

Environmental Finance Center Network

1997 Annual Report

1997 ANNUAL REPORT

Compiled by

*Environmental Finance Program
Office of the Comptroller
Office of the Chief Financial Officer*

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[FOREWORD](#)

It is our great pleasure to present the 1997 Annual Report of EPA's Environmental Finance Center Network. This report updates all principal activities of the six University-based Environmental Finance Centers (EFCs) through 1997 and is a continuation of the information contained in the 1996 and 1995 Annual Reports. Copies of these earlier reports are available on EPA's Environmental Finance website at www.epa.gov/efinpage/.

The Environmental Protection Agency provided seed funding in 1992 for the first EFC at the New Mexico Engineering Research Institute of the University of New Mexico. Soon thereafter, Centers were established at the University of Maryland and Syracuse University. A fourth Center was added in 1994 at California State University at Hayward. Two more EFCs were added in 1995; one at Cleveland State University early in the

year, and the other established later in the year at Boise State University in an alliance with the University of Idaho and Idaho State University. Now, with six EFCs strategically located at major universities throughout the country, the Network has become a significant force to assist local governments and small businesses in meeting environmental standards. Essentially, the EFCs provide finance training, educational, and analytical services designed around the "how to pay" issues of environmental compliance.

A central goal of the EFCs is to help create sustainable environmental systems in the public and private sectors. Sustainable systems have the financial, technical, and institutional resources and capability to operate indefinitely in compliance with environmental requirements and in conformance with generally accepted environmental practices. Creating and maintaining sustainable systems is a formidable challenge facing smaller local governments and businesses. Costs of needed public and private purpose systems and improvements often outstrip available resources. Yet paying for environmental protection has been and will continue to be primarily a responsibility of local governments and the private sector.

For their part, the financial outreach services of the EFCs seek to help meet environmental needs by focusing on identifying ways of increasing efficiencies by avoiding costs, lowering costs, and shifting costs, as well as increasing private sector investment in environmental systems. The reader will find in the following pages many innovative and traditional activities the EFCs have undertaken in accomplishing these objectives. Their work, however, is an ongoing process, and the sum total of its benefits will make an important contribution to environmental progress in this country.

Information on the Environmental Finance Center Network can also be found on our website on EPA's Environmental Finance Program homepage at <http://www.epa.gov/ocfopage/>.

We welcome your comments and suggestions. Thank you.

Michael W. S. Ryan, Comptroller, U. S. Environmental Protection Agency

ACKNOWLEDGMENTS

A great many dedicated people have helped the EFCs along the way. We particularly want to acknowledge the EPA Regional management and staff noted below who have generously provided their skills and time in managing the cooperative agreements with each of the six centers. The EFC network would simply not exist without the Regions' superb cooperation and support. Additionally, we appreciate very much the key assistance and support of Headquarters management and staff in the Program Offices.

We are deeply indebted to Sallyanne Harper, Acting Chief Financial Officer; Michael Ryan, Comptroller; former Comptroller Katherine Schmoll, former Acting Comptroller Jane Moore; and John Wise, Executive Director of the Environmental Financial Advisory Board, for their outstanding support of the Centers. There is no model or template for the Centers and they benefitted greatly from the valuable guidance and suggestions of these individuals.

We also want to recognize Victoria Kennedy, whose invaluable assistance as consultant contributed in great measure to the highly acclaimed 1997 *Guidebook of Financial Tools*.

Vera Hannigan

EFC Network Coordinator

EFCs in the order of their establishment

Region 6 - University of New Mexico EFC

- EFC - Heather Himmelberger, P.E., EFC Director
- Susan Butler, EFC Program Manager
 - Lorri Skeie-Campbell, Program Coordinator
 - Margie Krebs-Jespersen

EPA/HQ

- Peter E. Shanaghan, Small Systems Coordinator, OGWDW

EPA Region 6

- William Hathaway, Director, Water Quality Protection Division, EPA Region 6
- Richard Hoppers, P.E., Water Quality Protection Division, EPA Region 6
- Joan Brown, Acting Chief, Assistance Programs Branch, EPA Region 6
- Donna Bunn, Acting Chief, State/Tribal Programs Section, Water Quality Protection Division, EPA

Region 6

- Betty Ashley, State/Tribal Programs Section, EPA Region 6
- James Brown, Chief, Drinking Water Section, Water Quality Protection Division, EPA Region 6
- Freda Wash, Grants Section, Water Quality Protection Division, EPA Region 6
- David Reazin, Drinking Water Section, Water Quality Protection Division, EPA Region 6
- Blake Atkins, Environmental Engineer, Drinking Water Section, EPA Region 6

