preserving the past, caring for the present, and creating a future for my children and grandchildren to enjoy.



Jane Hunt is a teacher in the Perryville School District, Arkansas. She has been teaching since 1982 and currently is also Coordinator for the gifted and talented program. In addition to teaching and chairing the Lake Sylvia board, Hunt is a writer; she also serves on the board of the Thornburg Rural Water Association and has volunteered two summers as campground host for the Forest Service.

Photos these pages:

Page 18, canoeing Girl Scouts, circa 1940 and the Caretaker's Cabin

Page 19, swimming lake and surrounding woods

Page 20, Great Hall

THE DETERMINATION TO FIND AN EXPLANATION FOR BURIED BONES LED A NEBRASKA CATTLE RANCHER AND AN AMATEUR ARCHAEOLOGIST TO ONE OF THE MOST AMAZING ARCHAEOLOGICAL FINDS IN THIS COUNTRY. THE RESULTING DEVELOPMENTS ARE STILL UNFOLDING.

HUDSON-MENG BISON KILL SITE

PATRICIA NOONAN IRWIN

The mystery and the persistent detectives

In the 1950's, Albert Meng, a local cattleman, and Bill Hudson, an auto parts store owner and self-taught archaeologist—both from the town of Crawford and surrounding Dawes County, Nebraska—refused to believe that the bones they discovered on what is now the Forest Service's Oglala National Grasslands, to be only sheep skeletons from an early ranching operation. Over the years, they persisted in trying to find someone who had the expertise to excavate and analyze what they believed to be ancient bones.

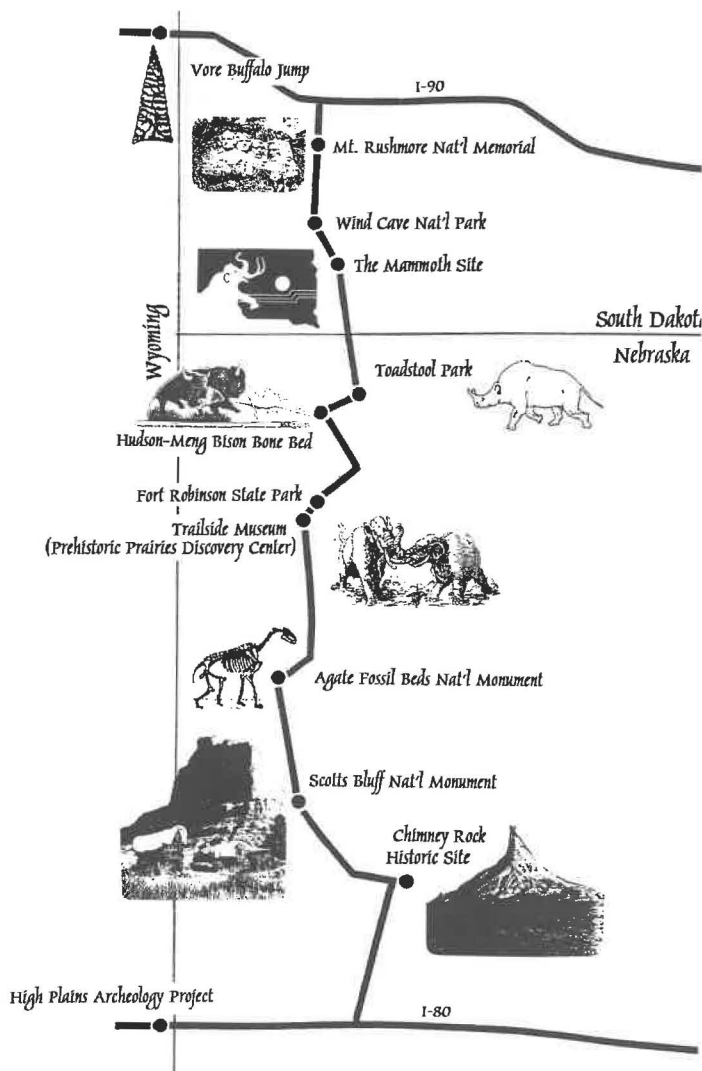
And their persistence paid off. In 1971, they convinced Larry Agenbroad, professor of Earth Science at Chadron State College, Chadron, Nebraska, to begin excavation of the site which

was within the borders of the Nebraska National Forest. Before closing it in 1977, their find was placed on the National Register of Historic sites because Agenbroad had uncovered the skeletal remains of an extinct bison sub-species, *Bison antiquus*, several Alberta projectile points, and numerous stone tools, thus discovering the largest known bison bonebed of the Paleoindian age in the Western Hemisphere. Researchers now estimate there are over 1000 animals, but the bones which Agenbroad examined were to remain reburied (again) for another 14 years.

In 1990, Terri Liestman became the first Nebraska National Forest archaeologist and, recognizing the significance of the bonebed, renewed interest in the site and initiated additional excavation. Liestman's enthusiasm for

the project was contagious, enlisting Larry Todd, assistant professor of anthropology at Colorado State University as principal investigator in the summer of 1991. In addition to Todd's uni-

versity students, volunteers from Earthwatch Expeditions International, the Forest Service's program, Passport in Time, and many local Nebraska individuals worked at the bison bonebed.





In those early years, funding was limited, and Earthwatch volunteers paid for the experience, while investigators and National Forest personnel donated their time. Nearly 5000 people visited the site, and over 100 volunteers contributed 4,650 hours. At one time, Liestman was forced to refuse 100 weekend volunteer applications as the project grew in popularity. German and British broadcast companies filmed public education documentaries, and Soviet Union and Japanese scientists toured the site one summer.

After Liestman's promotion to the Forest Service's Rocky Mountain Regional Office as Regional Archeologist, Mary Peterson, Nebraska National Forest Supervisor and Liz Ohlrogge, Recreation/Lands/Minerals Staff Officer, then spearheaded project planning and development. With the advent of Forest Plan revision, Ohlrogge shifted to working full time on the Plan, and the Pine Ridge District Ranger, my position, became project leader in the spring of 1995.



Since 1991, the bonebed has been excavated every summer, led always by Larry Todd with Dave Rapson, University of Wyoming, and joined in 1993 by Louis Redmond, the Nebraska National Forest archaeologist who replaced Liestman.

The bison and the Paleoindians

Researchers agree that (1) Paleoindians probably crossed into North America on the Bering Strait 13,000 years ago, and (2) the bones at the Hudson-Meng Site are 9,000 to 10,000 years old. How the bison died, though, remains a mystery. Scientists once thought the bison had been stampeded over a cliff by Paleoindian hunters who removed the skulls for religious ceremonies. Later excavations, however, exposed tiny skull fragments and a gentle slope, so researchers abandoned the titles "Kill Site" and "Lost Skull Learning Center" along with the jump or stampede theory.

Some scientists also believed the bison died in a blizzard. They dismissed the "snow-

storm" theory when dental studies showed that the calves were only three to four months old.

Every summer, new excavations expose more questions and fewer answers. So although scientists are understandably cautious in suggesting new theories, many now suspect the bison died in a violent prairie fire or a lightning storm. Only additional study will tell us the "true" story of why over 1000 bison lay buried for 10,000 years.

Task force for research, protection, and interpretation

From the beginning of her tenure, Liestman and the local community pushed for additional recognition for the bonebed site, and in 1992, a task force of over 15 partnership agencies, organizations, and local community groups formed to determine research, protection needs, and interpretive opportunities.

The task force decided upon the following goals:

- * interpret Nebraska's unique natural and cultural history,
- * offer scientific exploration through on-going excavations of archaeological and fossil resources,
- * conduct educational programs using fossil, cultural, and historical resources of northwest Nebraska,
- * promote tourism in western Nebraska,
- * contribute to rural economic development, and
- * provide training for students at the Pine Ridge Civilian Conservation Job Corps Center.

The task force then laid out what was to be an imaginative and ambitious plan to combine existing and successful operations with those still to be built. The integrity and purpose of each individual site would be respected, but the whole would enhance each of the members.

The bonebed site and interpretive partner sites

The administrators of the University of Nebraska-Lincoln Trailside Museum, located at Fort Robinson State Park, in 1992 suggested a joint research and learning center which would replace their aging museum and

provide interpretation of both the bison bonebed and another nearby site where two giant mammoth skeletons were excavated north of Crawford in the 1960's (see map). These mammoths apparently died in mortal combat about 12,000 years ago when their tusks became permanently locked. The giant mammoths were excavated just five miles east of Hudson-Meng. Presently, the skulls and tusks are stored at the University of Nebraska-Lincoln Museum almost at the other end of the state from the site. The people of northwest Nebraska have long searched for a suitable facility in their area to house the mammoths.

The newly-formed partnership determined that two separate facilities would be built. The new Bonebed Enclosure, constructed over the bones on the Hudson-Meng site, will allow continuous excavation and protect the bones from weather and vandalism. The second facility, the Prehistoric Prairies Discovery Center, will provide visitor interpretation and administrative facilities. The Discovery Center will be located 20 miles from Hudson-Meng, at Fort Robinson State Park, Nebraska's largest (22,000 acres) and most historic state park.

Established as a post-Civil War Indian Agency protective post, Fort Robinson remained an active military post until 1948, and today receives 300,000 visitors every year. Many famous western names played leading roles in Fort Robinson's colorful history, including Red Cloud, Walter Reed, Arthur MacArthur, Dull Knife, Doc Middleton, and General Crook. The famous Sioux leader, Crazy Horse, was killed at the Fort in 1877.

Both locations offer opportunities to appreciate the striking contrasts of vast mixed grass prairies, towering buttes, and harsh badlands of Nebraska. From the Discovery Center, through expansive glass panels, visitors will enjoy the span of colorful escarpments such as Red Cloud Butte, Grant's Thumb, and Coffin Butte. Enroute to Hudson-Meng, visitors can examine Toadstool Park, a fascinating and unique geological and

paleontological site. Toadstool presents evidence of a 30 million year old braided riparian system, with fossilized tracks and trails of thirteen Oligocene vertebrate species.

The partners' responsibilities

The contributions of the partners required a careful blending of the resources of the federal government, Nebraska state agencies and universities, city and county departments, citizen groups, and private assistance. As a critical partner, the Nebraska State Museum is providing staffing, exhibits, and a gift shop for the facilities. They will also collect visitor fees and provide the majority of the annual operation and maintenance expenses. The City of Crawford is providing the annual costs of water and sewer utilities, and the Crawford Chamber of Commerce has committed 10,000 volunteer hours annually. Because the Discovery Center will be built in Fort Robinson State Park, the Nebraska Game and Parks Commission is providing a lease for the site. The Dawes County Travel Board is providing signs and promotion. The value of the annual operations and maintenance commitments from these partners is \$222,000.

The universities and colleges (many of them collaborating from other states) are providing expert archaeological and paleontological research and education programs for educators, students, researchers, and the general public. The Pine Ridge Civilian Conservation Job Corps will paint, stain, landscape, plaster, and construct sidewalks, parking barriers, and outdoor furniture.

Local individuals and groups have already contributed thousands of hours excavating and providing interpretation at the site. Many, including senior centers, youth groups, and Chambers of Commerce members, have committed to continue to staff the Center as volunteers.

In total, the Forest Service is providing \$3 million to the project while partners will match that figure. To raise those funds, an umbrella organization, Friends of the Prehistoric Prairies, was

formed with 15 board members from Sioux and Dawes County, Nebraska. In February, 1995, the Friends hired a professional fundraiser. The first phase of the campaign is the feasibility study, due in May, 1995 which will reveal the most promising sources for raising these funds.

Additional partners:

*Nebraska Historical Society
Nebraska State Historic Preservation Office
Friends of the State Museum-Trailside Chapter*

*Dawes County Commissioners
Sioux County Commissioners
Chadron/Dawes County Economic Development*

*Panhandle Area Development District
Nebraska Governor's Office
Chadron Chamber of Commerce
University of Nebraska-Lincoln
Chadron State College, Chadron, Nebraska*

*University of Wyoming-Laramie
Colorado State University-Ft. Collins
South Dakota School of Mines and Technology-Rapid City*

Rural development aspects

Because Fort Robinson State Park is already a major tourist attraction, we expect 60,000 visitors every year at the Discovery Center, and 20,000 at the Bonebed Enclosure. The Nebraska State Department of Economic Development projects an annual economic impact of \$1.65 million to Dawes County, while the City of Crawford with a population of 1115, is projected to receive \$1.4 million.

In addition, there are regional tourism benefits. This location along the I-80 to I-90 connecting corridor provides a rural tourism model that will combine

ecotourism (nature based) with cultural attractions. This cultural heritage corridor will be marketed as a vacation package to tourists seeking an authentic rural experience. Developing additional attractions along this travelway will establish and expand small businesses that will serve the additional tourists.

The research and scientific discovery aspects of the project are more difficult to quantify or put dollar figures on, but they are nevertheless very real. Partnering colleges and universities can study, excavate, explore, and teach on the largest, most extensive bonebed of its age in the Western Hemisphere. Researchers are studying DNA to determine how these bison are genetically linked to other bison elsewhere in the world. Paleobotany studies of grass and plant remnants may tell us what vegetation existed 10,000 years ago and how the climate has changed over time. Researchers are even learning new survey and excavation techniques. Partners will conduct science programs to educators, college students, and K-12 students throughout the area.

Author Patricia Noonan Irwin (pictured right) has been the District Ranger since 1994 of the Pine Ridge Ranger District, Nebraska National Forest located in Chadron, Nebraska. Her responsibilities in-



clude being the project leader for the Forest Service of the sites described in this article.

She has worked in timber, recreation, fire, and lands on several National Forests, including the Mt. Baker/Snoqualmie and the Gifford Pinchot in western Washington, the Caribou in southern Idaho, the Lincoln in southern New Mexico, and the Mark Twain in Missouri. She also served as a Peace Corps volunteer on the Caribbean island of St. Lucia. Irwin's Bachelor's in Forestry is from the University of Missouri-Columbia.

Photos these pages:

Page 21, Southwest trench, dug in 1993. Screening area on center right. Upper right is pond dam built in 1954 which exposed the bison bones;

Page 22, 1993 excavation at Bison Bonebed. Foreground is water screening area used to catch fine bone fragment and other particles. Background is west trench dug in 1993; also student volunteer excavating bison bones, including two lower mandibles, during the 1993 excavation;

Page 23, Co-principal investigator Dr. Larry Todd (right) explains practices to Nebraska Governor Ben Nelson (far left) and *Omaha World-Herald* reporter Jason Gertzen. Colorado State University student volunteer (center) is Mark Larsen.



THE MATERS:
JEAN & CATHERINE

BY KAREN LYMAN

WiNR: This issue focuses on rural community assistance and I know that's something you've been working a lot on recently. What's your take?

CM: Let me start with this: when we talk about impacts to the forest products industry most people are unaware that if you put all the manufacturing together in forest products and wood processing, outside of pulp and paper but including veneer and composite board manufacturing, over 75 percent of all individual operations within the United States are comprised of 20 employees or fewer. So where the impacts are felt the hardest, and where they are often ignored the most, are in the rural areas where these operations are located. They comprise the largest segment of impacted populations and potentially, the largest segment of value-added dollars to the U.S. economy.

This is part of what Mater Engineering has decided to concentrate on—anybody can do the engineering component on a large business basis, or for a large organization. The real challenges are in helping the rural areas get back into business. And often that means that you're working with four, five, six to ten individuals within a community who originally may have been a part of a larger organization, but who now have ideas about what they can be doing on a much smaller scale. Usually those ideas incorporate not only processing but value-added product development.

WiNR: What kinds of help do you offer?

CM: I look at maximizing the resources that are available in the given community. Sometimes the crisis of access-denial to the commercial species has forced these communities to take a look at what else is out there in the forest. Much of this is unused and under-utilized species that they were trashing or burning up. I say to them, let me show you what you can be doing with this species—and in fact potentially capture a higher profit per unit coming off product development than the traditional species that you've always worked with.

WiNR: That's a pretty hard concept for some folks to adopt.

CM: There are major barriers to overcome in the process. What I usually end up doing—and I work

throughout the United States and off-shore—is to help set up the manufacturing operation in the community. We determine how that resource needs to be milled or turned so it's producing product. But the other part is that we are actually involved with the design of the products. This eliminates the thinking "I know the mechanical characteristics of this resource and I know I can make this out of it. Therefore I'll do that and let somebody else figure out how to sell it." I reverse that by identifying what the consumers are buying first, how they're buying it, and who they are buying it from. And what designs are selling. And then we can figure out the next generation of design. Instead of a commodity way of thinking (how can we push more volume through) it's completely reversed to where we now are asking how can we best meet the consumer's needs and demands by working the equation backwards. Doing this also shows us where the potential partnerships are.

WiNR: This sounds so sensible.

CM: It's wonderful because you're working hands-on, with people who are really making a difference. They're introducing new, successful product lines to both domestic and international markets with species they thought were junk before. They just didn't realize what they could work with and that it would make a difference in terms of their community's sustainable resources and sustainable economic development.

WiNR: The idea of a sustainable community is key here?

CM: Yes, it's basically looking at good stewardship of your forest lands which means much more than just good stewardship of your wood. It means looking at good stewardship of the community itself and the people who are really doing the most to take care of the resources that are right next to them.

WiNR: Do some communities have a hard time giving up the old ways?

CM: Many decisions are out of the hands of the small community in the natural resource realm. And that is very hard. But there are still many things that are left within their control. And so my classic statement is that crisis always affords an opportunity.

Mater Engineering, Ltd., headquartered at Corvallis, Oregon, has been servicing world-wide forest product clients for almost 50 years. The firm specializes in the design and engineering of wood processing facilities and technologies, as well as in the identification of market opportunities for new product development.

Karen Lyman interviewed them individually at their office complex on the banks of the Willamette River. Within Mater Engineering, Ltd., Dr. Jean Mater (JM in our interview) is Vice President, Forest Products Marketing Services Division, and Catherine Mater (CM in our interview) is Principal and Vice President.

WiNR: The focus in this issue is on rural community assistance, something that seems near and dear to the heart of Mater Engineering. And it seems that your workshops and seminars on public perception, citizen involvement, and conflict resolution are often targeting rural communities. Can you describe what you hope to accomplish in these seminars?

JM: I've been doing this kind of work for the past 17 years. I don't do it regularly—only when the industry notes a sense of crisis. But I really enjoy those workshops because I feel I can make an immediate difference.

A lot of the seminar and workshop work is giving people an opportunity to gripe. Somebody's listening and has a suggestion. And no one is saying, "You shouldn't be complaining." The complaints are justified and we want to know what we can do about them. I think that alone has a value. And that's what we do with citizen participation, too. We give citizens a chance to throw eggs at us. I've written three books on that topic and I'm writing another. This book, *Reinventing the Forest Industry* will be my sixth.

WiNR: You've done some seminars in California. What were they like?

JM: Seminar topics depend on where we are. In California, I did two-day seminars for the California State Forest Service with an emphasis on public hearings and citizen involvement. Those things have been real problems for them there. We would go through what a public hearing process is and why it's not just an event but rather a part of the process necessary for public decision-making. We discuss how public hearings can be manipulated, the kinds of strategies and tactics that are used. And how those tactics can be combated if they need to be. Or we might talk about how they can use the same tactics that the advocacy groups use and what constitutes an advocacy group. And we'll actually get down to how to conduct a public hearing using a checklist from one of my books.

WiNR: So that all the t's are crossed and the i's dotted?

JM: Also to make it effective and accomplish whatever you want. In California, with the Forest Service, the public sits as the judge and jury; but the agency has limited authority to make any decisions. But they hold public hearings. So that's what I focused on. The response in California has been very good. I like doing seminars because they give me input and reactions right away.

WiNR: I gather you're worried about the condition of the forest industry.

JM: One of the things that I've been working on are the questions: "What is the public perception of the forest industry? Why did it get that way and what are we going to do about it?" I don't believe in finding balances. I believe a balance is just an unsatisfactory compromise between unsatisfactory situations. I think you have to find solutions. And so that's the angle I'm coming from. I'm reading a book whose author suggests that the environmental movement has gone too far and that it has to change. I'm much more pragmatic. I'm saying that it is a new ethic and it's *not* going to change. It's the forest industry that has to change.

WiNR: How is that going to happen?

JM: I think the forest industry has to increase its credibility. Among the things that have to be fixed is the fact that the industry is so fractured. From our work at Mater Engineering we have a terrific vantage point because we work with industry and environmental groups. We work with all segments of the industry—not just the producers. I think it is necessary to get all those segments together. We must also understand that the people who are closest to the consumer are the people who know the least about the industry. When I give this talk I challenge everybody to go into a lumber yard or the nearest Home Depot and ask a question: *On this piece of wood can I use nails or do I have to use screws, and what's the difference between these other two woods?* Most retailers who deal directly with the customer don't know about woods and can't assist a customer.

That's a tremendous disadvantage for the forest industry. The wood products industry is certainly getting competition that we've never had before from steel, plastic, and engineered wood products. I've noticed that retailers and wholesalers are not at forest industry meetings. The only meetings they attend are their own. I think that's a great loss in the industry.

WiNR: What about the latest hot topic: certification?

JM: I'm also on a soap box about the issue of certification, specifically, certified sustainable forest management. This is a great opportunity for the forest industry. And when I say industry, I mean the entire spectrum, including the university and its students, and the regulators; anybody who has something to do with the forest, growing it, managing it, utilizing it, and producing from it. It's the only catch word that I can think of that includes everybody. And I think the forest industry is blowing an opportunity that certification gives.

WiNR: How does it work?

These people are survivors. They are committed to the geographic area they've been raised in and that they've been a part of. They don't have any other choice but to say, "How can we look at this differently?" It's taking what essentially is a very negative situation—and not looking for a silver lining, but instead looking in a new direction that will still keep them in the forest they love, making a good living and, further, having a way of making sure that those resources will be there to work with into the future.

WiNR: What do you consider a big success in one of these projects?

CM: We don't pick up on the big business mentality where some company might bring in 200 or 300 new jobs. That's not what this is about. I feel quite successful if I am able to help initiate two or three businesses that may be in the 5-10 employee range. That's success in many rural parts of America where we work. Further, we feel successful if we are able to provide a project where we're not only taking resources off the forest but ensuring sustainability of that resource in the long run. What we typically hear is, "Let's get some of these service jobs here in the community for reforestation." But those tend to be seasonal in nature. They remind me of when the local public works and employment funds came out on the national level. There was funding for set projects, then the job was done, and the workers left or were laid off. And you're right back employment-wise where you started. I look less to that and more to long-term sustainability of job creation that's reliant on resources where you have done due diligence to make sure that there's a match. Again, it's sustainable resources, sustainable economic development which I really think is the winning equation for sustainable communities.

WiNR: Many rural communities, mine included, still have pipe dreams of big business swooping in to save us. But what you're talking about is more realistic, more attainable.

CM: How many communities have said, "Let's build an industrial park so we can draw big business." What they don't realize is that every other community is doing the same thing. You offer nothing new to really differentiate yourself. It's not that it isn't an admirable thing to shoot for. And it's not that what we do on the forestry side of the equation is the only thing communities should be doing. But again, it's making sure that you've got enough on your plate so that you're going to have both some short term and long term successes.

WiNR: Can you give some examples?

CM: We're just finishing up a project on the Sierra National Forest in the community of North Fork, California, not too far from Fresno. This was a classic situation where the Sierra Pacific Industries mill shut down. The community was concerned about revitalization. They have tough transportation problems and they're not on the main line for tourists although they do get some.

Our project was divided into two phases. Number one was to look at the non-commercial wood species available in the Sierra National Forest. Were there species the community could be working with that the Forest Service was having trouble managing? And secondly, were there other products from the special forest products side of the equation that might hold unique national and international market opportunities. So we did evaluations and made recommendations in both. The community decided in Phase 2 to stay with the wood-based side of the equation. First we identified significant acreages of small diameter lodgepole pine, considered to be a weed species. But we'd already done extensive domestic/international market research which showed quite successful product development opportunities, especially in furniture and cabinetry, using lodgepole pine.

As a result of that, a company started by a group of designers developed a new furniture prototype out of lodgepole pine. It was RTA (ready to assemble) for the high end catalog market. They are now setting up for manufacturing. We connected with the high-end catalog market to find out whether or not they were interested. They said, "This sounds good. Can you manufacture 40 to 50 units per month?"

Another group wanted to produce home decor units out of bull pine—another junk species—and special smaller scale items out of different woods including lodgepole pine and manzanita. What we did was help them re-design their product layout. So instead of offering the same traditional designs in candle holders, for example, we created a whole new design for full centerpieces that incorporated bull pine and lodgepole pine.

WiNR: I'm surprised. Manzanita?

CM: I was very much intrigued by manzanita. The manzanita grows so thick there that equipment can't get past it in the forest. They have trees that are 2 1/2 feet in diameter—it's substantial stuff. The sentiment had been to get rid of it. It's just garbage. We looked at it in two different arenas. One was manufacturing it into exotic flooring. I now have wholesalers who are calling me almost weekly asking, "Can you tell me who is manufacturing manzanita flooring? Have they started up yet?"

WiNR: Manzanita flooring sounds interesting.

CM: Manzanita is a gorgeous wood, tough to dry, but a gorgeous wood. Very dense, very hard—it makes great flooring. But there were two problems; the first was the drying process. This region of the United States isn't known for its skill in hardwood



JM: There are organizations that do certification. You hire them and they certify that your forest management meets certain environmental, ecological, technical, and sociological requirements. The certification movement has taken hold in much of Europe—and internationally. Actually the impetus came from the summit in Brazil. It's gotten to the point where it's a significant part of the international forest industry. In fact, the two largest certified forests are clients of ours and we're marketing them using their certification as an advantage.

I'm a member of the marketing study group organized by the Society of American Foresters to study certification. (Cathy is tackling it from another direction through the John D. and Catherine T. MacArthur Foundation). I think the industry is missing an opportunity because we have all these different organizations and each has its own mission. The industry badly needs a leader to make certification have meaning. A consumer who is interested in buying a product that is made from wood that has come from a certified forest won't have any idea of what she's getting today. There are many different kinds of decals, different labels from different organizations with different parameters. The international organization, the Forest Stewardship Council, is trying to be the certifier of certifiers. But they lean in the environmental direction so that the industry just can't buy into that. So they are going in different directions. It's very confusing and I think it just cries for leadership. One credible certification process is what we need.

WiNR: Do you see the certifier as being an agency or independent council?

JM: I think that it needs some person in the industry to say, "We've got to do this." I think that it's going to be a leader, a person.

On the other hand, environmental groups are really having problems, too. They can see that they have to take a marketing approach. Of course, I'm very high on marketing approaches. I think that the whole answer is right there. I wrote my first book on citizen involvement in public perception before I really thought through the marketing aspect. Now I've added that to it and I look at the change in public perception as a marketing effort rather than a public relations and educational effort.

WiNR: What else are we doing wrong?

JM: One of the things I say that no matter what we do—we can have the best certification programs, get a lot of credibility—but one clear-cut that is visible from the highway harms the industry's image. Clear cutting, I think, is a big problem that the industry has had. We can tiptoe around it, or we can run around it and explain it away. We can say it's the only way to grow Douglas fir and a lot of other species, but it still doesn't look right. You can talk yourself blue in the face, which the industry has done, spend millions of dollars, which the industry has done, but seeing one clear-cut will undo it all as far as the public is concerned.

WiNR: People do glaze over when you talk about clear cutting.

JM: Because that's what they care about. They care about harvesting! Those are the messages I've been getting. I think we should do a lot of signing in forests and on highways, discreet informational signing, such as *You're passing a ponderosa pine forest and what you're seeing is enough to make 3800 dining room sets*. There was a signing program in Oregon but unfortunately what the industry wanted was a lot of forestry and historical facts rather than facts that relate to the consumer. The consumers are not that

interested in when this forest was first cut and that kind of information.

There's a lot of work to be done in the industry in order to change the public perception. I've been collecting all of the statements, advertisements, and articles from the 54 trade journals I take—plus a lot of consumer and customer magazines—where you, the consumer, are exhorted to be patriotic: *It'll save two trees! It'll save five trees! It'll save a forest of trees! If you do this or that*. That's serious business that impacts our pocketbook in a competitive sense.

WiNR: Have you had other experiences with negative publicity?

JM: I was a consultant to the Three Mile Island consortium after they had the nuclear reactor accident. Someone from Pennsylvania heard me speak about public relations problems being like trying to fix a broken leg with a bandage and asked me to participate. That was a very interesting and informative public relations fiasco. And that's all it was. There was an accident but the controls worked. The public relations handling of it, however, was just deplorable. I saw what a negative public perception could do. In this case, it killed the nuclear industry. The technology is there and it is safe. And even though they have the same installations working well in Europe, nuclear energy is not working here.

WiNR: Just one accident killed a whole industry?

JM: Yes. It's negative public perception. Then there was Chernobyl, which is a different technology, but few understand that. It's nuclear, they say. Nuclear is bad.

My training actually is in chemistry and I worked for the Bell Telephone Laboratories as a chemist before I came out to Corvallis. The chemical industry has an even worse public perception, if possible, than the forest industry. It hurts to think people are so ignorant—after all *everything* is chemical. So the industry started a program called Responsible Care. They are trying to solve their problems. They are trying to change the public perception and this is the kind of program I'm advocating for the forest industry. The chemical industry is just as fragmented as the forest industry. It's a very technical business, but it deals forthrightly with consumers. It was the leadership of someone at DuPont at the time who said, "We have to do this. Survival demands it." And he got the companies to sign on. It's only been in effect a year, but they really are trying to solve the problems rather than PR them.

WiNR: So education isn't the answer?

JM: Education cannot compete with advocacy. Especially if you have on the one side the environmental groups advocating—and I'm not anti-environmental or anything like that, but I recognize pragmatically where we are—while we educate. It has not worked. Actually the advocacy is manipulation which is the emotional response. Educating is an intellectual effort. You just can't make intellectual efforts compete with emotional ones. I don't say the information isn't necessary—you need that as a basis. We have to be very credible and say things that are absolutely correct. But if there's no emotion attached to it, it's not going to change anybody's mind.

I think we've been using the wrong paradigm in the industry. The paradigm we are based on states that if people only understood what and why we were doing it then everything will be all right. Well, you can understand and not agree. And I think that's the wrong paradigm.



drying, not that it can't be done. But that was the first barrier we had to try to overcome. What we did was look for new drying technologies that were—once again—adapted to small scale. All traditional drying technologies tend to be heavy up-front capitalization. Then I came across some new drying techniques used by the food industry. It was being prototyped at California State University-Fresno in their viticulture department using some new microwave vacuum technology. When I read about the successes they were having with cellular structure retention and color retention in food, I thought this is a long shot, but why not? I contacted the head of the viticulture department and the mio-vac lab unit. They were having problems because they had this new technology producing fabulous fast dried foods but the food industry wasn't picking it up. They weren't an industry in crisis—they really didn't need it. So I said "You know, you might have the right technology for the wrong industry. Have you tried testing this out on wood?" They said no, but they we're open to it. So while we were doing the North Fork project we asked if we could do some prototype runs. They had a very small (three feet in diameter and five feet long) mio-vac test and a 14 foot diameter, 48 foot long prototype to run food through on four conveyer systems. Manzanita has a very high moisture content and when it dries you lose almost 50 percent because of the splitting and the checking. We put slices of random thicknesses in the tube and went from a greater than 60 percent moisture content down to 7 percent moisture content in 81 minutes. Traditionally that would have taken up to two or three months to dry. Eighty-one minutes. The wood had no splits. No checking. It had a slight warp to it, which meant all I had to do was send those boards through a planer and I would have the perfect flooring material ready to go. We tested lodgepole pine and were able

to get a 7 percent moisture content in eight or nine minutes. And the small prototype unit is just the perfect size for rural parts of America.

The second barrier with manzanita was what to do with all those branches? Do you just toss them? But another group of people decided that there was real design flow in those twigs and limbs. So they created a whole new line of stick people sculptures. They're now selling stick people—with the story about how it got started—in art galleries throughout the United States. They're really in demand.

WiNR: Are there other examples?

CM: Another was a milling operation that wanted to develop some new product lines out of hardwoods, most especially California black oak. We worked with them doing the same thing. They had actually designed a couple of lines of home furnishings. What we did was help them redesign those to better fit what we saw were immediately salable products in three or four distribution outlet areas which can start up a whole new processing facility in North Fork.

WiNR: How do your international projects differ from these domestic ones?

CM: Ironically, the whole question of sustainability of resources, which we think of as new in the United States, is something many countries have been thinking about for some time. In New Zealand, I was retained by World Forestry Corporation to help them access global markets. They have plantations of radiata pine, which has traditionally been, at least in North American terms, a weed species. But they've found it to be a wonderful species for milling operations and wonderful for furniture and cabinetry.

WiNR: What were their special problems?

CM: To access global markets, they needed a logo, or image, that was true to their forestry practices. They also needed help to redefine their forestry practices so that there really is sustainability of resources. Often times that becomes a part of a buyer's demands, for example, when you deal with the high end catalog markets.

I would say that two-thirds of the 50 or more catalogs we work with—and survey across the world—require suppliers to stipulate where the natural resources came from to make the product in the first place. If it's from an endangered species, they will not carry the product. Many will refuse to carry teak and mahogany products, unless it can be shown that the wood comes from certified sustainably harvested regions of the world.

WiNR: Is certification the industry's future?

CM: It's here already. But it's still an area that the wood products industry fights hard against. I'm doing work directly on that issue with the John D. and Catherine T. MacArthur Foundation. That foundation is one of the leading foundations in the world that provides millions of grant dollars every year to natural resource endeavors internationally. They brought a team of five international experts together to help them better understand if the MacArthur Foundation itself is internally maximizing their dollars to make a difference. The real question was looking at the sustainability of resources, certification, and applying it to the global market. What's the product development side? How are products distributed? Does it make a difference when you're defining product development in South American countries versus how you do it here in North America versus in the border forests of Russia. Who controls those decisions on product development from the resource development side? The players are really different. You need to understand those distinctions.

The foundation was so pleased with the work we did they are now releasing our full report to many other private non-profits around the world. It's also going to the President's Council on Sustainable Resources and Economic Development.

WiNR: What was your role on the Foundation team?

CM: Of the five, I was brought in as the expert on the wood product manufacturing and marketing side. They had experts working the forestry end from Bolivia, Chile, Peru, and from Papua New Guinea. These were experts on the tropical side of the equation where the MacArthur Foundation had spent a lot of their time and money. I was the last member brought on board when they realized they were missing discussions about the temperate and boreal wood regions. Also they had nobody representing the manufacturing and marketing issues. It's been a wonderful team to work with—and wonderful work as well. Work with the MacArthur Foundation has lead to other interesting projects with global players, such as the World Resources Institute.

WiNR: How do environmentalists feel about certification?

CM: I also work with the Institute for Sustainable Forestry in California and it's very interesting to watch the uncommon alliances that are coming together. Before, I think the environmentalists thought that if they built a concept, people would follow

The net result of our paradigm, which follows the environmental agenda instead of having our own, is that we've been planting trees. That's the big deal; everybody's out planting trees. So everybody loves the forest but hates the foresters and the loggers because they're cutting those trees down. We haven't accomplished our mission. But we've certainly done a good job for the environmental mission. The forest industry has been reinventing itself in response to economic and environmental pressure, but it's re-active, rather than pro-active. We need our *own* program—not just a defensive response to the environmental program.

WiNR: And is this where certification comes into play?

JM: Certification could be a hook that people could understand because of the sociological and ecological management requirements. It could happen if it's handled correctly.

WiNR: How long before the forest industry really gets onto the Green bandwagon?

JM: I've been presenting papers at the Millard Freeman Wood Technology Clinic. It's a machinery show coupled with technical sessions. Three years ago I presented the first paper they ever had on the Green Movement. At that time, the Green focus was on recycling and natural products. It was the beginning of when "environmental" became a product attribute. I'm doing one at the next clinic on certification and where the Green Movement has gone. In three years it's really increased in importance and in utilization. So it is a movement—and that's one of the things we do in my public perception workshops—is tell the difference between something that is just a passing fad or a trend and a movement.

WiNR: Earlier you said that it is actually a change in our ethics.

JM: Yes, it's part of the environmental ethic. Part of that concerns the industry and is why they are listening now. They really didn't think it was so important before, but part of the environmental ethic is to not use wood products. That's a pretty expensive position for the industry.

WiNR: This becomes more important as the industry downsizes and the Forest Service shrinks a bit?

JM: The forest service is being pilloried and I think they're very misunderstood. It's our Congress that tells the Forest Service what to do. So the agency really has responsibility without authority. I've been on two forestry advisory committees for the Secretary of Agriculture. I saw this happening when John McGuire was Chief of the Forest Service and I was on the State and Private Forestry Advisory Council. This was when I wrote my first book, *Citizens Involved: Handle with Care*.

WiNR: You're doing a seminar in Idaho for Forest Service employees—what are you going to tell them?

JM: One thing I would emphasize is that they ought not to be the spokesmen for the industry, which they really haven't been. Not directly anyway. They have a mixed mandate and that's their problem. It used to be that community preservation was part of their mandate. Now forest preservation is. And it's not clear. People do not realize that the Forest Service has little say in these policies. They do what they are told by Congress.

WiNR: Has most of your rural community assistance work been with the Forest Service?

JM: We've done a lot of work under the Forest Service diversification plan where they try to help dislocated communities who have lost their timber base but are still in the forest. They have a forest base they can't use, essentially. I have a double sort of interest in that, because I'm very active in the Job Training Partnership. I started it, chaired it, and organized it for the state of Oregon when it first came out. I'm still on three boards so I'm very close to what's happening in rural communities.

What Mater Engineering does is see what assets these communities have. For instance in Montana, the area we are working with sits between two large national forests which can't be accessed. This is an area with about 13,000 people. In this particular area we found that the mills had closed. There was one mill that had been bought up by Champion International and was reopening, but it was a dismal situation, greatly downsized. First, we do an inventory of what we do have and secondly what we can make out of it. One of the things we were looking for was what could be made with the non-commercial, non-traditional small fibers? We emphasize value-added work. Any lumber you can cut we advocate adding the value and doing secondary manufacturing so you keep the jobs in the area, instead of shipping them out. In fact, Montana had been shipping out 87 percent of its lumber to other states. That's what we've been trying to change.

This is the basis that we use all over in trying to develop a sustainable community—that's the buzz word now. Make the value-added in your area. That's number one. Secondly, look at timber that has not been cut and that's available—because nobody wanted it. We have different standards now. We can figure out how to use it. One advantage we have at Mater Engineering is that we work a lot in the northeast and the midwest and we've seen the techniques they have developed there for using low grade, small diameter logs and also using the non-commercial species. It takes a lot more work than harvesting and sawing up big trees. But we can't harvest them anymore. We find out what products can be made with the species that are available and where the markets are for those products.

Another thing we look at are the special, non-timber products. People have not recognized the value of those products. Compared to timber, it's been peanuts.

When we first started doing this, we found out you can't go to the census or any studies because it's not organized—just a family



because it's the right thing to do. Then they realized that this wasn't working. Ultimately what we're seeing is a recognition from the environmental community that the only way to get their agenda to work is that it has to be market-driven, especially with certification.