Region 3 - University of Maryland EFC

- EFC - Dr. Jack Greer, EFC Director
- Elizabeth Hickey, EFC Coordinator
 - Jeremy Haas, EFC staff

EPA Region 3

- W. Michael McCabe, Regional Administrator, EPA Region 3
- Jon Capacasa, Deputy Director, Chesapeake Bay Program, EPA Region 3
- Theresa Martella, Grants Project Officer, EPA Region 3
- Mindy Lemoine, Chesapeake Bay Program Office, EPA Region 3

- State - David O'Neill, Local Government Advisory Committee, Chesapeake Bay Program Office
- Maryland Sea Grant College

Region 2 - Syracuse University EFC

- EFC - William Sullivan, Director of Executive Education, EFC Director, Syracuse University

- Kim Collins, EFC Program Manager
- Jae Moon, EFC Ratesetting Trainer
- Kevin Ryan, EFC Research Associate
- Scott Larson, EFC Intern

EPA Region 2

- Jeanne M. Fox, Regional Administrator, EPA Region 2
- Herbert Barrack, Assistant Regional Administrator, EPA Region 2
- Robert Gill, Chief, Construction Grants, SRF Section, EPA Region 2

Region 9 - California State University, Hayward EFC

EFC - Samuel Doctors, EFC Director

- Sarah Diefendorf, EFC Associate Director
- Susan Blachman, EFC

EPA Region 9

- Felicia Marcus, Regional Administrator, EPA Region 9
- John Wise, Deputy Regional Administrator, EPA Region 9
- Anna Hachenbracht, Project Officer, EPA Region 9
- Weinke Tax, Assistant Project Officer, EPA Region 9
- Eileen Sheehan, Pollution Prevention Coordinator
- Leif Magnuson, Waste Minimization Coordinator
- Angela Baranco-Mason, Pollution Prevention Coordinator, Air and Toxics

Private Sector

- Mahlon Aldridge, Director of Pollution Prevention Programs, Ecology Actions

Region 5 - Cleveland State University EFC

EFC - Donald T. Iannone, EFC Director

- Dr. Ziona Austrian, EFC Associate Director
- Dr. Robert A. Simons, EFC Real Estate Expert
- Adina Swirsky, Research Associate
- Kirstin Toth, Manager, Community Brownfield Project
- Paul Christensen, Manager, Community Brownfield Project
- Jackie Holland, Ph.D. Student Researcher

State - Steve Grossman, Executive Director, Ohio Water Development Authority

- Jennifer Kwazniewsky, Manager of Voluntary Action Program, Ohio EPA

Private Sector

- Randy Muller, Vice President, Environmental Services, Bank of America
- Lewis Norry, President, Norry Company, Rochester, New York
- Todd S. Davis, Partner, Hemisphere Corporation
- Kevin D. Margolis, Partner, Hemisphere Corporation

EPA/HQ

- Edward Weiler, Office of Pollution Prevention and Toxics, EPA

EPA Region 5

- Valdas V. Adamkas, former Regional Administrator, EPA Region 5
- David A. Ullrich, Acting Regional Administrator, EPA Region 5
- James VanderKloot, EFC Project Officer, Region 5, USEPA
- Mary Beth Tuohy, former Brownfields Team Leader, EPA Region 5
- Rich Winklhofer, Region 5 - Cleveland Office, USEPA
- William Haubold, Brownfields Team, EPA Region 5

Region 10 - Boise State University EFC

EFC - Dr. James B. Weatherby, Chair, Department of Public Policy and Administration

- Bill Jarocki, EFC Director
- Sharon Burke, EFC Project Associate

EPA/HQ

- Robert J. Blanco, Director, Implementation and Assistance Division, Office of Ground Water and Drinking Water (OGWDW)
- Peter E. Shanaghan, Small Systems Coordinator, OGWDW

EPA/Region 10

- Charles C. Clarke, Regional Administrator, EPA Region 10
- Jane Moore, Assistant Regional Administrator, and Director of Management Programs, Region 10
- Clark Gaulding, Academic Relations Manager, EPA Region 10
- William Chamberlain, Capacity Development Coordinator, EPA Region 10
- Susan Morales, Environmental Justice Coordinator, EPA Region 10
- James H. Werntz, Co-Director, Sustainable Communities Pgm., EPA Region 10
- Harold Thompson, Capacity Development Coordinator, EPA Region 8
- Paul Felz, Financial Analyst, EPA Region 8

State - Dr. James R. Weise, Manager, Drinking Water Program, Division of Environmental Health, Alaska Department of Environmental Conservation

- Lance Nielsen, Bureau Chief, Idaho Division of Environmental Quality
- Bill Jerrel, State Revolving Fund Manager, Idaho Division of Environmental Quality
- Dave Leland, Manager, Drinking Water Program, Oregon Health Division
- Peter Dalke, Interagency Program Coordinator, Oregon Department of Environmental Quality
- Steven M. Carley, Supervisor, Financial Management Section, Washington State Department of

Ecology

- Janice Roderick, Water Quality and Financial Assistance Program, Washington State Department of Ecology
- Kevin Brown, Director, Division of Drinking Water, Utah Department of Environmental Quality

Private Sector

- Don Munkers, Executive Director, Idaho Rural Water Association
- Janet A. Gillaspe, Executive Officer, Oregon Association of Clean Water Agencies
- Kevin Olson, Executive Director, Oregon Association of Water Utilities
- Chow Taylor, Local Government Specialist/Program Administrator, Alaska Municipal League
- Michael Siegel, RateMod Associates, Washington, DC
- James Burke, Chairman, Finance Committee, Pacific Northwest Section, American Water Works Association

EPA's Environmental Finance Team

- George Ames, Team Leader
- Vera Hannigan
- Timothy McProuty
- Eugene Pontillo
- Alecia Crichlow
- Joanne Lynch

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[Highlights of 1997 Collaborative Activities](#) of the **Environmental Finance Center Network**

1997 saw much growth in the collaborative efforts between the EFCs. One of the strengths of the Network is their ability to work as a unified group to accomplish national objectives. In addition to their effective work in promoting and sharing creative environmental financing techniques and building partnerships between the public and private sectors, as well as with their respective Regional Offices, the EFC Network collaborated on several innovative accomplishments:

Financial Tools of the Network:

The EFCs and the Agency's Environmental Finance Program have produced an array of finance training and educational publications and courses available through the EFC Network. These tools are designed to provide hands-on useful assistance to the regulated community.

An outstanding example is the Guidebook of Financial Tools. In 1996, the EFC Network and the Environmental Financial Advisory Board (EFAB) collaborated on developing the guidebook. This report was extremely well-received, and is currently being updated and expanded. The 1998 edition will be released September 1998. The Guidebook as well as its expansion is the product of a collaborative effort among members of the Environmental Protection Agency's Environmental Financial Advisory Board, the Directors and staff of the Environmental Finance Centers, and the staff of EPA's Environmental Finance Program. The Guidebook is routinely distributed by the EFCs as part of their ongoing outreach activities. For example, the Boise State EFC has distributed over 100 copies within Region 10. The Guidebook is also available on the Environmental Finance website under [Environmental Financial Tools](#) at <http://www.epa.gov/efinpage/index.html>

Small Water System Capacity Development:

The success of the Safe Drinking Water Act (SDWA) depends on the effective operation of individual public water systems. A comprehensive understanding of rate design concepts for water systems is an essential element in operating and managing sustainable utilities. The network of Environmental Finance Center's training and education programs are designed to meet the need of utility managers to design equitable utility rates and to match financing mechanisms to capital projects.

- The Centers at the University of New Mexico and Boise State University are currently working with states in Regions 6 and 10 in developing capacity development strategies required by the SDWA. This assistance project, funded by the USEPA Office of Ground Water and Drinking Water, brings EFC staff resources and expertise on capacity development to several western states that have begun work on meeting this SDWA requirement. The EFCs are working with the states of Alaska, Oregon and Idaho in Region 10; Utah in Region 8; and Arkansas, Louisiana, Oklahoma, and New Mexico, Texas and the Native American Tribes in Region 6. (See: Region 6 and Region 10 Annual Reports)

Financial Capacity Development:

Financial Capacity Development -- the ability to both obtain the resources necessary for sustainable infrastructure systems and to manage those resources well -- is one of the three capacity components required under the 1996 Amendments to the Safe Drinking Water Act (SDWA). A water and wastewater rate model was developed under a cooperative agreement with EPA's Environmental Finance Program and the

Government Finance Officers Association. The purpose was to design a useful financial tool for small to moderately sized communities as an affordable way to evaluate their existing rate structures and evaluate the fees charged for water and wastewater systems. This is to encourage the adoption of rate structures and strategies that promote full cost pricing, using the EFC Network as the primary means of delivering to public officials the requisite training and technical support for its proper use.