You just can't push certification and its costs onto manufacturers without having that cost coming back in terms of return of investment. (Of course, you can opt to do sustainable harvesting of your resources without the certification.) But interestingly enough, we now hear the environmental community saying we have to help manufacturers identify and create the market for products that are manufactured from sustainable resources that can be certified. And we have to help them get their 20-25 percent return on investment that they need to have up front. It has to make good business sense. Mater Engineering is just inundated with requests from international environmental groups for assistance in this area. They're asking us, "How do we help industry do what they have to do? And will it keep us on target too?"

WiNR: Your work has such variety. You go from helping regular folks figure out what to do with manzanita branches to helping formulate world resource policies. It must confound the industry. I note from a magazine article about Mater Engineering that you were called "The Heretic."

CM: Yes, and I was astounded when I read that. But you can see that attitude from industry's traditional side. Someone is even quoted in the article as saying, What is Mater Engineering doing in forest management policy discussions? They're forest product engineers. They design facilities! What we do is so outside of what has been traditional in the wood products industry for generations. They're still thinking—why should we have to understand what the consumer wants? We'll let somebody else do it. We'll let the brokers and wholesalers figure it out.

WiNR: Are you finding some companies moving slowly toward better forest utilization and consumer consideration?

CM: What you're seeing is an evolution within the industry, a metamorphosis. Even some big companies, like Weyerhaeuser in Canada have come to realize that there was more to the forest than the trees. They wanted to know how to look at so-called other species—were there markets for those species? So what they did, and this was revolutionary because nobody else in North America is doing this yet, was bring Mater Engineering in and ask us to help identify other species there were in their forest which may hold market opportunity. Then we were to prioritize those species according to mar-

ket demand so that this information could be incorporated into their annual GIS. The idea was when Weyerhaeuser did their harvest rotations they could make early announcements and coordinate with the surrounding communities because they would know where the volumes of high value species were. That's just kind of common sense, isn't it? Weyerhaeuser U.S. was unaware that Weyerhaeuser Canada was even doing this.

WiNR: Can the concepts you have been talking about be taught to college students?

CM: Oregon State University has recently submitted a full proposal to the MacArthur Foundation for funding to create a curriculum that is based on sustainable forest resource management. If this happens OSU will be the first university in North America to incorporate that curriculum. It would have international reaches throughout the world because there are many other arenas that are doing sustainable forest resource management, especially in the non-wood based components, that will be drawn in on this. There already has been one course set up on sustainable forestry at OSU. What's intriguing is that even as the student population drops in the traditional forest products curriculum at OSU, they are overwhelmed with students who want to take the Sustainable Forest Resource Management course. They have a waiting list. That tells us something about forest products curricula. The kids coming in can see what's ahead and they want that kind of training. They are not getting it from academics as usual. When I was in college, environmentalism was a fad. Today's students grew up when environmentalism had matured, but many professors are from the previous era.

WiNR: Can you describe what it was like to participate in the forest summit with President Clinton? How did it come about?



CM: That was interesting. I was in Japan when the discussion of the summit was being reported and I think there was more visibility offshore about it than there was here in America. In fact I was interviewed by NHK TV—like CNN—in Japan about forest products before I came back. When I got back I had a call from the White House waiting for me. At that time the line of discussion was for me to help them so that they could present the working paper for the President and the Vice-president in preparation for this forest summit. They wanted to know what issues they ought to be looking at, what seems to be the right direction, and so on. They were most interested in value-added processing and what rural America was looking at in terms of defining their solution. We went through a full two-hour interview and I thought nothing more about it until a week before the summit when I got a fax from the President's office saying he would like for me to be a presenter at the summit. But I didn't get any direction on my presentation until three days before. They thought the President might ask me some questions so I would probably want to be prepared for that. Just take it as it comes, they said.

Since I was on the third panel, I had the luxury of sitting through the first two and I created my thoughts as panel one and two were flowing into panel three. I think I was a third of the way through panel three before the President asked me some questions. I prepared nothing before I went in because I knew that panel three had to be responsive to questions. But, you know, it wasn't as difficult as I thought it would be. If you think about it, you're there because you have certain knowledge in certain areas. The hardest thing in a set up like that is to get those points across in three second sound bites.

A lot of new project development for the firm came as a result of the summit which was very surprising to me. When I travel now, I have people stop me in the airports and say—I remember your discussion on the forest summit. That was two years ago!

WiNR: Hey, we were paying attention.

CM: I am constantly amazed that people sat through that whole thing. I think it was really important to people in all walks of life.

WiNR: When you talk about field work do you get out yourself and tromp through the brush?

CM: Yes, it's the only way. When I get projects, like this intriguing project I had in Missouri, before I do anything else, I usually spend a week to two weeks in the forest looking at the species, working with the people

here and a family there working on alternative forest products. It's been fragmented so badly that there aren't any statistics. But in aggregate, it's very big business.

Another aspect we have found is that in most rural areas—and what I'm doing in Montana is very typical—there will be a small custom furniture manufacturer or somebody who's making Christmas ornaments. Maybe they were hobbies when they had jobs, but now these hobbies have to support them. We advocate cooperatives and collaboration, which goes against the grain of people in this industry—they're independent people. Working together is a real problem. But you can make the dollars go so much further if, instead of one producer sending out a sheet or a catalog and someone else sending out another, we combine them all. Instead of each one going to a trade show, which is a very expensive thing to do, having one trade show for the area.

We are also looking at flexible manufacturing and using the techniques or the facilities already in the area. Somebody may have planing facilities, somebody else may have a dry kiln. Now, we ask them, how do you work together to produce a product so that you can use your facility to create jobs?

WiNR: Have you found some interesting new products?

JM: In Montana they have mines that have been closed because of environmental pressure. About 90 to 95 percent of what those mines took out ended up as tailings. There are mountains of them! They're part of the environmental pollution. I've been working on a process and the feasibility of installing a plant in that area to make aerated autoclaved cement (AAC) building products. It's so strange for me to working on anything like that that isn't wood. But it makes sense because the mine tailings have been found to be an acceptable ingredient to which you add some sand.

There's a terrific demand for this. This is an old product. It's used all over the world except in the United States because we've had wood. But now wood is so expensive. And also we have to consider fire safety. The AAC building product is lightweight with good properties. It's fire-proof and also good in seismic activity. So we're taking a product that is being used all over the world and saying maybe it's time to look at that here.

That's another thing I'm advocating for my re-inventing of the forest industry is that we should look at ourselves not as a lumber industry but as a shelter industry. You use whatever there is. You use lumber to its major benefit. There's nothing like wood, of course. But there are times, when you need something that is fire retardant or sensitive to seismic activity (although lumber is very good for that too).

Another project I'm looking at is putting exterior walls and foundations in the AAC building product and then using wood wall panels. You get all the benefits of everything. For Montana we're also looking at wood cement-bonded-fiber board. I think that this is a product whose time has come. You use fiber in that, you just use whatever is leftover. We can also use the mine tailings in that. And it only uses about 20 percent wood fiber. We have found that there is a shortage of both of these products in the United States.

WiNR: How do the folks who've lost their traditional industry jobs in Montana react to all these new ideas?

JM: It's a sea change, really. First of all there's a lot of resentment in the rural communities. They sit in the middle of these lush forests—we have the best forests in the world right here—and then we import radiata pine from New Zealand or try to obtain spruce and larch from Russia. It's very difficult to feel cheerful when it's your job that's been lost. They love the environ-

ment too, but they also see the value in harvesting and the necessity of harvesting to regenerate the forest—something that is not generally understood.

I did a seminar after one report in Montana, and spent a whole Saturday with people who were interested in preserving themselves. There was this one company that had made wood pellets from the by-products of the now-closed mills and now they can't get by-products anymore—so what could they do? Any suggestion that I had for them seemed more difficult than what they were used to. They ended up saying they'd have to go somewhere else where they could get what they wanted—and they probably will—because all the other avenues would require a great deal of creativity and innovation on their part. And that's not what they wanted to do—they just wanted to make a living. Now that is a problem.

WiNR: Some areas may differ, though?

JM: Yes. Cathy has had experiences in California where they're more enthusiastic about the new opportunities she has opened up. But California's forest industry has been so beaten up, for so long. Even before the spotted owls and so on, they had so much citizen participation that it has tended to discipline the industry and restrict it.

When people really get the idea that they can do something—when they get over the "I don't want to change" part then they begin to do it. When my interim report came out from a project we did in Iowa where we had demonstrated ways to use juniper—which everyone had been burning because it was in the way—for profit, the project manager there told me that she circulated the information around to some of the larger land owners. One of them who was burning his juniper bushes read that and said "I'm burning up all this money." He stopped the burning and is now harvesting the juniper and making products out of it. These reports do have a practical value.

WiNR: Do you find there is a pattern to the kind of assistance that communities need?

JM: It depends on the community. For most of them the basic pattern is jobs, the replacement of jobs lost. Not only the primary jobs or secondary, but the tertiary jobs which are the community itself. The package that Mater Engineering develops really varies. We don't usually stay on site, but we're there often. I did a project in International Falls, Minnesota, for example, where a mill had closed putting about a thousand people out of work. That was before the Forest Service diversification funds and before the Economic Development Administration had a substantial grant for this work. I met with a committee and went there every month all winter, the coldest place in the country. So, to answer your question as to pattern, as far as the work I do, I don't have a "One Package Fits All."

WiNR: I live in a rural agricultural community and although agriculture is a few steps behind the forest industry, the community can see the writing on the wall. Do you ever work on any agricultural or agroforestry projects?

JM: Agroforestry is a practice whose time has come. We have a project with the Department of Agriculture on the use of straw for cattle feed and it can be combined with special forest products. I work with a forester who's a professor at the University of Oregon, a sort of maverick. He's firmly believes that soil is the limiting factor as to how many people you can feed and house on earth. Agroforestry relates well to soil mitigation.

who know about those species. Missouri asked me to evaluate other products from the woods besides their commercial wood species. The first thing I did was spend time in the Ozarks meeting with these ancient herbalists who had been treating people for years with wood extracts and had international markets established. I was driving one day in these forests in the Ozarks with instructions—go down this county road for 20 miles. I'm thinking to myself that if I get stopped here for any reason there isn't anybody who's going to find me for 20 years. But when I get to the end of the road, inside a log cabin is the most amazing man. He's established international markets, his fax is set up, and he's got an extracting operation using mosses and bark from the trees for a major migraine headache cure. You just can't believe what's happening in this international alternative medicine industry.

WiNR: There can't be many women doing what you do. Is that ever a problem?

CM: No, in fact it can be a plus. Especially when I'm working in foreign countries, like in Japan, for example. If you think women in the forest industry are rare here in North America, try Japan. When I was there as a guest of the Japanese government, making speeches to their head forestry and forest products industry people, I'm introduced as Catherine Mater, principal and vice-president of Mater Engineering, a firm 50 years in the wood products industry world wide—AND SHE'S A WOMAN! I think...this is hard to tell? I don't laugh because that would be rude, but it truly is just such a phenomenon to them still that they just have to add, "And she's a woman!" What that does though is afford me visibility up front. You then have to substantiate credibility within a pretty short period so that you don't turn into an oddity. I've not found any difficulty at all working with people in all segments of all fields within both the forestry and forest products industry.

WiNR: How about the family part of the family business?

CM: This is such an unusual family. I had always intended to go to law school. My bachelor's degree is in political science and business. I got introduced to the Mater family because I was working my way through undergraduate school and I came to work here. Mater Engineering had just secured an expert witness job with the Quinault Indian Reservation representing the Quinaults on mismanagement of forest lands. As I worked on that I began to see that there were two whole new worlds out there that I had never even given a second thought to—and one was the forest products side of the equation and the other was the engineering side. After

Scott and I were married, I still had law school thoughts in my mind but I started working on contract management for the firm and Scott and I traveled together as a professional team. The more that I began to work on site—seeing facilities constructed, working with milling operations—I began to see that the engineering thing was really intriguing.

Scott never wanted me to become an attorney anyway and he gives himself full credit for saving my soul. He suggested I just go back and get an engineering degree. We called the head of the civil engineering department at the university and took him out to lunch with the thought that I could enter into the civil engineering program on an undergraduate basis. As we were having lunch, Scott said, "Well, you know Cathy has been working on project sites for three years and she has more of a handle on what real engineering projects are about than most of your students. I think you ought to let her into your master's program in civil engineering." I thought, I don't know this man. What is he talking about? My undergraduate work is in political science and business and this department head is going to let me into a master's program in civil engineering? Get real Scott. But that's what happened.

WiNR: That must have been a lot of work, though.

CM: It was hard. But in a way it was exactly the right thing because I was doing real time on projects and I was getting to the heart of what I needed to know. I understood why I needed to know certain things and I could work with it in the field which made a lot of sense to me. Plus I was married to an engineer. So anytime I didn't understand something at 2 or 4 in the morning all I had to do was wake him up. Needless to say, Scott was more thrilled when I got my master's degree than I was.

WiNR: Do you two still work as a team?

CM: Oh, yes. His field is mechanical engineering and we do work as a team. Of course to be able to work with Jean and Milt who were the Godmothers and Godfathers of the wood products industry internationally has been wonderful. Jean has been a fabulous mentor. Coming into this family is analogous to jumping into a master's program in engineering without an undergraduate degree. They are so far ahead of the curve over anybody else. It's not at all like the horror stories you hear about family businesses. It's not all peaches and cream either, but we make it work. Our two boys ages 11 and 14 have always been incorporated into our work. Especially during the summers where they are on project sites and they actually help us do measurements. I had a soundproof nurs-

ery we designed right next to my office. After they were born they both came to work before they ever went home from the hospital. They've been part of the family and every-day-work structure. I used to have a little red wagon and they separated out all the mail for the people in the building and hand delivered it. What mom and dad did was more than a title to them because they were a part of it.

WiNR: Kids in offices aren't for everybody, though, are they?

CM: It's not what I would recommend for everybody—bringing the kids to work. In fact I testified at the congressional level about the fact that it may not be such a good idea for corporate America. You really need to have kids separate from the work space.

WiNR: You share workspace with your husband also?

CM: Yes, and working with Scott has been a delight. We've been married 20 years and I thank God daily. The best choice I ever made was finding Scott. I'm Type A (personality) now, but I was Type A plus before. I've really benefited from his calmness and reasoning. He's able to work with all kinds of pressures but stays on an even-keel.

Scott is the real story behind our successful family life. Here he is president of the company running multi-million dollar projects himself—and we have projects that we work on together plus quite separate ones, too—but he still coaches both boys' soccer teams. He plays on an adult soccer team. This goes on while I travel; the last two or three years, I spent over 60 percent of my time on project sites all over the world. You find a lot of women in the corporate world who blend business and family. But what you don't find are a lot of corporate men and fathers doing what Scott's doing. And Milt, his father, was very much the same way.

WiNR: Becoming really involved?

CM: Scott's always been genuinely interested in the lines of a partnership in marriage and in the profession. I would never in all my years have the nerve to ask a department head about going into a master's level engineering program. He's the one who did it. Then he said to me, You can do this. Usually the first question I get from people—even clients that I work with—is, "What does your husband think about all this." Until you meet Scott and see what he's about, and work with him professionally, you don't realize what a find he is. Jean and I are usually the people who get the press, but Scott's really the story.



WiNR: I know your company wrote the 1989 State of Oregon strategic market plan which was designed to expand value-added wood product manufacturing in the state. How did that come about?

JM: Our work was the basis for the Oregon Economic Development Program. We did a separate one for eastern Oregon and one for western Oregon. But before that I had done one for Massachusetts which was very interesting. Massachusetts had put all of its eggs in the high tech basket and was very successful. But they began to find that this had a soft underbelly, too. Although the high tech corridor and the Boston corridor were enjoying prosperity, the rural areas were not sharing in urban prosperity and were having a rough time. Then they looked around and saw they had forests. They thought of those as their playgrounds, their parks. Our assignment was to find value-added products that could be manufactured in the area. I had reported on what we did. Someone from Oregon heard my report and wanted to do that here. Cathy and Scott negotiated that.

WiNR: Who benefited most in Oregon?

JM: I think a lot of companies have benefited from the plan. We did a study on manufactured housing and advocated that as a prime secondary product that should be undertaken in the state. I think now we're now one of the leading manufactured housing states. It's a field that's really growing.

WiNR: In terms of the company, does each family member have a special skill they bring to work?

JM: I'm the only one in the family who has been trained in forest products and forestry. Cathy and my son, Scott, are both engineers. Cathy got her Bachelor's Degree in Political Science and then took a Master's in Civil Engineering which is really an incredible feat. My husband Milt is now dead, but he and I started the firm. He was the engineer.

When I started I was the only woman and in many cases still am. I don't know how many women are Fellows at the Society of American Foresters, not many, I know. The year that I was made a Fellow, I was the only woman. I also have the highest award that the Forest Products Society gives, the Gottschalk Award. My husband and I got that jointly—so we were the only couple, too. I feel very fortunate to have the highest awards of the two societies.

WiNR: Is hard work a family trait?

JM: I work long days. We all do. Cathy and Scott manage the day to day running of the company. Nobody reports to anybody. I now have my own assistant who reports to me. We have a lot of assistants who work for whomever needs them.

WiNR: Would your company's organizational chart work for other family businesses?

JM: I don't know. Scott came to work with us, and then Cathy came. So I've worked with my husband, my son, and with my daughter-in-law—and that takes a lot of doing. I've always said the worst part of working with your husband is that you can't go home and complain about the boss.

Scott is the leveler. He doesn't get excited. He's like my husband. I'm a cloud minus twelve and I think Cathy is that too, more or less. But he's always a cloud nine. That's a good thing to have in a business.

WiNR: Why is the business in Corvallis?

JM: Because we wanted to be in Corvallis. The town is great. We came to Corvallis and we said we're going to find some way to earn a living here. We bought a manufacturing company and we also had the engineering company. My husband invented the original automation for saw mills. So we were manufacturing that equipment. And then in order to use that equipment, you had to engineer the mills differently, so we started the engineering company. And after a number of years, since Scott wasn't interested in the manufacturing end of the business—and the engineering end was so interesting—we sold the manufacturing part. We knew that it would mean a lot of traveling, but it was worth it.

WiNR: Will Mater Engineering stay on the same path as it is now?

JM: I doubt it. Because the path keeps changing—not that we keep changing. We have changed as the industry has needed it. For instance this marketing work that we're doing I did on my own first in 1985, but I didn't do very much then. So whatever the industry needs we're going to lead in filling it. We're constantly looking at new avenues.

Interviewer Karen Lyman is Associate Editor of Women in Natural Resources.

Photos these pages:
 Page 26, Catherine Mater in the office
 Page 28, Catherine Mater and Scott Mater, President of the company at a trade show
 Page 29, Jean Mater
 Page 30, Catherine Mater in the field
 Page 33, The Maters: Catherine, Scott, and Jean (photo by David Grubbs)

American Women Afield: Writing by Pioneering Women Naturalists was edited by Marcia Myers Bonta (Texas A&M University Press, 1995) and follows her *Women in the Field: America's Pioneering Women Naturalists* (Texas A&M Press, 1991). The very readable assessment of many publications is extremely informative and interesting to readers who appreciate the description of dedicated naturalist's careers. The follow-up volume also includes the work of 25 women, covering a century, with biographical sketches and reprint examples revealing their subjects and writing styles. In most instances the writers' research is impressive in both technical substance and geographic location as these were vigorous, talented women living in a male dominated society. Their unusual naturalist service had much value in educating the public about nature's deserts, forests, beaches and jungles. Numerous insights of their outstanding research is clearly reflected in these two books with descriptions of rigorous travel and residence settings, experimental projects, and published educational reports.

Jack DeForest, Alexandria, Virginia

The National Wildlife Federation has published a new book called *Ecodemia: Campus Environmental Stewardship at the Turn of the 21st Century* by Julian Keniry. The title is descriptive. Campuses all around the U.S. are redesigning the basic principles on which their institutions operate from day to day and the book captures some of that activity.

Call the Federation at 800-432-6564 and ask about item 79866.