- Using the rate model for water and wastewater, the Environmental Finance Center at Boise State University has placed significant emphasis in 1997 on training activities related to utility rate setting and alternative methods for financing water and wastewater system improvements. This activity occurred in the form of demonstration workshops for rate setting technical assistance and training in each of the four states in Region 10, and post-demonstration workshops in the Region, as well as collaborating with the other EFCs to provide training in the use of the rate model. For example, in November 1997, the Boise State EFC (Region 10) joined the Syracuse EFC (Region 2) in the presentation of a rate setting workshop conducted in the western region of New York State. The workshop has since led to additional requests for presentations by the EFC. All of the training workshops incorporated RateMod Pro v.3.0. RateMod Pro is a sophisticated, yet user-friendly computer model for water or wastewater utility financial analysis and rate setting. The model was developed in response to local government officials who participated in EFC sponsored infrastructure finance charrettes in the early 1990s. (See Region 10 Annual Report)
- The Director of the EFC at Boise State (Region 10) has been extremely helpful in advising the Maryland EFC (Region 3) in drinking water issues, especially in the critical area of rate-setting. He helped establish contacts between the EFC and their other clients in Region III, and will serve as instructor and advisor to the Maryland EFC on rate setting. (See Region 3 and Region 10 Annual Reports)
- The Great Lakes EFC is working with the Boise State (Idaho) EFC to develop skills in using the Rate Model to assist small and medium-sized communities in the Great Lakes region (Region 5). The Director of the EFC at Boise State visited Cleveland in early December 1997 and conducted a Rate Model training workshop for Great Lakes EFC staff. The Cleveland EFC plans to introduce Rate Model services in the second half of 1998. (See Region 5 and Region 10 Annual Reports)
- The EFC Director for the New Mexico EFC (Region 6) met with the EFC Director for EPA Region 10 (Boise State University) to discuss capacity development as it relates to state requirements and to meet with representatives from Utah's Department of Environmental Quality. In particular, Utah representatives were shown a utility rate model and a discussion was held regarding tribal issues within state capacity development. The EFC at the University of New Mexico will be conducting rate model workshops throughout Region 6. For more information on the rate model, please visit the Environmental Finance website under Environmental Financial Tools at <http://www.epa.gov/efinpage/index.html>. (See Region 6 and Region 10 Annual Reports)

Tribal Assistance:

The Great Lakes Environmental Finance Center at Cleveland State University is currently working on an initiative to assist Native Americans in their efforts to create sustainable environmental communities. The proposed project will utilize three centers in the EFC Network and a ecological design institute to introduce the use of comprehensive community planning and ecological design techniques to help Native American Communities restore ecological balance.

Four primary entities will comprise the project team. The Environmental Finance Centers at Cleveland State University (Region 5), the University of New Mexico (Region 6) and Boise State University (Region 10) will work with Ecosa Institute to assist six Native American Communities. The team will also work with EPA's

national headquarters and regional offices to utilize their expertise in tribal issues. (See Region 5 and Region 10 Annual Reports)

Pollution Prevention:

- The Great Lakes EFC (Cleveland State, Region 5) is working with the EFC at California State, Hayward (Region 9) in advancing strategies for industrial pollution prevention. The Great Lakes EFC provided funding to the California center to plan and undertake a pollution prevention demonstration project in 1997 and 1998. This work will be incorporated into an overall report to US EPA's Office of Pollution Prevention. (See Region 5 Annual Report)
- The EFC9 at California State, Hayward (Region 9) is working on a Pollution Prevention (P2) Demonstration Project in conjunction with the Great Lakes Environmental Finance Center for Region 5, which involves a progression of tasks. Beginning with a series of meetings with local economic development organizations, EFC9 will assess the role of financing as a barrier to the expansion of P2 in business and industry. The tasks are as follows: (See Region 9 Annual Report)
 - Bay Area Pollution Prevention (P2) Directory Extension-This project will extend the EPA Region 9 inventory of Pollution Prevention service providers for the Bay Area in conjunction with the EPA P2 Team.
 - Plan for a Bay Area Industry-A specific industry will be targeted by EFC9 in conjunction with the US EPA Region 9. A plan will be produced for stimulating more P2 activities in that Bay Area Industry. A case study of successful P2 implementation in that industry will be developed.