Ecopsychology: Restoring the Earth, Healing the Mind is a Sierra Club Book and was edited by Theodore Roszak, Mary E. Gomes, and Allen D. Kanner (Random House). Psychologists, together with ecologists, present revolutionary concepts of mental health along with a vision of renewal for the environmental movement.

International Range News is a biannual newsletter dedicated to "increasing awareness of ongoing range management activities in developing countries." The editors welcome contributions for the newsletter and names for a directory of range professionals. To be included or for information write Doug Johnson, Rangeland Resources, Oregon State University, Corvallis, OR 97331.

A reader's guide that's also a seven-century history of women, *500 Great Books by Women* (Penguin) meets the needs of the browser as well as the special interest reader. Beginning with the oldest book summarized—Confessions of Lady Nijo, a Concubine's View of the Japanese Imperial Court, published circa 1300—the recommendations are inviting and interesting.

In *From this Day Forward: Meditations on the First Years of Marriage*, Toni Sciarra Poynter (HarperSanFrancisco) promises to help us find the essence of our partner's character beneath all the other baggage.

If you belong to a reading group, or want to start one, Rollene Saal's *The New York Public Library Guide to Reading Groups* (Crown Publishing) might be of interest. There are 350 books, plays, and short stories; the editor gives 38 reading lists. Some are not surprising like a set called Old Favorites. Even if you just wanted some directed summer reading for yourself, how could you go wrong?

One of the best non-fiction books I have read in a long time is *Reviving Ophelia: Saving*

the Selves of Adolescent Girls by Mary Phipper who is a clinical psychologist. She has treated countless girls of junior high and high school ages who are suffering from a multitude of problems caused mainly by learning that after a non-sexist grade school experience which had allowed them to blossom, at stressful puberty they have to conform to society's view of girls/women. They are buffeted by many more pressures than their mothers and even if mothers understood them completely, the mothers and fathers are almost helpless to assist the daughters who are confounded by the changing of the rules from grade school to junior high. Many do not recover from the junior high experience. Phipper gives insight into assisting the girls who turn away from loving parents at the precise time they are in the worst danger; she discusses what the new crises are, what we should be doing as a society to counter the harm. There is very little finger pointing here (except at the thin is beautiful industry) but lots of examples from her cases lay many remedies out for us. We are legion who remember junior high with loathing; it is still loathsome, but the consequences today are worse for bright, promising young girls. They might be salvaged—and educated women should be interested in their peril. DLE

Breathing Space: Living and Working at a Comfortable Pace in a Sped-Up Society by Jeff Davidson (MasterMedia Ltd.) offers the usual tips on how to conduct a frazzle free life. On vacations, he cautions, for example, that we should not leave preparations for travel until the last minute or we waste the first few days getting rested; also, get back to work one day early to recompress; select Wednesday to go back rather than high-pressure Monday. Thanks pal, but you didn't tell us how to get the vacation first.

Richard Strohm wrote *Your Rights in the Workplace* to assist employees who want to keep things straight with their employers. For example, he says not to file medical claims with the company's personnel office, but directly with the insurer to protect your privacy within the company. There is usually a privacy waiver attached when you enroll in a company/agency plan, so you must act to cross it out or file a reversal if you have already signed one. If you are with a company that self insures, then you may be out of luck.

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Women in Natural Resources will have upcoming focus issues on environmentalism and the 10th anniversary of the Dallas symposium on women in natural resources. If you have a manuscript in progress or would like to discuss a topic, call the editor at 208-885-6754, Pacific time.

PLANNERS OUGHT TO PAY ATTENTION TO THOSE FACTORS THAT WILL PUSH OR PULL THE RELATIVELY WELL-OFF OVER-FIFTY CROWD TO GREENER PASTURES.

RETIREMENT MIGRATION: AN ECONOMIC DEVELOPMENT TOOL

LINDA KIRK FOX

Policies to attract retirees have grown in popularity as a strategy to encourage rural development in a number of states. Across the nation, the continued rapid growth of retirement counties was one of the few rural success stories of the 1980s. Enticing prospective older migrants has even become an established branch of many state governments. *Discovering South Carolina*, the state's "official relocation and retirement guide," is a glossy annual publication now in its seventh year. And books like *You can't plant tomatoes in Central Park: The urban dropouts guide to rural relocation* are available to help big-city retirees adjust to the rural lifestyle (Ruegg and Bianchina, 1990).

The underlying premise of policies to attract retirees is that retirees, with their relatively high and stable income, bring broad economic benefits by boosting populations, incomes, and employment in the counties they move to. The benefits of older adults and retirees to the community include increased economic resources, such as transfer payments in the form of pension and Social Security checks and savings, and the increased employment that may result from purchases of housing and services (Gardner, 1988).

Elderly migration—in or out of the community—as an economic development tool is important to some states, like Idaho. States like these are more dependent on the volatile agricultural/food processing complex than the nation as a whole or even some other states in the northwest region (U.S. Bancorp, 1994). Li and MacLean (1989) concluded also that the services and retail businesses in rural Saskatchewan, Canada, were largely sustained by the elderly population. These authors stated rural depopulations and the decline of the elderly population may cause the demise of the economies of many of the small towns they studied.

Older Americans control a substantial and increasing portion of the nation's wealth. Three factors were working in their favor in the 1980s. The share of households headed by an elderly adult was increasing, thereby

increasing the total wealth of older Americans. Also, the stock market boom of the mid 1980s benefited affluent elderly householders who control a large portion of individual stock holdings. Finally, a rapid escalation in home values in many markets boosted the net worth of most elderly householders because most older Americans own their own homes.

The fear of the 'gray peril'—that the burden placed on social services by elderly migrants will drain local community resources—has been discounted for the most part. One reason is that retirement migration boosts spending and broadens the tax base.

Another reason is that the taxes generated by the infusion of retirement income circulating in a state's economy will partially offset the public cost incurred by these new residents. Indeed, Bell, Serow, and Shelley (1987) found evidence that the share of income paid to taxes by the elderly in Florida exceeded that of the young. And Rosenbaum and Button (1989) found the presence of a politically organized aging population lead to increased local educational funding, not decreased funding.

The study of migration in later life has become increasingly important in recent years as older Americans are altering the demographic structure in many localities. Most research on elderly migration has concentrated on "amenity theory" where the goal has been to gain information useful to communities to attract new retirees (Haas and Serow, 1990; Hoppe, 1991). But, it is equally important for communities not to lose current elderly residents. The loss of retirees to outmigration can be staggering. Oldakowski and O'Rourke (1991) estimated the State of Illinois lost over \$1.2 billion due to retiree outmigration during the 1985-90 period.

Rural development specialists have promoted elderly migration as a potential community development tool with attracting retirees as the payoff to the community. However, there has been little recognition of the potential negative impact on communities with the loss of current elderly citizens of the communities or the related need to retain productive elderly citizens. Knowing the

likelihood of elderly migration would be useful to nonmetropolitan areas trying to retain the elderly as well as those trying to attract elderly migrants.

Why and where do older persons move?

Researchers interested in the issues surrounding elderly migration have suggested appropriate ways of assessing the motivating factors and subsequent behaviors. Elderly migration is viewed as a set of interrelated decisions, beginning with the triggering mechanisms which, according to Wiseman (1980), start people thinking about moving.

Triggering mechanisms can be divided into push factors (e.g. loss of a spouse, loss of independence or environmental stress and neighborhood dissatisfaction) and pull factors (environmental attractions, desire for amenities, wanting a lower cost-of-living and less crime, and seeing successful relocation of friends). Triggering mechanisms include changes in life cycle stages, like launching children from the family, and retirement.

These triggering mechanisms are then affected by factors such as personal resources, income, community ties and satisfaction, and former experience with moves, or by factors like cost of living and the housing market. These factors can either impede or facilitate migration. The type of move that results may be relocation within a community migration or a move to another community, state or country, or it may be seasonal migration only ("snowbirds").

If the move is to a new community, Wiseman (1980) includes destination selection factors in the model, including knowledge of potential locations, and former travel and vacation experience. The result is the migration outcome (new living arrangement, destination, and distance moved, for example).

According to the American Housing Survey, 25 percent of all age households in the western region of the U.S. moved within the one year period (U. S. Bureau of the Census, 1991). Changes in family status and housing needs were among the most frequently cited reasons for moving. These

Table 1. Background information

n = 1,635

Age

50-53	22%
54-57	18
58-61	18
62-66	23
67-70	18

Marital Status

Married	71
Not married	29

Gender

Female	52
Male	48

Education

High School Grad or less	43
Some College	33
College Graduate	24

Employment

Employed	51
Retired	41
Not retired/ not employed	7

Annual Income

0 to \$14,999	18
\$15,000-24,999	21
\$25,000-34,999	16
\$35,000-49,999	21
\$50,000-64,999	11
more than \$65,000	13

Household size

One person	20
Two persons	60
Three/more persons	20

Health

Excellent	30
Very good	33
Good	22
Fair to poor	15

Years in Community

1 to 7 years	23
8 to 14	14
15 to 21	15
more than 22	48

factors are, of course, interrelated and are often interchangeable.

But what about the elderly? Older Americans are only half as likely as the average American to move across state lines. Eighty-four percent of adults aged 55 and older say they would like to stay in their current homes and never move, according to a 1992 survey by the American Association of Retired Persons (AARP). The frequently cited reasons for moving of the elderly: housing changes, declining health, to be near relatives, and to reduce cost of living.

For decades, retirees have flocked to Florida, Arizona, and California. These patterns were remarkably stable for more than 50 years. And these flows of retirement migration were well established. Between 1985 and 1990, 4.5 percent of people aged 60 and older made an interstate move, compared with 9 percent of the general population (Longino, 1994a). Between those years, Florida received 24 percent of all older interstate migrants, followed by California, Arizona, and Texas. Although the share of older migrants received by the top 15 destination states has remained stable, the share held by the top ten has decreased (Longino, 1994b). Some states are gradually losing their allure, while others are actively recruiting potential retirement movers.

A Study: Housing Transitions of the Maturing Population

Based on the behavioral model of migration of the elderly as proposed by Wiseman (1980), a research project was proposed by a team of researchers in the western region funded in part by the Agricultural Experiment Stations in the respective states. The project, titled *Housing Transitions of the Maturing Population: Consequences for Rural/Non Metropolitan Communities in the Western Region* attempted to clarify the circumstances which contribute to the likelihood of adults, 50 to 70 years of age, to stay or to move away from their present community.

The selection of variables was guided by needs expressed by community leaders and previous research of factors affecting the likelihood of moving near or at retirement, particularly community satisfaction. It was proposed that the independent variables and demographic characteristics which included age, education, gender, marital status, and employment, along with community variables have a direct effect on the dependent variables: preference to stay or move.

•*Measuring Community Satisfaction.* Satisfaction is a feeling state that is subjective, but the measurement process is

objective. Community satisfaction also is an attitude. Research on community satisfaction has tended to follow either of two classic models of attitudes. One is a "belief-affect" model (Fishbein and Ajzen, 1975) which proposed that people combine their evaluations of a set of beliefs about an object in arriving at an overall attitude. This model has been applied to communities in the work of Campbell, Converse, and Rodgers (1976). The second model of attitudes describes how attitudes can function as expressions of one's values.

Evaluation of a community is thus proposed to rest on a combination of highly available specific and general beliefs about the neighborhood. The disadvantage of the availability approach is that no empirical rule exists for the *a priori* selection of predictors of satisfaction. Some would say the unreliability of self-reports on judgment processes makes satisfaction measures highly questionable. However, Sofranko and Fliegel (1984) evaluated both the validity and utility of satisfaction measures and conclude respondents can be objective and that their assessment of community satisfaction correspond to real attributes.

Given the nature of satisfaction, it is not surprising to find that most people are, indeed, satisfied. Dissatisfaction can be alleviated through one or two methods: altering the situation (a response to negative feedback) or changing one's mental image of the situation (reduce cognitive dissonance). Those who are dissatisfied have a greater propensity to do something about the situation than those who are relatively satisfied. Dissatisfaction initiates a search for more satisfying alternatives, and the decision to move is one such alternative.

But does dissatisfaction with community lead to change, such as a move to another community? This study was conducted to see if dissatisfaction was a motivating condition of potential stayers or movers. Understanding what community satisfaction factors, or "push" factors that

potentially could contribute to the migration event would augment the bountiful amenity theory research which exams the "pull" of various amenities, climatic, and geographical characteristics. The topic of community satisfaction and likelihood of moving in or near retirement was examined using Wiseman's framework of the decision-to-move factors. It was determined to build a model using logistic regression to test this framework.

•Methodology. The research of the *Housing Transitions of the Maturing Population: Consequences for Rural/Non Metropolitan Communities in the Western Region* W176 technical committee addressed the critical questions of the impact of planned housing changes or transitions on rural communities. From October 1993 to May 1994, a telephone survey was piloted, refined, and conducted using potential respondents who were contacted in three western states—Idaho, Wyoming, and Nevada.

A dual frame sampling method, which is a combination of telephone directory and random digit dialing, was used in order to obtain the desired number of completed surveys and to reduce errors (Frey, 1989; Groves and Lepkowski, 1985). The sampling method was determined in consultation with the Social Survey Research Unit (SSRU) at the University of Idaho, Moscow. Phone numbers were ordered for an age-stratified random sample of each state's population between 50 and 70 years of age from Survey Sampling, Inc., a commercial sampling firm.

The age delineation was selected to allow representation of persons on the age continuum to include those who are retired as well as those who have additional time until retirement. To obtain a target of 600 completed surveys per state, 1,500 listed phone numbers, screened for people over the age of 50 and under the age of 70, was initially drawn for each state.

In addition to the phone numbers from directories, 3,000 random digit dial phone numbers were drawn. This large number

of phone numbers was drawn because past research conducted by the SSRU indicated just under half (or about 45 percent) of the households would have someone who was 50 years or older. The random digit dial numbers were not all household phone numbers—some numbers were businesses, non-working numbers, or FAX numbers, for example. About 60 percent of numbers called were households. The telephone interview policy was to make five call-back attempts for each eligible household. These attempts were made at different times of the day or evening and on different days. The response rates were determined for each state based on the number of calls initiated and the number of surveys completed by eligible respondents. Response rates ranged from 76 percent in Idaho to 75 percent in Wyoming and 63 percent in Nevada. The final sample contained 1,635 cases.

Results

Before combining samples from the three states, crosstabulations and chi-square analysis were used to test the relationship between demographics and other variables of interest. Results indicated there were few significant differences between the respondents for the three state represented in the sample. There were more respondents living in Nevada who were retired than either Idaho or Wyoming. Nevada residents when compared to those in Idaho and Wyoming had lived in their communities fewer years and had greater number of moves. Gamma is a measurement of association which indicates direction of relationship, positive or negative, and the strength of the relationship. These were not considered strong associations as indicated by gamma. Because the level of gamma was less than .20, which some consider a cutoff point, none of these were considered strong associations so the data from the three states were combined for analysis.

•General Characteristics of the Sample. As can be seen in

Table 1, the respondents in this study were, for the most part, similar to 50 to 70 year-old adults in their respective states, according to 1990 Census data (U. S. Bureau of the Census, 1992). Educational attainment was also similar to the percentages in the 1990 Census. In the three states, college graduates make up 15 percent to 17 percent of the population over age 25 (U. S. Bureau of the Census, 1992). According to the Census, in the three states of Idaho, Nevada, and Wyoming, responses to income category \$25,000 to \$35,000 ranged from 15 percent to 21 percent. The respondents' profile in the current study is comparable to Anderson (1991) in Idaho, Utah, Oregon, Nevada, and Wyoming, where 19 percent had incomes over \$65,000 and 25 percent, the largest portion of the preretirees in that study, had income between \$35,000 and \$50,000.

Our study showed the average number of years in respondent's current community to be 24. The results in this study are similar to the American Association of Retired Persons (AARP, 1992) who also found a consistency in older American's "aging in place"—some 28 percent told AARP they had lived in their current residence for over 30 years.

•Responses to Community Satisfaction Questions. In keeping with the established practice in community satisfaction research, in this study respondents were given a series of statements about a variety of community attributes, presumably those most central to community life (Vreugdenhil and Rigby, 1987). The responses were then used to represent, alone or in scales and indexes, measures of community satisfaction or dissatisfaction. Two measures of community satisfaction were used. One was a global question measure referred to as "overall community satisfaction." The other measure of satisfaction was based on a series of 28 questions. It was decided to include both measures because satisfaction research indicates people appear to be more satisfied when

asked a general global satisfaction question than they are when responding to questions about specific community attributes.

The majority (59.5 percent) of the older adults in Idaho, Nevada, and Wyoming were very satisfied with the communities in which they lived (see Overall Satisfaction, bottom of Table 2). Only two individuals out of 1,635 indicated they "do not know." The mean score on the scale of 1 to 4, 4 being the highest level of satisfaction, was 3.51. The deviation on the overall satisfaction measure was .58. This study supports the findings by LaGory, Ward, and Sherman (1985) and Sofranko and Fliegel (1984) who found 85 percent were somewhat or very satisfied with their neighborhood or community.

The frequencies, mean scores, and deviations for all 28 individual satisfaction items are reported in Table 2. On the 4 point scale, 4 being the highest level of satisfaction and 1 being the lowest, the mean scores ranged from high of 3.79 (places of worship) to lowest mean score of 2.48 (public transportation). However, the item asking about public transportation also had a large number of responses in the "do not know" category.

The deviation in responses varied widely on individual satisfaction items. The largest standard deviation in mean scores were crime rate, recycling programs, cost of housing, and both drug problems and air transportation. The smallest deviation in response means were places of worship, volunteer opportunities, library, and noise level.

The data bear out expectations that satisfaction was dependent on knowledge. Most respondents had sufficient knowledge to assess shopping facilities (i.e. only 11 gave a "don't know" response), and most could evaluate "cost of housing," "air quality," "noise level," and "water availability." It seems some items, like shopping and cost of living, are relevant to all community residents.

This study found respondents were satisfied or dissatisfied on many of the same items to those in the study of Rudzitis and Streatfeild (1992-93) who

surveyed 398 people in nonmetropolitan San Juan County, Washington. They found residents were least satisfied with employment opportunities, local taxes, schools, medical services, and shopping facilities while they were most satisfied with the air quality, scenery, low crime rate, pace of daily life, and climate.

In analysis of the 28-items measuring community satisfaction, the 10 highest mean scores were for places of worship, fire protection, volunteer opportuni-

ties, library, water availability, noise level, outdoor recreation, police service, water quality, and air quality. The 10 items with the lowest mean scores were public transportation, employment opportunity, drug problem, cost of housing, local government, recycling programs, crime rate, air transportation, cost of living, and indoor recreation.

The differences in the availability of services, such as public transportation, between metropolitan and nonmetropolitan com-

munities may be a factor in the levels of satisfaction. The measures also revealed differences between metropolitan and nonmetropolitan communities. While both metropolitan and nonmetropolitan residents were very satisfied with places of worship, fire protection, library, noise level, and volunteer opportunity, they were dissatisfied with varying aspects of their communities. Metropolitan residents were not at all satisfied with the crime rate—their number one con-

cern—nor what they perceived as a drug problem. Nonmetropolitan residents' top two concerns were lack of employment opportunities, and public transportation, both perennial problems for smaller communities. Cost of living, cost of housing, and local government were points of dissatisfaction no matter what size community they lived in.

T-test analyses found significant differences between metropolitan and non-metropoli-

Table 2 Frequencies, Mean Scores in Rank Order, and Deviations for Satisfaction Items n = 1,635

Questions of Satisfaction	Levels of Satisfaction				Mean	Deviation
	4	3	2	1		
1. places of worship	1407	139	70	19	3.794	.565
2. fire protection	1316	232	52	35	3.730	.624
3. library	1181	301	94	59	3.593	.757
4. volunteer op.	1187	255	160	33	3.588	.748
5. water available	1180	328	16	111	3.576	.819
6. noise level	1161	358	10	106	3.574	.804
7. police service	1046	447	46	96	3.494	.812
8. outdoor recreation	1064	374	93	104	3.467	.863
9. air quality	1019	440	11	165	3.415	.929
10. water quality	1031	408	19	177	3.402	.953
11. waste management	902	500	67	166	3.308	.951
12. race relations	861	540	107	127	3.306	.900
13. access to shopping	967	416	11	241	3.290	1.051
14. medical facilities	921	443	50	221	3.262	1.033
15. adult education	902	389	211	133	3.260	.969
16. service groups	814	422	345	54	3.221	.890
17. cultural choices	752	589	136	158	3.183	.947
18. public education	795	501	167	172	3.174	.990
19. indoor recreation	658	583	202	192	3.044	.997
20. cost of living	567	739	9	320	2.950	1.065
21. air transportation	650	453	247	285	2.898	1.112
22. crime rate	575	623	38	399	2.840	1.152
23. recycling programs	585	525	166	359	2.817	1.142
24. local government	350	888	98	299	2.788	.980
25. cost of housing	525	581	166	363	2.776	1.123
26. drug problem	456	558	248	373	2.671	1.112
27. employment opport.	355	616	240	424	2.552	1.096
28. public transportation	376	388	514	357	2.479	1.071
Overall satisfaction	973	588	2	72	3.506	.58

Levels of satisfaction 4=very satisfied 3=somewhat satisfied 2=do not know 1=not satisfied

tan respondents in several areas of community satisfaction. The higher mean scores on significant items tells us those who currently live in the metropolitan community had higher scores with access to shopping, air transportation, medical facilities, indoor recreation, adult education, employment opportunity, and cultural choices. Metropolitan residents were also more satisfied than nonmetropolitan ones on recycling program, public transportation, and volunteer opportunity. The non-metropolitan residents, on the other hand, were significantly more satisfied with crime rate, air quality, noise level, race relations, and water availability. However, the global question of satisfaction had a mean score of 3.50 for both metropolitan and nonmetropolitan residents and no significant differences.

Males and females differed significantly in their responses to individual satisfaction items. Results of t-tests show that males were more positive about cost of housing ($p < .001$), drug problems, police service, outdoor recreation ($p < .01$), race relations, noise level, and cultural choices ($p < .05$). There were no mean scores on individual items that were significantly higher for females than for males. However, in the mean score on overall satisfaction, the females had a significantly higher mean score (females, 3.58, males, 3.51) ($p < .05$). Sofranko and Fliegel (1984) noted people appear to be more satisfied when asked a general global question (in this case the females, certainly) than they are when responding to questions about specific community attributes. Sofranko and Fliegel did not have a comparison by gender for which we can compare the results of this study.

A community satisfaction index (CSS) was created by summing scores on the 28 individual items. The internal consistency of the Community Satisfaction Scale (CSS) proved to be high as assessed by Cronbach's alpha (.81). Since scoring all the 28 items in the CSS in the same way gives equal weight to each item, subscales were computed using factor analysis. Factor

Table 3 Community Satisfaction Subscales Created by Factor Analysis

n = 1,635

Factors	Loading	Mean	Deviation
Factor 1: <i>Quality of life</i>			
service groups	.51	3.221	.890
access to shopping	.42	3.290	1.051
medical facilities	.46	3.262	1.033
outdoor recreation	.62	3.467	.863
indoor recreation	.59	3.044	.997
adult education	.50	3.260	.969
volunteer op.	.52	3.588	.748
cultural choices	.57	3.183	.947
Factor 2: <i>Community safety</i>			
crime rate	.75	2.840	1.152
drug problem	.71	2.671	1.112
Factor 3: <i>Environmental quality</i>			
air quality	.56	3.415	.929
water quality	.75	3.402	.953
water availability	.73	3.576	.819
waste management	.37	3.308	.951

Table 4 Community Satisfaction Scale and Three Subscales Scores

n = 1,632	Mean Individual Score	Mean Index Score	Std Dev	Min.	Max.
Community Satisfaction Scale	3.19	89.45	10.54	51	111
Quality of life subscale	3.29	26.32	4.31	9	32
Community safety subscale	2.75	5.51	1.93	2	8
Environmental quality subscale	2.59	10.39	2.00	3	12

analysis is a standard procedure to successfully isolate sets of items to measure community attributes. Using the criterion of including only items with Eigen values greater than 1.0 and factor loading greater than .35, three subscales were created using factor analysis (see Table 3). The first factor explains 41 percent, the next 17 percent, and the next 14 percent of the variance.

The first satisfaction subscale, called quality of life, included the items of community satisfaction of service groups and volunteer opportunity, access to shopping and medical facilities,

both indoor recreation and outdoor recreation, adult education, and cultural choices. The test for reliability resulted in a Cronbach's alpha of .71.

The second subscale was called community safety and included two items, satisfaction with community ability to handle drug problems and the crime rate. The test for reliability resulted in a .59 Cronbach's alpha. The third subscale called environmental quality included only a few items, air quality, water quality, water availability, and waste management. The Cronbach's alpha was .56. The alpha coef-

ficients indicate that the reliability of the three community-attribute scales was adequate, even though one scale has only two items. The range and the mean index scores on the subscales varied because of differing number of items in each scale (see Table 4).

It was decided that the three subscales could provide more precision in describing results from further analysis than the CSS scale containing all 28 items. The three subscales and the global question of overall satisfaction were included in the logistic regression model to examine the propensity to move.

A variable was created that measured the "gap" between

actual and desired community size. This variable, called congruence, was created by reviewing where the respondent currently lived, such as in a metropolitan county or nonmetropolitan community, and how they responded when given a question as to preferred community size. Over half (59 percent) of the respondents currently lived in the size county they prefer, whether that be metropolitan or nonmetropolitan. Thirty four percent currently lived in a metropolitan county, but given a choice, said they preferred to live in a nonmetropolitan county. Only 6 percent currently lived in a nonmetropolitan county but preferred a metropolitan one.

—Logistic Regression —

The probability of an event occurring, in this case migration, was modeled using logistic regression. The parameters of the logistic regression model were estimated using the maximum-likelihood method. Because logistic regression requires a dichotomous dependent variable, the responses to the mobility question were coded "Remain where living now" and "Move somewhere else." The 43 respondents who did not give a response were dropped from further analysis. Of the 1,592 respondents, 63 percent expressed a preference to stay, while the remaining 37 percent indicated a preference to move.

Whether the individual preferred to stay or move was used in the logistic regression analysis with the sociodemographic variables: age, gender, marital status, education, employment, income. Additional independent variables used in the analysis were household size, health, duration in community, past moving experiences, congruence between current community size and stated community size of preference, overall satisfaction with current community, and three subscales of community satisfaction. Forward stepwise selection was used for automatic selection of a final model by SPSS/PC+.

There were seven of the 15 independent variables in the full model with a .01 significance level: age, gender, overall satisfaction with community, duration in the community, congruence and quality of life and environmental quality subscales of community satisfaction. Variables that were not significant: marital status, education, income, health, household size, current community size, past moving experiences, and community safety subscale.

Unlike regression, logistic regression does not provide an R Square value which indicates the proportion of the total variability that is explained by the regression. The classification table in the SPSS subprogram of logistic regression, however, serves this purpose. In this model, 72.6 percent of the responses were correctly classified.

AARP (1992) found when comparing current county of residence with preferred residence, when asked, 47 percent of nonmetropolitan county residents would choose the same type area if they were to move, 12 percent of metropolitan county dwellers would choose to stay in the same type area.

Crosstabulations and chi-square results indicated two demographic variables and three independent variables were significantly related to overall satisfaction question responses. Females more likely than males responded they were "very satisfied" to a general question of community satisfaction. Those who had lived more years in the community also were more likely to respond "very satisfied." Those individuals who had fair or poor health were not satisfied. Those who currently lived in a community which corresponded to the community size they preferred, were very satisfied.

The commitment model of neighborhood satisfaction would suggest that economic and social involvement in one's community would be related to increased satisfaction. The results of this study supports the concept in that older persons and those who lived longer in the community were more satisfied.

•*Logistic Regression Model and Results.* Previous studies by Haas and Serow (1993) and Glasgow (1982), Speare, Kobrin, and Kingkade (1982) indicated the question "if, given all things equal, in 10 years would they prefer to stay or move?" was a valid and reliable way to measure mobility. Respondents in this study were asked "If all important life factors stay the same, where would you prefer to live 10 years from now?" Consistent with the documented number of older Americans "aging in place," 63 percent of the sample said they would prefer to remain where they are now living. The next largest number, 15 percent, stated a desire to move to another state. The next preferred choice was to move within the same state (12 percent). Others would choose to move within the same community (7 percent).

In keeping with the fundamental concept of this study, it was not surprising to see a relationship between overall satisfaction and preference to stay. The current study supports Haas and Serow (1993) who found that several underlying factors, called push factors, were important in the decision to move of retired interviewees. Dissatisfaction with crime, congestion, pollution were the items grouped as second most important push factors.

The significant difference for age of respondent is not surprising. Older Americans are only half as likely as the average American to move across state lines (Longino, 1994). Eighty-four percent of adults aged 55 and older say they would like to stay in their current homes and never move, according to a 1992 survey by the American Association of Retired Persons (AARP).

Congruence, which measures the "gap" between the size of the current community of residence and the preferred community size, given a choice, was also significantly related to the mobility variable ($p < .001$). The respondents who more frequently stated they were not in agreement, as measured by the congruence variable, more frequently stated a preference to move in the next ten years.

Males and females differed significantly on preference to move. Males were more likely than females to prefer to move. Bach and Smith (1977) also found males more likely than females to plan to migrate. Interesting, there was no significant difference between females and males in the size of county, metropolitan or nonmetropolitan, in which they currently lived or preferred to live given a choice.

The index scores for quality of life and environmental quality are the sum of the responses on a four point scale from low of 1, not at all satisfied, to a high of 4, very satisfied. The higher the index score, the more satisfied. The coefficients resulting from logistic regression were negative, meaning the higher the levels of satisfaction, the likely the respondent indicated preference to move.

Two out of three subscales created by factor analysis of 28 community satisfaction items were significant in the model. The first factor, called quality of life, included the items: service groups; volunteer opportunities; access to shopping; medical facilities; outdoor recreation; indoor recreation; adult education; and cultural choices. Respondents with lower satisfaction scores on these subscales items were more likely to respond they would move in 10 years ($p < .01$).

The second subscale created by factor analysis, called environmental quality, included the items air quality; water quality; water available; and waste management. Respondents with lower satisfaction on this subscale were more likely to respond they would move in 10 years ($p < .001$). The third subscale, community safety was not significant.

Discussion and Conclusions

The use of both attribute-specific measures and global satisfaction were used to address the research question, does satisfaction play a significant role in a model of elderly migration? A sense of satisfaction is a highly personal experience, heavily influenced by the individual's past experience and current expectations. There is no doubt, the community plays an important role in the lives of individuals. A primary purpose of this study was to compare the relative importance of demographics, household and community characteristics and levels of community satisfaction in explaining a preference to move among a sample of 50 to 70 year olds in three western states.

The statistical analysis indicates significant variables can be helpful in predicting the likelihood of migration were: gender, age, duration in community, congruence, overall satisfaction, environmental quality, and quality of life. The analysis of community satisfaction variables show those with a lower level of satisfaction could be "pushed" to move from their current community. In general, one may conclude from the findings support for the no-

tion that aspects of community like duration in the community, size of community and perceptions of ideal community size do have an affect on community satisfaction and in turn, influence the preference to move. There were few attributes of individuals and households, with the exception of age and gender, that were sufficient to explain satisfaction and explain preference to move.

Findings in this study further confirm the study of Bach and Smith (1977) who found people who were above a threshold of dissatisfaction planned to migrate—and then migrated. Campbell et al. (1976) also reported on a link between community satisfaction and the "wish to move." In particular, satisfaction with the contextual environment, e.g., urban dwellers were less satisfied than rural residents, and therefore, more likely to express a wish to move.

Without getting into the debate about predicting future actions, like residential mobility, this study has been worthwhile. There is evidence that satisfaction has been shown to be a particularly relevant factor related to mobility and retention issues. One would expect that those who are more dissatisfied with their current place of residence would be more receptive to opportunities elsewhere and thus be more likely to want to leave.

Environmental quality, crime rates, and lifestyle are important in explaining why people move (Long and DeAre, 1980). Older residents, according to Longino (1994a) weigh the quality of life in their current home against that of a potential destination. Older residents are no longer constrained by job or school considerations so they concentrate on what it is they prefer in their community—quality of life and environmental conditions, key issues in this study.

For global satisfaction, there were equal levels of satisfaction between the metropolitan and nonmetropolitan residents. The lack of a significant difference between community size and satisfaction measured on individual aspects of community is interesting. Nonmetropolitan residents are less satisfied on

several aspects of the area, but are not in general dissatisfied with community per se. Because of a lack of critical mass to support a public transportation system or air transportation, large medical facilities, ample cultural events, plentiful shopping facilities and indoor recreation facilities, that may tend to lower community satisfaction among the nonmetropolitan dwellers on those components. But these nonmetropolitan residents evaluate other components of the residential environment more highly, like crime rate, drug problem, air quality and water availability.

The results from the congruence variable that found a substantial number of the metropolitan residents preferred nonmetropolitan has implications for the donor communities. Despite the greater number of individual items about which metropolitan residents expressed satisfaction (shopping, air transportation, medical facilities, cultural choices, to name a few), the direction of the congruence variable in the final model indicates those living in the metropolitan areas but who preferred nonmetropolitan expressed a preference to move. The nonmetropolitan residents were more satisfied with crime rate, noise level, and air quality and were less likely prefer to move. It seems we need to work on ways to make the cities more livable, as implied by the results of this study.

In general, one may conclude from the findings some support for the hypothesized model in that aspects of community—like duration in the community, size of community, and perceptions of ideal community size—do have an affect on community satisfaction and in turn, influence the preference to move. Admittedly, there are certain limitations to looking at a sample of potential migrants, but samples from recent immigrants will raise other questions as well. How important this "quality-of-life" orientation as discussed here will influence the future migration of those surveyed in this study remains to be seen.

Apart from knowing the sources and levels of respon-

dents' satisfaction/dissatisfaction, there is a question of what research or policy use can be made of community satisfaction data. It is difficult to document that community dissatisfaction is a significant predictor of much of anything, even though one could suggest obvious implications such as desire to bring about change in one's community of residence or desire to leave a community by those who are dissatisfied. But this study provides evidence that community satisfaction—as certain aspects of community satisfaction as isolated in the subscales—is as good a predictor as the stock-in-trade variables of age, duration of residence, and life cycle measures.

According to final models in this study, those who were dissatisfied overall with the community, and were dissatisfied with the environmental quality and quality of life factors, were more likely to express a preference to move. Community leaders and planners can take directly from this study the importance in knowing and maintaining satisfaction of community respondents. This especially has to do with facilities: access to shopping, medical facilities, indoor recreation, adult education, and cultural choices. Also important factors which should not be taken for granted are air quality, water quality, water availability, and waste management. Regarding economic development policies, the study indicates that maintaining the levels of satisfaction of current residents may be as important as policies to attract new immigrants. The "quality-of-life" orientation that has been demonstrated by many researchers as key to amenity migration is also key to retaining current residents.

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ECONOMICALLY DEPRESSED SMALL TOWNS ARE OFTEN PARALYZED BY APATHY, WOUNDED PRIDE, OR LACK OF ORGANIZATION. THIS MONTANA TOWN IS HURTING ECONOMICALLY, BUT IS WORKING HARD ON A PLAN WITH CONCRETE GOALS.

PLANNING A STEP BY STEP REVITALIZATION

BARBARA A.F. OTT

Ashland, Montana is a small community in the southeastern portion of Montana, an hour's drive east of the Little Bighorn Battlefield National Monument. The town is surrounded by the Ashland District of the Custer National Forest, the Northern Cheyenne Indian Reservation, and some Bureau of Land Management lands. Residents earn their living primarily from agriculture in the form of cattle ranching and timber harvesting.

Ashland is an unincorporated town of 484 persons, but the population of the area served by the community is approximately 1,379. Like many other small agricultural communities in the west, it has been impacted by the hard economic times suffered by area ranchers and timber harvesting operations. Many local businesses have shut their doors. The community reflects the depressed economy in the form of run down structures, neglected properties, and empty commercial buildings. Unemployment in Ashland itself is a staggering 29 percent. The per capita income is \$3,808. Nearly 72 percent of the town's population is below poverty level. Research also indicated that 52.8 percent of all area households and 87.9 percent of the households in Ashland

itself are considered low income based on guidelines provided by the State of Montana. Although income figures for the sparsely populated areas surrounding Ashland are somewhat less severe, they depict a very economically depressed condition.

After reflecting on these statistics, in 1993, a group of concerned residents formed the Ashland Community Action Team (CAT) to try to determine the needs of area residents and find a way to provide for those needs. The first Chairperson of the CAT was Kaaren Rizor, the Secretary/Nurse for Ashland Public Schools. Founding members of the team represented a cross section of the community, including local business persons, bankers, ranchers, and law enforcement, plus representatives from local churches, the St. Labre Catholic Indian Mission, members of the Northern Cheyenne Tribe, Rosebud County Commissioners, and the USDA Forest Service.

The CAT applied through Rosebud County to the USDA Forest Service for a 1990 Farm Bill Grant of \$8,000 to develop an action plan. The 1990 Farm Bill allows for the awarding of grants to rural communities that are dependent on forests and natural resources—where the Forest Service has a significant presence or interest—and

where persistent problems such as low per capita income indicate a need. The Forest Service receives grant proposals, awards grants to successful applicants, and administers the grants.

After Ashland's grant was awarded, the CAT proceeded to hold two community-wide meetings to obtain the input of residents. The CAT was preparing to solicit the services of a contractor to write the plan when I became involved. I volunteered to write the plan for no fee if the CAT would cover necessary expenses. I am a Forest Service employee on an educational leave of absence from the White River National Forest.

After 12 years of working for the Forest Service, I

requested permission to take an extended leave of absence from my position as the Support Services Specialist for the Holy Cross Ranger District of the White River National Forest in Colorado. I wanted to pursue a graduate degree.

The leave was granted and allowed me to not only advance my education, but permitted me to spend time at home caring for my two preschool children. While on leave, our family moved to Ashland when my husband, who is also a Forest Service employee, was transferred to the Custer National Forest.

My course of study was a Master of Science in Management with an emphasis in Public Administration through the SURGE program



offered by Colorado State University in Fort Collins, Colorado. The SURGE program is a video-based graduate education program which allows individuals who cannot attend regular on-campus classes to pursue graduate degrees from remote locations across the country.

During my studies I became particularly interested in rural economic development. The Ashland community development plan appealed to me as an independent study project that could also be used to satisfy some of the requirements of my degree program.

I began by reviewing the work already done by the CAT and determined that a survey of area residents was needed in order to validate the CAT's findings thus far regarding the community's needs and desires. I conducted a mail survey of all area households. The results validated and better refined the CAT's understanding of the community's needs. They indicated that the CAT's basic observations had been correct. I also undertook the task of researching statistics and other data about the Ashland area from a wide variety of Federal, State, and private sources. The information gathered aided in

forming a more complete description of the community's social and economic conditions. Many area residents were interviewed for historical information. These data provided a means to prioritize the needs identified.

- A majority of residents felt that the highest priority was to secure a clinic and an improved emergency medical system. Residents must travel to neighboring towns, from 30 minutes to an hour away, for limited medical services provided by physician's assistants. The nearest doctors and advanced medical care facilities are located 1 1/2 to 2 1/2 hours away. Ambulance services are provided by neighboring communities. The goal developed as a result of this effort is to provide for emergency medical care, routine medical care, and health training practices. A key action item identified to achieve this goal is to construct a medical clinic. Additionally, the local First Responder Unit will be upgraded to a transporting ambulance service.

- The second priority expressed by residents was a need for an increased amount of low income housing. Housing is in extremely short supply and virtually no homes are for sale. Rental units are also very difficult to find. Newcomers often rent a home sight unseen if they are lucky enough to locate a vacant unit. Much of the existing housing is in poor condition and in need of rehabilitation. The low wages and per capita income of the area indicate that low income housing is needed, so in this case, the key action items are to structure and implement a housing rehabilitation project and facilitate the construction of low income housing. The first step will be a detailed housing survey to better refine the specific types of housing needed as well as the rehabilitation needs.

- Third highest was

economics and commerce. As stated earlier, the data revealed a high rate of unemployment and an extremely low per capita income in the immediate Ashland area. The goal developed by the CAT is to establish a program to promote the development of small businesses and events to attract people to the community—thereby increasing the number of long term employment opportunities. Key action items are to establish an organization of local business persons to promote and support local small businesses and to develop a plan to market Ashland and its natural and historic resources to tourists on their way to the Little Bighorn Battlefield. An annual community celebration to attract visitors is one idea to be explored. Another action item developed was to identify opportunities to assist the expansion and diversification of local enterprises while also seeking to attract new industries and businesses to the community.

- The fourth and final area of concern identified was capital improvements to address a variety of aesthetic, safety, service delivery, and recreational needs within the community. Ashland has no park, and recreational facilities are inadequate. The community itself has no recreational programs except for limited extracurricular activities provided by the public school. Facilities at the nearby St. Labre Catholic Indian Mission for swimming, racquet ball, and weight lifting, are currently available to non-mission members only on a limited basis. In terms of safety, the existing traffic patterns and the mixing of pedestrians and bicycles with automobiles was found to create serious problems. An area of critical importance is the highway in front of the school, which has no signed pedestrian crossing. Additionally, several infrastructure needs were identified



relative to the water and sewer system, fire department, and facilities for the county sheriff's deputies stationed in Ashland.

We developed four goal statements to address this fourth category of needs. (1) Develop an effective and safe transportation network for vehicles and pedestrians. (2) Establish and maintain a park(s) in a condition which provides an attractive atmosphere and leaves a favorable impression on residents and visitors. (3) Plan for multiple recreational activities and events for residents of all ages. (4) Provide such other facilities and programs as needed to improve the health, safety, and welfare of the community. The action items identified included planning for Ashland's main business district in terms of traffic flow, parking, sidewalks, pedestrian/bike paths, handicapped access, etc. Others were parks with playground and picnic facilities; the negotiation of an agreement with the St. Labre Mission to allow for increased use of their recreation facilities by the community; opportunities for other recreational programs such as softball; and the acquisition of equipment and/or construction of facilities for the water and sewer district, fire department, and Sheriff's Deputies.

Once all the information was gathered, I began the process of condensing it into a plan of action for the future of Ashland. I worked closely with the CAT, providing suggestions and advice to ensure that the plan was complete and that it accurately reflected the needs and priorities of the community. We decided to schedule the implementation of the action items over a 10 year period. I presented the plan at a third community-wide meeting with the objective of obtaining validation from area residents. The plan was accepted and subsequently the CAT

Chairperson, Kaaren Rizor, and I presented it to the Custer National Forest Supervisor.

The "Rosebud/Ashland Community Action Plan: Moving Toward A Brighter Future" has now been completed, accepted by the community, and certified by the Forest Service, thereby fulfilling the grant administration requirements of the 1990 Farm Bill. It has provided a starting point for development efforts. I now find that I have a vested interest in the plan's implementation so I am now actively involved in writing grant proposals to begin funding the action items identified in the plan. The members recently elected me to Chair the CAT for the coming year.

Our top priority is to not only implement the plan, but to obtain 501(c)(3) Non-profit Corporation status for the CAT. This will give the CAT tax free status to raise funds and will make it possible to apply to a much wider range of granting agencies, both philanthropic and governmental, for funding to implement the plan. Additionally, we are working to increase community-wide awareness and involvement in the plan's implementation. Toward these ends, work has already begun to develop a charter and bylaws and a committee has been established to generate a community relations and involvement plan.

The CAT will serve as the lead organization to obtain

funds and to administer contracts. Volunteers will provide labor for some tasks and will staff the board of directors for the CAT once it becomes incorporated. Potential funding sources are currently being identified. We want to find grants to fund projects before considering other methods such as taxation or bond issues.

Interest in the Ashland CAT is growing. Our meeting room becomes more crowded each time we convene. Hopefully, we will soon need to find a larger facility for our meetings. We are excited to be a catalyst for changes that will benefit the entire community.

Barbara A.F. Ott is on leave as a Support Services Specialist from the Forest Service's White River National Forest, Holy Cross Ranger District in Colorado. She began work there in 1987. Prior to that, she worked on the Black Hills National Forest. She is an Ashland (Montana) Elementary School District trustee, has been a CPR instructor, and EMT. Her Bachelor's in Business Administration is from Chadron State College, and she is completing her Masters in Management from Colorado State University-Fort Collins.

Photos these pages:

Page 43, part of downtown Ashland on a rainy day;

Page 44, the public school;

Page 45, Kaaren Rizor, left, and the author Barbara Ott on the right.



RESOURCE CONSERVATION AND DEVELOPMENT (RC&D) ASSUMES THAT LOCAL, RURAL PEOPLE KNOW WHAT THEY WANT FOR DEVELOPMENT PROJECTS.

WISCONSIN'S HUGE NATURAL RESOURCE BASE IS A MATCHUP FOR A LARGE RC&D

JOHN R. WITHERSPOON

Forest Environment

Northwest Wisconsin is rich today with healthy and productive forest resources. There was a period when this was not so. During the early 1900's, Wisconsin forests were cut-over and burned, resulting in lands of minimal value for agricultural or timber production. Concerted efforts to regenerate the forest cover resulted in an increase in growing stock volume on Wisconsin timberlands to 8.4 billion cubic feet in 1955. By 1967 this had grown to 11 billion cubic feet, to 15.5 billion cubic feet by 1983, and 16.6 billion cubic feet in 1992.

This resource base is an important foundation for a major component of the state's manufacturing economy. Forest products firms employ 17 percent of Wisconsin workers (92,000) in manufacturing and produce 18 percent of the value of shipments at \$14.6 billion. Paper and forest products companies are the first, second or third leading employers in 42 of the state's 72 counties. From 1967 with 11 percent of all manufacturing employment to 17 percent in 1993, Wisconsin is positioned to increase forestry based production even further.

The commercial timber resource base in the state consists of 14.76 million acres. Who owns it?

Million acres	
Nonindustrial private	9.08
Forest Industry	1.16
Federal	1.42
State	.57
Counties	2.18
Native Americans	.35

Primary forest industry employs 76,000 people (200,000 secondary, 7,000 in logging and hauling). In 1985, there were 1,439 primary forest industry companies with a total payroll of \$1.9 billion and a value of shipments exceeding \$9.8 billion. This makes it the second largest industry sector in Wisconsin, second only to nonelectrical equipment manufacturing and ahead of agriculture at \$5.1 billion, and recreation at \$3.8 billion.

Figure 1 shows the traditional forest vegetation of Wisconsin. But forest-related too, are the inland lakes, streams, and rivers which are very important to Wisconsin and provide habitat for diverse populations of wildlife, fish and aquatic species.

Resource Conservation and Development (RC&D)

The Pri-Ru-Ta RC&D Area of northwest Wisconsin was established in 1964, two years after federal legislation provided for it, and now covers 10 counties, 10,600 square miles, and includes a population of 168,800. The area contains some 25 percent of Wisconsin's huge water resources and 20 percent of the land base. Just as the name implies, the riches of Wisconsin's natural resources in this case become the focus of development efforts. Because this RC&D landscape has direct access to Lake Superior, there is an open gateway to the world marketplace, an added development incentive.

All RC&D areas are managed by a council. Each council

establishes its own governing policies and develops programs to meet local needs and available resources. The council membership is one Land Conservation Committee member from each County Board (of Supervisors) within the RC&D area.

In all of the counties, there is a Land Conservation Program. Chapter 92 of the Wisconsin statutes is the state's soil and water conservation law. It requires all counties to create a Land Conservation Committee (LCC) to carry out assigned responsibilities for conserving soil, water, and related natural resources. In Taylor County, for example, the LCC is made up of County Board of Supervisors members elected to the Agriculture and Extension Committee. The LCC has the power to address state, federal, and local programs and resource concerns and one of the mecha-

nisms for doing so is sponsorship of the Resource Conservation and Development program in northwest Wisconsin. Each county LCC pays an annual \$150 fee for sponsorship in the Pri-Ru-Ta RC&D Council.

RC&D projects to fund

The mission of the Pri-Ru-Ta RC&D Area is to conserve, develop and utilize local resources to raise the level of economic activity in the area while enhancing the environment and the standard of living in the 10 county area.

The program operates on the premise that local citizens can develop and carry out action plans which address problems the citizens themselves have identified. Projects (such as the Red Cliff rearing ponds, below) are then developed to address these local problems and are

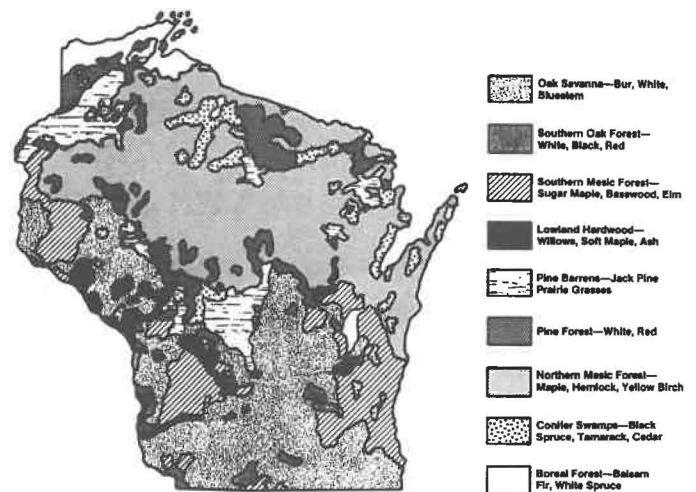


Figure 1. Early forest vegetation of Wisconsin

implemented through the action plans.

RC&D Councils receive funding from USDA grants, foundation grants, state agencies, local government, and private industry. Help may be in the form of donations, loans, grants (with specific goals), or cost-sharing efforts.

In the case of the Pri-Ru-Ta RC&D, it holds nonprofit [501(c)3] status from the IRS and the State of Wisconsin. The Natural Resources Conservation Service administers and funds the program as well as providing staff support to all of the councils. The value of this support is \$100,000 per RC&D Area Council. With 277 current areas, the FY 95 support totaled \$27,700,000 nationally.

Red Cliff fish rearing ponds project: An example of how it works

The Pri-Ru-Ta RC&D Area was approached by representatives of the Red Cliff Band of Chippewa Indians (Bayfield County) in the spring of 1991 to assist in the development of a walleye rearing facility so tribal members could restock area

lakes both on and off the reservation with walleye fingerlings. Off reservation spearing of walleye in spring is the exercise of tribal treaty rights. Spawn would be collected by tribal fishers from fish speared. The RC&D Council agreed to work with the tribe to secure funding and technical assistance toward this project. A cooperative effort developed between the RC&D Council, the Red Cliff Tribe, the NRCS, the Great Lakes Fish and Wildlife Commission, the Bureau of Indian Affairs, the Forest Service, and the US Fish and Wildlife Service.

The RC&D Council obtained a \$60,000 grant from the private Otto Bremer Foundation of St. Paul, Minnesota for facility construction. The Forest Service contributed \$15,000, the Red Cliff Tribe contributed \$35,000, and NRCS provided engineering assistance for design of the three cell walleye pond system.

The ponds were constructed during the summer of 1993. The first full operational year will be the summer of 1995 with production expected to reach 150,000 walleye fingerlings. The rearing ponds, in conjunction with a newly

constructed indoor trout hatchery, provide full time employment for two tribal members and three additional seasonal positions for tribal members.

The economic impacts of this RC&D project are far reaching and extend beyond the reservation borders. Improved fishing should mean increased tourist dollars in the local economy.

Pri-Ru-Ta RC&D's future

There are other very positive projects. Among them is the Superior Shores Agricultural Venture which has the potential to change the face of the dairy farming industry of northern Wisconsin. The venture is an Ashland County and Bayfield County project that brought together dairy farmers with fruit and orchard producers to create, manufacture, and market a value-added dairy-fruit product line. Currently milk produced along Lake Superior is trucked to southern Wisconsin processing sites while fruit is sold to pick-your-own visitors or shipped to Minnesota. This project will create a stable, long term market for northern Wisconsin dairy and fruit agriculturalists.

Unfortunately, there are also uncertainties about the future of all RC&D projects. At this writing, the President of the National Association of RC&D Councils, Mary Seccombe of Butte, Montana, has advised the 277 established RC&D councils across the country that the House Budget Committee advised the House Appropriations Committee that the 1996 RC&D program receive zero dollars. If this comes to pass, it would kill an effective, efficient rural development program managed by local people successfully for over 30 years.

John R. Witherspoon works for the Northeastern Area, State and Private Forestry of USDA Forest Service and is the RC&D Coordinator located in Medford, Wisconsin. His other Forest Service work sites (since 1979) have been in the North Central Forest Experiment Station (Minnesota), and on the Humboldt (Nevada), Nez Perce (Idaho) and Pike (Colorado) National Forests. Prior to that, he served with the Peace Corps in Honduras. His degrees are a Bachelor's in Forest Management from the University of Michigan and an MBA in Management from Kent College (Louisiana).

One of the Changing Faces at RC&D—MARY WILLIAMS

Mary Williams—active businesswoman, teacher, and county-elected official—represents the changing face and personality of RC&D council members in northwest Wisconsin. The trend to diversity on the RC&D councils is spreading slowly nationwide. Historically, however, the RC&D council consisted of rural white males, often retired, usually attached to farming/agriculture, forestry, and less often, tourism. This management pattern worked and is still working that way in northwest Wisconsin and most parts of rural America. Adding talented and well connected people like Mary Williams to that pool brings cultural changes to established programs such as RC&D.

Williams taught at the elementary school level for 18 years and continues to teach business development and operations to eighth graders through Junior

Achievement. While Williams was teaching, her husband Allen was operating a successful construction company. The company built six restaurants in central Wisconsin in anticipation of her departure from teaching and Allen's departure from the construction business. Today, the Williams' oversee approximately 300 employees in their franchises.

Mary Williams also launched a political career and was appointed to the Taylor County, Wisconsin, Board of Supervisors. She was reelected last year to a second term. "Many business people feel becoming involved in local politics hurts business," she noted, but she hasn't seen this. She feels it is important for customers to realize that you care about your community.

As a County Board of Supervisors official, she is the Chair of the Health Committee, the Li-



brary Committee, a member of the Personnel Committee, the North Central Technical College governing committee, University of Wisconsin Agriculture and Extension Committee, and the Land Conservation Committee (LCC). With membership on the LCC, Williams was selected to represent Taylor County on

the Pri-Ru-Ta RC&D governing council.

In addition to her county government activities, she serves as the Secretary for the Taylor County Tourism Council, is President of the Taylor County Big Brothers and Big Sisters organization, and President of the Medford Public Library Board.

Communications with customers, the public, and political colleagues are her keys to effectiveness. "I am willing to listen to the people of Taylor County" says Williams, "and I let them know I care about their needs and concerns. My position is to do what I feel is right for this community at this time and try hard to not concern myself with the politics of reelection. I can be replaced so I try to do what is best for today even though it might not be what is the most popular position to take."

John R. Witherspoon

Conflict: Danger & Opportunity

On the Grow

A Management Column *Barb Springer Beck*

Barb Springer Beck is President of Beck Consulting which provides services to natural resource managing agencies in facilitation, conflict management, work force diversity and teambuilding. She currently lives in Red Lodge, Montana. Beck was formerly employed by the U.S. Forest Service as an Archeologist, Forest Resources Staff Officer, and has held two District Ranger positions in Montana and Idaho. She is a Women in Natural Resources editor.

You learned about conflict when you were a kid, maybe the hard way. As an adult, you're still dealing with it—on the job and at home. As elsewhere, in managing natural resources, conflict is inevitable. With controversial environmental issues and rapid agency changes (emphasis on accountability, collaboration, and teamwork, to name a few,) resource agencies are fertile ground for conflict. No matter what your job is, you simply can't afford to waste energy on unproductive conflict. The pressure for results is too high. By developing your ability to address conflict, you'll improve your performance and be a real asset to your agency.

Although it may be contrary to conventional wisdom, you can turn conflict into a positive. The truth is, conflict in organizations is not necessarily bad. (The Chinese symbol for conflict is a combination of the words for danger and opportunity.) How conflict is handled, not whether it occurs, will determine if it is beneficial. Nothing can increase motivation and energy like a good fight. A team that negotiates range capacity on a controversial allotment creates a

positive energy that can be felt: working together satisfies everyone's interests. The tension of differences of opinion can indeed produce creativity and better results.

Conflict can also clarify an issue by forcing us to think through, articulate, and support our views. Sometimes when we scrutinize our ideas, we strengthen our position, sometimes we change it. Increased understanding of other positions can broaden the range of solutions. Seen in this light, conflict truly can be an opportunity.

Substantive or interpersonal differences

Once you become aware that a conflict exists, look for the root. Common sense, right? Conflicts can originate from substantive or interpersonal issues. A substantive conflict for example, could occur between two botanists deciding whether to de-list an endangered plant. An interpersonal conflict on the other hand, could be the result of a forester feeling that she is not respected: "The team doesn't value my opinion."

To determine the root of a conflict, try to sort the issues from the symptoms. This can be tough because conflicts are often messy. It's human nature. You'll need to

research the conflict by finding out when it first appeared, who was involved, and what triggered it. An offhand remark such as—"What does she know, she's never worked at a National Park, only in the Regional Office"—could readily trigger an emotional reaction, i.e., conflict.

Ask yourself, does the conflict appear to be cyclical in nature; does it occur, for example, each year at rating or budgeting time? Is it caused by problems with the organizational structure, or unclear roles? When Ranger Districts sharing a fisheries biologist each need biological evaluations with quick turn around times, perhaps conflict can result. You'll need to explore whether the interpersonal issues caused the conflict or resulted from it. And finally, find out what barriers you face in dealing with the conflict. Do your detective work, then choose a strategy.

Two options: control conflict, or resolve it

You'll need to pick a strategy based on your research. When controlling conflict is your goal, three techniques are available. They are to 1) prevent flare-ups, 2) constrain the form, and 3)

cope differently. While avoiding confrontation may seem the least painful, it usually isn't best in the long run. Conflict forced underground may intensify, making an eventual confrontation even more destructive.

- Preventing flare-ups can be done by avoiding the triggers. Interactions frequently trigger confrontation. By reducing the number of interactions with a particular person, or avoiding the subject of disagreement, you can prevent flare-ups. This approach is a good one for minor and short term issues. Try this also when the time for resolution isn't right, or the power balance is tipped against you.

- The second strategy, constraining the form, attempts to limit destructiveness of conflict, yet provide for confronting it. Tactics intended to provoke someone, such as bringing up a previous mistake, are considered out of bounds. This strategy may involve the assistance of a supervisor, team, or third party. Interdisciplinary team members with a serious disagreement, based on values, let's say, would benefit from this approach.

- Coping differently, the third control strategy, can decrease your stress levels. Tell your spouse about the co-worker who failed to meet a deadline, instead of retaliating against them. Talking about the incident will reduce tension and prevent you from an angry outburst you might regret. Monitor your thoughts about the conflict and make an effort to keep it in perspective. This strategy is a good one when you feel upset. Combining this with other actions to address the conflict can be very effective.

Let's look now at actually resolving conflict. Resolution of conflict is a straightforward goal, but it's easier said than done. In order to truly resolve a conflict, you need some control over the basic issues. The issues need to be addressed to everyone's satisfaction, or the conflict itself eliminated. Timing your efforts is really important. To successfully resolve conflict, there must be an appropriate level of stress. Stress levels which are too low won't provide sufficient motivation. Stress levels that are too high may render people ineffective

at resolving conflict even though they are motivated.

- A conflict can be eliminated by removing a person or an issue. When there is interpersonal conflict, retirement, transfer, or termination of one party will eliminate the conflict. A substantive issue, such as differences between a range conservationist and permittee over when to remove cattle from an allotment will disappear once the first winter storm has forced them off the range. Disagreement over tactics to contain a wildfire may become moot once the fire jumps the control line. Intervention, or in some cases, simply the passage of time may eliminate a conflict.

- Changed situations can also dissolve conflict. For example, budget battles among resource areas will be eliminated if two BLM resource areas are consolidated into one. Although consolidation could cause other conflicts, the competition between units for funds will have been eliminated as a source of conflict.

- When a disagreement won't go away, can't be controlled (and the time is ripe), it should be confronted. As with conflict, confrontation is not

necessarily bad, and can be a valuable tool. Focusing on issues in a non-threatening environment can go a long way toward resolution. A safe environment is essential. No one can concentrate on an issue when they feel attacked. The dialogue of confrontation will have to address the root of conflict and continue until mutual understanding is reached. Preparation, ground rules, an open mind, and relentless focus on the issues are the keys to success. There's no getting around it, addressing conflict is challenging.

The good news, and the bad news, is that you'll have no shortage of conflict on which to practice. These conflicts will be internal (as an employee, team member, subordinate or supervisor) as well as with interests outside your organization. Through your attitude and your actions, you can make conflict a constructive force for you. Practice the skills of good conflict management and you will reap great rewards!

WHEN TINY ELK CITY, IDAHO, DECIDED TO EMBARK ON ECONOMIC DEVELOPMENT PROJECTS, PLANNERS INSTINCTIVELY KNEW THAT THEY ALSO HAD TO PAY ATTENTION TO RETAINING THE WORKFORCE'S QUALITY OF LIFE.

FINDING A WAY TO USE THE WOODS

THESE VOLUNTEER HEROES ARE DOING IT THEIR WAY

MARYALICE STONER

Elk City, Idaho in Idaho County has a population of about 400 people and is 52 miles from Grangeville, Idaho (population 3,350) the nearest city. While the road is paved, it is twisty and narrow with cliffs on one side, the river on the other, and deer bounding across at blind corners. The drive from Elk City to Grangeville takes about one and a half hours in good weather and half the afternoon when the snow's really coming down or the ice settles on the roadway.

There's no local government in Elk City. The County Sheriff provides law enforcement, most of Idaho County is one school district with one school board, and the roads are maintained by the agency that owns them, such as the State highway department, the county, or the USDA Forest Service.

The economy of Elk City has always been focused on its abundance of natural resources. Named by prospectors in the 1800's because of the large resident herd of elk, Elk City originally was a mining center. As mining declined, the economy focused on the timber and lumber industry. Now the timber and lumber industry is declining in the whole area. During the 1980s in Idaho County, wood products jobs declined by 20 percent, while farm employment went down by over 40 percent. Elk City lost one shift at the town's sawmill, resulting in the loss of 40 positions. With the closure of a major mill in Grangeville last fall, and some of the planer operations from Elk City being moved to the former mill, another 10 jobs left the town this spring. It's not hard to see why community members feel an urgency to move forward to help compensate for some of the changes in their economic base. And, they have also decided that they want to retain the traditional lifestyles and values that attracted people to the town and have kept them there since the mid-1800's.

Volunteers provide structure

Because Elk City doesn't have any local government, the driving force for modernization is the Elk City Area Alliance. (The name

was changed from the Elk City Booster Club because it sounded like a sports club.) Traditionally the Boosters organized when needs arose, members got excited over a project, completed it, and when the need was over went back home and waited for the next crisis. This time, the volunteers organized for years of rural development work.

One of the Alliance volunteers who has taken on some of the leadership for the job of modernizing Elk City is Mindy Wiebush. She is a native of Indiana, earned a Bachelor's Degree in Forestry from Michigan Technological University at Houghton, and worked for the USDA Forest Service. Wiebush met her husband, Jim, in the Forest Service. They moved to Elk City in 1986, where Jim is the District Ranger. Once her children arrived, Wiebush didn't want to work outside the home so she began a home business to carve duck decoys and produce hand-painted children's puzzles.

Past successful projects

In 1994, Washington Water Power (a regional multi-state electrical utility) donated a two-acre parcel for a park in downtown Elk City to be the center for some of the community's activities. Wiebush assisted other community volunteers removing old fence, cleaning up rubbish, mowing grass and holding a fund-raising picnic. There's a nice place to put a little bridge over Elk Creek so people will be able to walk from the park to the proposed medical center. The donated land had a building that a large number of community volunteers have remodeled into a base station for the Idaho County Sheriff's Department. The new facility gives the officers a base of operations with access to a

private telephone and provides a place for them to take someone if they need to.

A few years ago, the community raised funds to replace their volunteer fire department's fire truck. They retired the old one for community activities and celebrations. Wiebush noted that when she first moved to Elk City, "they had an ancient, ancient red fire truck that looked just like the ones you saw in books when you were a kid."

Another good example of Elk City's community spirit is the new ambulance. Several years ago, residents pitched in to purchase a new ambulance worth over \$60,000. Dedicated community members spent literally years to raise the money through dinners, sales, auctions, raffles and grants.

Future projects for the Elk City Area Alliance (ECAA)

In mid-March of 1994, a modernization effort began when the Elk City Area Alliance held a community brainstorming session to define Elk City's good and bad points and to roughly clarify future goals. They applied for an \$8,000 Farm Bill grant and participated in the Idaho Department of Commerce's GEM Community Training. By Christmas 1994, Elk City completed their Community Action Plan which provides a brief historical and economic description of the area and identifies numerous projects that will be completed by the volunteers.

•*Medical.* Their big ticket project is to establish a medical clinic. The community is an hour and a half drive during good weather from the nearest medical practitioner and facility and residents are discussing whether to support a community nurse in addition to scheduled doctor's visits a couple of days a



week—and a possible pharmacy or prescription service.

George and Barbara Regas have made the clinic their whole life outside of work. They're forming partnerships with Syringa General Hospital in Grangeville, and St. Mary's Hospital in Cottonwood which is 25 miles further away from Elk City than Grangeville. This group of volunteers is helping to build and will help manage the medical clinic. The Elk City Area Alliance bought land while the Regas family, the local EMTs, and others worked on a variety of grant applications; one of the granting organizations was the Steele Reese Foundation, which provided funding for an architectural survey. They broke ground May 1st of this year and will finish the building by September with another \$55,000 Steele Reese grant and \$20,000 worth of lumber from the Shearer Mill.

An additional need is support for emergency medical services. Wiebush says, "The volunteers are completely unpaid and many times they get up in the middle of the night to make a run. Sometimes they make three runs in three days, all at the expense of their jobs and their family life."

•*ForestNet.* The most extensive project Elk City has tackled so far is the Central Idaho ForestNet. Like many other areas of the west, Elk City is affected by complex natural resource issues. Natural resources have been compared to a nine-slice pie, with twelve people coming to dinner. The American public has diverse needs and a variety of expectations. Elk City has an abundance of hunting opportunities: deer, elk, bear, and moose that provide part of the economic base. The area also supports bull trout, Chinook salmon and steelhead, and wildlife such as wolves, fisher (like a weasel) and wolverine. Recreation uses range from snowmobiles, 4-wheel drive, and motorcycles, to dispersed camping, hunting, and wilderness experiences. These and many other uses already attract visitors to the area and contribute to the short and long term economic stability for small towns like Elk City.

But something new utilizing wood was needed. The idea became active in the community last fall when Wiebush visited the Olympic Peninsula WoodNet as part of a field trip funded by a USDA Forest Service grant and organized by the Montana Women's Economic Development Group (WEDGo). In January 1995, Wiebush organized the Elk City Area Alliance's meeting to discuss forming the Central Idaho ForestNet in Elk City. As coordinator, she is setting up meetings for the Alliance in every Gem Community in Idaho County to explain the benefits of participating in ForestNet. She tells groups that "the concept is to get a group of small, similar businesses together who work on a basis of

collaboration, cooperation, and communication to overcome the limitations due to small size." The communities' reactions have been very positive and she predicts ForestNet will be a five-county project.

Wiebush is steering a slightly different course than WoodNet: "The difference between us and the Olympic Peninsula WoodNet is that they're focusing strictly on wood products. There are other marketable products in the woods that can be harvested with less impact than a clearcut. We're expanding the vision to include alternative forest products, such as yew bark, bear grass, berries, mushrooms, floral products, and seeds." The businesses retain their independence and make their own decisions, but ForestNet researches new markets, improves competitiveness, provides support for marketing, offers technical advice, and assists with product development or discovery. The Central Idaho ForestNet brochure notes "Idaho forest products firms are faced with severe declines in raw materials. Our geographic remoteness from most national markets further adds to the challenge of profitability.... We aim to become the major advocate for business focused on wood products. Whether you make such goods as dimension lumber, cedar products, wood crafts, cabinetry, log homes, or other innovative wood items, ForestNet can be a powerful resource."

ForestNet offers support, including money, volunteer assistance, participation in activities, and seminars. Wiebush already has 50 names on a mailing list of business and economic development people who are interested in the project. Wiebush's own business is a good example of the type of small business that can be helped by ForestNet. Her wood puzzles often contain special shapes, such as a log truck, a salmon, the word "Idaho" or custom pieces with names or special dates. She's starting a line of special greeting card puzzles to go with her educational puzzles. Each is hand painted, original art. In addition to mail-order sales, she markets her work at popular Northwest juried arts and crafts shows such as Montana's Summer Fair in Billings, Sweet Pea in Bozeman, Hockaday Center for the Arts in Kalispell, Idaho's Beaux Arts in Boise, the Sun Valley Craft Show, and the Custer Art-Craft Show in Spokane, Washington.

A newsletter will be published to serve as a forum for discussing what the Central Idaho ForestNet does. Business articles, a technical discussion on a product, a marketing forum, and a classified section for information exchange and business opportunities are envisioned. Producing the newsletter itself may generate a new part-time business in the area.

ForestNet is applying through the Elk City Alliance for a USDA Farm Bill grant to

hire a coordinator. Until now, Wiebush has been volunteering. Ambitious short term objectives include establishing a directory of businesses, developing the organizational structure, determining how ForestNet can be financially self-sufficient, recruiting and promoting membership, and getting the newsletter off the ground. Long term emphasis will include jobs, internal and external communications, and marketing or product research. Wiebush believes that within two years, ForestNet will become independent of the Alliance.

•*Partnerships.* It is important in today's economic climate to generate partnerships. Elk City looks to collaborate with the Clearwater Economic Development Association, working with managers Tom Hudson and Dodd Snodgrass; the Idaho Rural Development Council, including Dick Gardner in Boise; the University of Idaho, which is providing an expert to discuss pelletized fuel and composting; and the Dean of Technology at Lewis Clark State College in Lewiston, Idaho, which is helping with computer technology to determine how remote businesses can communicate among themselves, Idaho County communities, and markets outside the region. They are also receiving encouragement from the Small Business Development Center at Lewis Clark State College and from Pam Garten of Garten Consulting Services in Kootenai who volunteers her time as a consultant to complete grant proposals.

Volunteers stimulate the economy

Other large and small projects to help the community are beginning. Citizens are putting a sign up in Grangeville to publicize Elk City to travelers and to alert people to the highway turnoff. The new directory to advertise local businesses will serve as a catalogue for selling the Elk City area to other businesses or manufacturers. Jamie Edmondson and Cynthia Sherrer contact all potential businesses and are establishing a process to update the directory to keep it current. The first printing used some funds from the 1994 Farm Bill Grant.

Attracting visitors with their tourist dollars ensures that the sports- and recreation-minded are not forgotten. Jamie Edmondson plans a horse endurance ride in September. The Elk City archery club has sponsored several archery shoots and plan to do more. The Timberliners Snowmobile Club holds snowmobile competitions and fun runs. The 100th anniversary of the Elk City Wagon Road, (the road begins in the town of Clearwater) brought forth commemorative quilt making by a Clearwater resident for a raffle while Sam Schneider is organizing associated festivities ranging from square dances, mountain-man rendezvous, street dances, and T-shirts.

Quality of life issues

All of the economic development planning would do no good if local residents continued to leave. Attention had to be paid to supporting the existing work and family life in the town to ensure that citizens felt their families' basic needs were being met.

•Mindy Wiebush was instrumental in establishing a day care although it was difficult to convince people that a day care was needed. Dual-career or single-parent families had difficulty reaching the providers on snow-clogged, unplowed country driveways. If the few providers were ill or out of town, there were no substitutes. Wiebush organized the effort with Forest Service parents to establish the day care center, locate a facility, make arrangements to use it, and hire day care providers. The center has now grown to two facilities.

•A major concern the community shares is a quality school system. The Elk City schools go from kindergarten to 10th grade. A few years ago, the school was kindergarten through eighth grade, but the majority of students only stayed through the fifth grade because when kids reached the sixth grade, families moved to towns which could provide upper grades. (The lack of a four-year high school still convinces some families to move temporarily or permanently to accommodate their children's educational needs.)

About five years ago, the school system began satellite distance learning from Helena, Montana, for ninth and tenth grades. That, in Wiebush's estimation, dramatically changed the way the community looked and acted. Because families could educate their children locally, they tended to stay longer and become more established in the area. (Also, more teenagers in the community meant more baby sitters.)

Susie Borowicz, the principal, supports a variety of innovative teaching techniques in the school system. The satellite distance learning is tied into a computer system for all of the classrooms. All grades are learning Spanish. The fifth grade is participating in the Young Astronauts Program over the satellite. As the community develops economically, they are ensuring that their school system will provide the necessary quality of education needed to attract people who have school children.

•In 1994, Elk City School received an \$8000 grant from USDA Natural Resources Conservation Service to develop an outdoor classroom. The district owns 20 acres of pasture, second growth timber, and mature timber, where the school initiated a cross-curricular approach to environmental education. Math classes might involve cruising timber, snow surveys, or surveying perimeters and areas. They conduct "opposites" field walks where students identify plants and animals through a key system where the



plant or animal either has the feature or doesn't have it. (Wiebush found it surprising how well kids grasped the message that wet and dry sites have different plants.) Mark Mathot is the team leader and is applying for another grant to expand that project.

•Elk City volunteers are building a peeled log pavilion behind the school for regional environmental education. Students from other communities could stay for a week and attend outdoor science classes or use the facility as a basis for discussion of environmental issues of the day. Environmental issues are especially important because north central Idaho kids are strongly aware of the Endangered Species Act and the effect it has on many of their parents' jobs. When wolves were released this spring, the Elk City fourth grade adopted one. Because Elk City lies so close to the Selway-Bitterroot Wilderness where grizzly bear also are proposed for reintroduction, this is an emotional issue in the community.

•Community members assist with after-school activities. Russ Newman coaches both girls and boys basketball. They participate in area tournaments, including one in Lewiston where the girls brought home a trophy.

•The Parent-Teacher Organization (PTO) is concerned about providing well-rounded schools to attract and retain a quality workforce—and that includes arts education. The National Endowment for the Arts program provides support for fine arts in the school including performances by the Missoula Children's Theater. An artist-in-residence program provides opportunities for kids to participate in things like poetry readings, puppeteering, and pantomime. The artist spends a week in Elk City working with the students. At the end of the week, the children perform in whatever activity they've been studying.

•The local 4-H program led by Teresa Enos for 30 to 50 kids adds another dimension to help maintain the workforce through support of the area's children. Wiebush helped the local kids clean the goose nests on Elk Creek and Red River and leads a 6 am birdwalk. Other volunteers like Debbie Layman, Pam Smith, and Betty Nafziger oversee the monitoring of the frog pond, discuss foods, rabbits, sheep, fish, and other 4-H subjects.

The future

Money for development activities will always be a problem for small towns. Grants have funded some of the Action Plan. The Elk City Retail Merchants Association has also been instrumental, actively supporting completion of the park, providing fund raising assistance for the clinic, and have been promoting activities to draw tourists to town. One of their objectives is to attract money to the community without changing the lifestyle to do it.

Will Elk City citizens, all 400 of them, succeed in achieving their goals? There are a lot of people who work on projects who are heroes, but there are even more people who have worked hard in a smaller role doing a particular task, who also deserve recognition. The Elk City Alliance Community Action Plan lists 14 projects for Business Retention and Expansion, 10 projects for Infrastructure, and seven major areas for Economic Diversification. With the spirit evident in the community, and volunteers who are heroes, Elk City seems assured of a prosperous future.

MaryAlice Stoner is the sub-staff for Recreation, Wilderness, Rural Community Assistance, and Special Uses on the Nez Perce National Forest which surrounds Elk City. She also serves as the Process Manager for the Forest Service's National Rural Community Assistance Awards. Previously she was the Recreation Project Leader at the Forest Service's Missoula Technology and Development Center, Safety Manager for the Bureau of Land Management in Montana, and North and South Dakota, and Outdoor Recreation Planner for the BLM. She also has worked seasonally for the Forest Service as an Animal Packer, Wilderness Research Technician, Wilderness Ranger, and Cartographic Technician. Stoner has worked in wildland fire fighting since 1970 and presently is the Situation Unit Leader on a Type II fire team. Her Master's is from Michigan State University in Park and Recreation Resources and her Bachelor's is in Geography.



SUSTAINABILITY
continued from page 7

will serve as a model to help others assess performance. A national project also is underway with the help of the North Central Regional Center for Rural Development to explore measuring success from communities' perspectives as a means for tracking progress and agency accomplishments.

Conclusion

For the nation to move toward a vision of sustainable rural development, we all must change the way we think and operate. We must focus more on outcomes, and learn from our collective efforts. Sustainability is not a federal, state, or local government responsibility; nor a public or private sector responsibility. All Americans need to be informed about sustainable development if needed changes are to occur.

New roles and relationships must evolve among government, business, nonprofit organizations, interest groups, citizens, and others. Changes in how we approach the environment and economy ultimately must be reflected in institutional change. There are many problems we face daily and sustainable development holds some of the answers to these problems. The challenge is to address these issues in a way that best utilizes local resources to meet the needs of the present without compromising the ability of future generations to meet their needs.

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Ruth McWilliams, Assistant Director of Cooperative Forestry, USDA Forest Service in Washington, D.C. collaborated with Fred Patten, while he was on detail to the Washington Office from the Aviation, Fire and Cooperative Forestry Staff of the Bighorn National Forest, Sheridan, Wyoming.

Their photos are found on page 6.

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US F&WS Budget

Fish and Wildlife Service's proposed fiscal year 1996 budget of \$1.24 billion remains essentially stable, with increased funding for recreational fisheries management, efforts to balance endangered species conservation with economic development, and restoration and conservation of coastal wetlands and other vital wildlife habitat.

The budget increases the Service's fisheries management funding by 39 percent, including \$4 million to conserve and restore interjurisdictional recreational fisheries of national significance. The budget includes an additional \$3.2 million for fishing, hunting, and environmental education programs and improved habitat management on national wildlife refuges.

The budget contains an increase of \$27.3 million in grants to states to assist local governments and citizens in developing habitat conservation plans that allow economic development to continue while providing for the protection of threatened species. There is also \$1 million for the restoration of the Everglades and coastal wetlands and \$1.6 for ecological systems in the Connecticut River basin with a focus on Atlantic salmon and other anadromous fish.

Meanwhile, the budget proposes to transfer 11 of the Service's 74 national fish hatcheries to the states with some transitional funding provided. There are decreases of 11 percent in the Pittman-Robertson Fund monies, (reflecting declines in federal excise taxes collect on firearms and ammunition) and diversions to the Coast Guard for boating safety of Wallop-Breaux Fund money (3.6 percent).

People Land & Water, March 1995

In-situ mining

The U.S. Bureau of Mines and two copper companies will start mining near Casa Grande, Arizona, next year using an experimental technique that will leach copper from deep within the Earth without digging it up. Known as in-situ mining, this approach uses weak chemical solutions to selectively recover minerals from rock. The rock itself—and the surface—remain basically undisturbed. In-situ mining produces practically no waste, leaves the land virtually unscarred, and avoids other environmental and safety problems associated with conventional mines. The technique could make it economically feasible to work deposits that are now too low-grade or too deep to mine. The test will be the first use of in-situ leaching to recover copper from an undisturbed deposit.

Environmental News Briefing, February 1995

Geoducks supporting school districts?

While timber sales on state-owned trust lands remain the largest single source of revenue that Washington State's Department of Natural Resources generates for public trust beneficiaries, the agency also generated millions of dollars from the sale of other forest commodities and from leases and permits under the agency's continuing program of maintaining a diversified asset base for generating money. For example, Washington's state-owned and state-managed geoduck clam fishery continued to grow in economic value during the year, far exceeding the record prices. In 1994, they were auctioned for \$7.35 average price per pound, compared to the record of \$3.49 per pound the previous year, totaling \$5.3 million. Not in order, the department's revenues are in millions of dollars: timber \$121.3, agricultural and grazing \$6.9, aquatic leases and commodity sales \$12.3, minerals \$1, commercial sites \$3.7, communication sites \$1.3, special uses and easements \$1.1—for a total of \$163.7 million from land management activities. The agency hired a coordinator to help mar-

ket forest products to increase production and revenues.

Resources Update, April 1995

Shift away from traditional families is happening all over the world

Women in both developed and developing countries are increasingly providing financial support for their children as well as caring for them, a study says. Migration and rising rates of divorce and childbearing by unmarried women are contributing to the shift away from traditional families in which the father is the provider and the mother is the caregiver.

Despite these changes, government policies often view mothers with jobs as neglectful of their children, says the study released by the Population Council, a non-profit research organization in New York. Entitled *Families in Focus: New Perspectives on Mothers, Fathers and Children*, the study recommends that child care be made more widely available and that laws be enacted to protect these parents from loss of land, housing, and income. "Mothering is about earning as much as it is about nurturing," said Judith Bruce, one of the study's authors. Some statistics: 20 percent of Russia's households are headed by a single parent, up from 10 percent 15 years ago; 25 percent of families in Hong Kong are headed by women; 10 percent in Burkina Faso by women; 19 percent in Cameroon. In developing countries, about 25 percent of first marriages have dissolved by the time women are in their 40s, as a result of death, divorce or separation. In the U.S. 24 percent of households with dependent children were headed by women in the 1980s, up from 12 percent in the 1970s.

Associated Press, May 31, 1995

Keeping the oil money at home

The USDI Bureau of Land Management proposes cuts in the federal royalty rate on "heavy" oil produced in the U.S. Low oil prices and high production costs have resulted in an uncertain

economic future for producers of low-gravity crude. This new change gives economic incentive to benefit heavy oil producers, the majority of whom are in California. The proposal is expected to increase recoverable reserves in that state by up to about 70 percent—from 132.8 million barrels to 228.5 million. This new rule will encourage operators of federal oil leases to put what had been—because of the royalty—marginal or uneconomic wells back into production.

Patrice Junius, *People, Land & Water*, May 1995

Who ya gonna call?

Patricia Talbott is a veterinary sleuth. Presented with a dead animal, she determines whatdunit. Animals become ill from a variety of complex causes including the ingestion of poisonous plants or polluted water, improper use of pesticides, exposure to mine tailings ponds, and even intentional poisonings. Talcott and more than 25 people working in the University of Idaho Analytical Laboratory rely on everything from background on the animals' environments and diets to symptoms of illness and signs of internal organ damage. Often her work is a combination of lab work, field observation, and common sense.

In one deadly case, 15 beef cattle died mysteriously in 48 hours. The rancher who owned the cattle observed symptoms that included blindness and muscle twitches. Lab studies found high levels of lead in the animals' livers and kidneys. A trip to the animals' pasture by the referring veterinarian revealed abandoned automobile batteries. The batteries contained lead in the form of a salt and the cattle were using the junked batteries as deadly salt licks.

Another 102 cows died in a 24-hour period in Washington state. Their cause of death was an all-too-familiar one in the Pacific northwest—the accumulation of nitrates in bales of oat hay, a common feed for cattle. Ruminants ingesting the nitrate-rich oat hay usually die because their blood loses the ability to carry oxygen throughout the body.

Talcott says ranchers need to test every bale.

Yellow starthistle is extremely toxic to horses but not to any other domestic animal. It causes an incurable disease that prevents horses from swallowing and eventually leads to death from starvation. More than three million acres of rangeland and canyons are covered with it in the northwest. Lupine is not toxic to horses, but is to cattle, sheep, and goats. Some species contain high levels of alkaloids that are extremely toxic; others contain a deadly chemical teratogen called anagryne. If cows ingest lupine between the 40-70th day of pregnancy, their calves are sometimes born with crooked-calf disease—twisted forelimbs. Lupine has also been suspected, but not proved, of causing human birth defects.

Environmental contamination includes toxic pools of water left by gold mines. When cattle drink from them they are poisoned eventually from the arsenic, cadmium, and zinc. Pesticide poisonings are a small percentage of her work and most result from incorrect storage or disposal. Some of the most toxic chemicals can be purchased at most home and gardening stores. Antifreeze, strychnine, pesticides to kill slugs and aphids, rodenticides for the control of rats and mice are all toxic to pets and humans.

Talcott has a degree in veterinary medicine and a master's and doctorate. In addition to her work at the University of Idaho, she manages the poison plant garden at Washington State University-Pullman and teaches classes in veterinary diagnostics and toxicology in the Washington-Oregon-Idaho Regional Program in Veterinary Medical Education.

Stephen Lyons, *Program & People*, Winter 1994

It is still lonely at the top for women in many of the sciences

A distinguished and diverse panel assembled at Mills College, Oakland California in 1994, to look into the serious underrepresentation of women in science, especially at the top.

They noted that while there are some women pioneers at the pinnacles, there is scarcity:

- Women represent 45 percent of the total American workforce, but about 30 percent of the employed scientific workforce. Fields vary from 50 percent in psychology, 33 percent in computer and math jobs, to 15 percent physical science and eight percent engineering.

- Women account for only 14 percent doctoral scientists and engineers in industry, and only 21 percent in science and engineering university faculties plus 17 percent in government service. Women scientists are more likely than males to be un- or under-employed.

- In fields like medicine which have welcomed women (40 percent medical students and 20 percent practicing physicians), the top ranks are male-dominated. Only three percent of deans and five percent of university chairs are women.

- Prestigious awards and honors are dominated by males. For example, only nine of 60 (15 percent) of the new members of the National Academy of Sciences were women. No Nobel Prizes and only one out of eight National Medals of Science went to women.

- Advisory panels like the National Science Board (now five out of 24 are women) and the President's Committee of Advisors on Science (five out of 18) indicate underrepresentation.

To attract women, the Mills Women in Science Summit participants recommended (1) initiate new recruitment and retention efforts, (2) assure comparable salaries, (3) promote effective mentoring systems, (4) improve work environments, (5) support career flexibility, (6) heighten visibility, (7) enhance funding, (8) more accountability.

Steering Committee, *Advancing Women's Leadership in Science: An Action Plan to the Year 2000*, 1995

Advice to junior faculty: Select committees, involvement carefully

If you're an untenured woman faculty member, chances are you'll be invited to join sev-

eral departmental and college committees. Feeling a mixture of honor and obligation, you'll accept. Little did you know, your choice of committees, level of involvement and visibility will directly affect your professional future at your school. Darla J. Twale, associate professor in leadership and technology at Auburn University offered advice for junior faculty at the Women in Higher Education conference in San Francisco, sponsored by the University of Texas-El Paso. She suggests that department chairs need to spell out for new faculty how service involvement is weighted and rewarded, and give guidelines on where to get involved and how much.

Twale reports that male peers will be far less likely to join committees. And should they accept, the committees will be university-wide, with more power and prestige. The committees women serve on were more likely to deal with specific issues: women's athletics, student services, teaching effectiveness, curriculum, harassment, minority and equity matters. Males served on grievance, promotion and tenure, budget, awards, admissions standards, senate, strategic planning, policy.

Advice from 33 faculty women and 24 men who have been there provide insights to junior faculty. "It may not be right," one man said, "but that is the name of the game—publish, grants, contracts." Educate yourself about your school's systems, norms, expectations and guidelines, to see how much service counts to get tenure. Weigh actions more than words; they may say service counts, but ignore it at tenure time.

Women and men faculty both advised against getting "too involved too early" in campus affairs. "Far too many junior faculty are praised and sought out for governance issues/committees and then chastised by the same people for not learning to say 'no'," another faculty woman warned. Before tenure, "understand the importance of establishing oneself in the professional community, in association leadership, publication, and presentation" a male wrote. "After ten-

ure, expand service to include university-wide and college-wide committees," another suggested.

DJ, *Women in Higher Education*, May 1995

Psst kid—choose your parents with better care

It has nothing to do with genes, but your parents still will probably determine how good a student you are. A computer analysis of Washington state education statistics by the newspaper *Seattle Post-Intelligencer* indicates parents' incomes and education levels are major factors in student performance. Class size and a lower pupil-teacher ratio apparently doesn't offset other problems faced by poor performers. It also showed better performances from students whose parents had college degrees, were not teen-aged parents, earned incomes, and owned homes. The study said single parenthood also was a factor, but somewhat less than income and education level. The analysis also studied the teacher-student ratio in the schools, since the state had no statistics on class size. The data suggested that having fewer students per teacher usually was not enough to prevent low test scores.

Associated Press, April 17, 1995

Those who care about kidstuff have to be savvier

A team of psychologists and economists from four universities—Yale, UCLA, the Universities of Denver and North Carolina—examined 400 child care centers and tested children in four states. They came to the depressing but not surprising conclusion that the vast majority of children in these centers were getting care that was "mediocre in quality, sufficiently poor to interfere with children's emotional and intellectual development." Only one in seven centers provided both the security and the stimulation that was worthy of a high rating.

The youngest of the children fare the worst. About 40 percent of the infant and toddler rooms were rated poor, and as Yale's Sharon Lynn Kagan says, "When I say poor, I mean poor—

broken glass on the playground, unchanged diapers." This study is one of the first to relate the *cost* of day care with the *quality* and with the *outcome*—how kids actually fare. It shows, in the words of Barbara Reisman of the Child Care Action Campaign, that "the ones that have more money do better." This conclusion, she laughs, "would make my daughter say, 'DUH, Mom'." It's rarely spelled out this clearly.

In fact, the better centers didn't cost the parents more. The extra money came to the centers from sources like block grants, private funds, corporations. The difference in the price tag of mediocre and good care was as little as 10 percent. But when they had the dollars, and had to live up to state standards, centers used the money in ways that matter—in the quality, quantity and constancy of staff.

Perhaps the most startling finding in the study is about parents, the buyers in the child-care market. Researchers said most care was mediocre or poor, 90 percent of parents said their child care was good. Perhaps a form of myopia brought on by guilt? How could I leave my kid at a place I didn't think was good? Or it could be inexperience. How many parents have seen the kind of centers that are the norm in France or Japan? But any way you look at it, this is a case of low consumer expectations. And a market that meets them.

For too long, child care has been tangled up in arguments about women's roles rather than children's lives.

Ellen Goodman, *Boston Globe*, March 20, 1995

Making a place in family life for the natural world does not come naturally

One of the sad realities of being a parent is that the same stuff you know is fun, exciting, educational, and enriching in your child's life is often messy, smelly, and exhausting to deal with. Your son announces that he's found this great maggot colony in a bag of old potatoes somebody left in the bottom drawer for way too long. You know this would make a great science-fair project, that he'd spend hours finding out not

just about maggots, but about the whole process of learning. Maybe even about life. But you also know you cannot bear the thought of those maggot-filled potatoes in your kitchen one more hour, let alone two weeks. So you toss them, and tell him to look up maggots in a reference book. And in the process, you convey the message, consciously or not, that what is man-made is somehow safer, better, and more appropriate than what the natural world has to offer. We may say that we love nature, but many of us manage to convey to our children the message that what is unnatural is better, less bothersome, anyway.

Children love and need patterns in their lives: rituals, traditions, routines, the cycle of the seasons. Nature offers all those things and more. In the spring, when you take a child to a feed store to see the chicks hatch in the incubator or to a nearby creek to watch the tadpoles, you are showing her a real-life drama more powerful than anything television has to offer. You're teaching the importance of sharp focus, of observation, of attention to detail, of patience. Chicks don't pop out of eggs like a jack-in-the-box. They make their way out, one peck at a time. There's a powerful lesson in that for a young child, and for parents.

Joyce Maynard, *Parenting*, August 1994

Being a scientist means taking sides

Once you are a scientist, which means as soon as you systematically ask questions about the universe, you take a political side. There are infinite questions that you could ask about the universe, but as only one scientist, you must necessarily choose to ask only certain questions. Asking certain questions means not asking other questions, and this decision has implications for society, for the environment, and for the future. The decision to ask any question, therefore, is necessarily a value-laden, social, political decision as well as a scientific decision.

Mary H. O'Brien, *BioScience* Volume 43, Number 10

Back to the little grass shack?

Welcome to 90s-style eco-tourism, where western travelers can soak up sun and absorb local color without a terrible case of the guilts. This new phenomenon amounts to a seismic shift in the economically important world of tourism, which employs 127 million people around the world (six million of them in the U.S.) and accounts for \$3.5 trillion in annual business.

However, Eco-tourism is a victim of its own success, as every tourism operator in the world starts to talk the talk, if not necessarily walk the walk. Even major hotel operators are signing on to "green" their operations from top to bottom. The international magazine *Green Hotelier*, published in London, debuts soon, for example.

According to Megan Eppler Wood, executive director of the Vermont-based Eco-tourism Society, "People say that eco-tourism is just a fad, a passing thing, but it's much more than that. It's a fundamental restructuring of how a certain segment of the industry does business." The old model is clear enough. Hotel chains, almost always foreign-owned, bought paradise for a song from the indigenous owners, built elaborate, energy-squandering, polluting resorts with western architects, workers and staff, then walled them off from any significant contact with local populations or culture (aside from the pool-side calypso band playing Sloop John B). The new model aims at both environmental responsibility and respect for—as well as involvement in—the host community. The Eco-tourism Society's definition for eco-tourism, "Responsible travel to natural areas that conserves the environment and sustains the well-being of the local people," is as good as any.

For David Schaefer of Park East Tours, who's working on a book about eco-tourism, the green dye should soak through to every aspect of the operation. "Are local people being paid livable wages and allowed to participate in the enterprise?" he asks. "Are they involved in management? Is food, including fruits

and vegetables, being purchased locally? Were locals involved in the construction projects? Is furniture locally purchased? Are structures biodegradable? Are guides thoroughly educated and are they educating tourists? Is access to environmentally sensitive areas being carefully controlled?" Obviously, adhering to guidelines like these would require an expensive, top-to-bottom restructuring for many resort owners and hoteliers. It's far easier to simply print a brochure on recycled paper, open up a few hiking trails and call what you do eco-tourism. But, according to Jonathan Soper of the Intercontinental Hotels Group, "enlightened self interest" can be a motivator for bottom-line entrepreneurs who see their business growing the greener they get.

Jim Motavalli, *E: The Environmental Magazine*, March/April 1995

How tough can these jobs be?

Slowly, very slowly, women are moving into higher-paying occupations that they rarely had access to in the past as welders, carpenters, and truck drivers, among others. Ability usually isn't the question. Rosie the Riveter came to symbolize the women who stepped in at factories and other work sites during World War II. They helped turn out tanks and ammunition. "The experience showed that when you pay women well and train them well, they perform," said Karen Nussbaum, director of the Women's Bureau, the entity within the Labor Department concerned with women's employment issues. But when men returned from war, women were expected to return to their homes and more traditional jobs.

Now, with almost 54 million women employed, only 6.6 percent of women are in non-traditional jobs, according to Wider Opportunities for Women, or WOW, a Washington-based advocacy group. The Labor Department defines non-traditional jobs as those in which women make up less than 25 percent of the work force. Three quarters of working women have low-paying jobs with little security, few

benefits and little room for advancement. At the same time, nearly half of all working women earn the family's primary income. The most skilled "tough guy" trade jobs pay between \$23 and \$27 an hour, while blue collar women's work usually offers salaries in the \$5 range. Because they haven't seen women working in trade jobs many women can't imagine themselves on a construction crew.

Lisa Genasci, Associated Press *Business*, May 31, 1995

Oklahoma reflections

The building was not picked at random. It was bombed to do as much harm as possible to civil servants of the United States government.

Elaine Y. Zielinski, *BLM News*, April/May 1995

Single woman alert

Every now and then, a single woman will find herself socializing with married people and realize, all of a sudden, how profoundly different they are. They issue dinner invitations for a whole week and a half in the future—not for "later on tonight" or even for "tomorrow," the way normal people do.

Whenever you think you're talking to just one partner, you're really talking to both. One woman reports that she updates her best friend on some saga and then she'll say, you know Frank thinks you should... I like Frank, but it's still a jolt to realize that he automatically knows what she knows.

Accept your roles: They're Ozzie and Harriet, you're Shannen Doherty. Also, something about getting married makes people feel older and wiser and more protective toward single friends. Immunize yourself against their compulsive parenting by not acting the child's part.

Spending time with marrieds is not unlike eating in an Ethiopian restaurant for the first time—culture shock can give way to comfort and wisdom as time goes on. Observing married friends may help you understand yourself, what you do and don't want from marriage someday.

Lesley Dormen, *Glamour*, June 1995

The Society of American Foresters meeting will be held October 28-November 1, 1995 in Portland Maine. For further information contact them at 301-897-8720.

The Quebec-Labrador Foundation, through its Atlantic Center for the Environment is launching a new, annual award—Caring for the Earth—to honor persons working for sustainable development and conservation in eastern Canada and New England. To receive the nomination forms and criteria, call Dr. Kathleen A. Blanchard at 508-356-0038.

MINFORS, will hold their conference October 1-4, 1995 at the University of Missouri-Columbia to build a network of culturally diverse partnerships among future leaders in natural resource careers. Student assistance is available. For information, call the extension conference office at 314-882-2301.

The 4th North American Agroforestry Conference will be held in Boise, Idaho July 23-26, 1995. To receive conference registration materials, call John Ehrenreich, 208-885-7600.

If you are moving, be sure to send WiNR a change of address card.

Kenai, Alaska will host the next Northwest Fire Council meeting September 11-14, 1995. The focus will be on fire management in Alaska, plus other issues such as the international cooperative fire efforts in Russia, Canada, and China. Contact Andy Williams at 907-474-2230 for information.

The Second Canadian Urban Forests Conference will be held in Windsor, Ontario July 16-19, 1995. For registration information call the Department of Parks & Recreation, 519-255-6270.

The Sixth International Symposium on Society and Resource Management issues a call for papers, posters, or roundtables for their conference to be held

May 18-23, 1996 on the Pennsylvania State University campus. The focus is on better integration of social and natural resource sciences in addressing resource and environmental issues. A commitment to the role of social perspectives in policy development and managing natural resources is underscored. For information, contact A.E. Luloff, Program Co-Chair, 111 Armsby Bldg., Penn State University, University Park PA 16802.

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*...and sometimes we like to play around,
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