Charrettes:

Part of the EFC's goal is to provide assistance and to act in an advisory capacity to state and local governments on issues related to environmental finance. One way to achieve that goal is to advise local officials in a "charrette" format. The charrette process, pioneered by the University of Maryland EFC, employs an advisory panel of federal and state officials and financial experts who provide local officials with solutions to their problems with financing environmental services and facilities. The charrettes provide a forum for frank discussions between local officials and financial experts about financing difficulties experienced by communities in meeting the demands of environmental mandates. The charrette process is a cost-effective way to address unfunded mandates and further the Agency's strategic initiative on Partnerships. In addition, it was one of EPA's key proposals for the National Program Review. (See Region 3 Annual Report)

- **Charrette Assistance to U.S. EPA and the Common Sense Subcommittee for Metal Finishers**

The Great Lakes EFC participated on a panel of experts in a charrette on "Access to Capital" held in Washington D.C. in January 1997. Other participants included representatives of large commercial banks, environmental insurance companies, the Environmental Finance Advisory Board, and the U.S. SBA. The charrette was organized by U.S. EPA and the Maryland EFC to provide advice to the metal finishers, printers, and printed wired boards industries. The charrette had three objectives: one, define obstacles (and methods for overcoming them) that these industries face in obtaining capital, especially for environmental investments; two, explore availability and potential benefits of environmental insurance policies; and three, determine the appropriate role for U.S. EPA, other federal agencies, and public/private sectors in facilitating these industries' ability to improve environmental performance through greater access to capital. (See Region 3 and Region 5 Annual Reports)

- **York, Pennsylvania Charrette**

Great Lakes EFC assisted the Maryland EFC with the York, Pennsylvania Ecological Design Charrette

in September 1997. The Director of the Great Lakes EFC at Cleveland State, bringing a wealth of expertise in the area of brown fields revitalization and urban renewal, conducted a session on how to recognize the 'ecological, historical, and cultural essence of place' in planning for the redevelopment of brownfield sites in the central city. The two-day session was rated a success by the City of York and the Maryland EFC (See Region 3 and Region 5 Annual Reports)

EFC/EFAB Network Coordination:

The Executive Directors of the EFCs that make up the Network serve as expert witnesses to EPA's Environmental Advisory Board (EFAB). In that capacity they participate in discussions during EFAB full board meetings. It is this type of coordination and positive interaction that leverages the expertise of both organizations toward a common goal, that of achieving sustainable environmental compliance. This collaborative effort is involved in several projects such as financial capacity assistance (through the New Mexico EFC) along U.S. Mexico Border, especially cost-effective environmental management initiatives (see following paragraph); Brownfields cleanup and redevelopment initiatives; capacity development tools and training to help strengthen the viability of the nation's public drinking water systems; and helping to develop a watershed management approach to explore regional funding mechanisms that would tap into the buying power of an entire watershed to empower local communities with the greatest need to implement environmental projects.

- **Cost-Effective Environmental Management:**

Public-Private Partnership Studies for the Environmental Financial Advisory Board: Cost-Effective Environmental Management Case Study Compendium

The University of New Mexico EFC Director served as vice-chair of the Cost-Effective Environmental Management Workgroup of the Environmental Financial Advisory Board. This working group expanded its focus beyond public-private partnerships and added to its evaluation, models that focus on internally optimizing environmental services. To achieve its objectives, this workgroup outlined two major work projects: a compendium of case studies on effective service delivery and a "how to" handbook for local governmental officials interested in looking at the preliminary steps of implementation. The first work product was completed in October of 1997 and was titled "Cost-Effective Environmental Management Case Studies." The compendium discusses ten cost-effective environmental management efforts in municipalities throughout the U.S. And include internal optimization strategies, such as, encouraging competition through full privatization.

Environmental Financial Information Network:

The Environmental Finance Center Network updates its website continuously on the Environmental Finance Program homepage at <http://www.epa.gov/efinpage/index.html>. The homepage, located on EPA's main website (www.epa.gov), provides information about the Environmental Finance Program (EFP), its components, and its services and publications. Included at the website is information about the Environmental Finance Center Network (EFC), the Environmental Financial Advisory Board (EFAB), and the Environmental Financing Information Network (EFIN). There are also available numerous advisories and reports, which can be found under Environmental Publications, as well as the new guidebook on financial tools, which is located under Environmental Financial Tools. We are continuously expanding the website. A major source of information are the ongoing updates on the EFC Network's activities, as the Centers use the world-wide-web to improve the effectiveness and efficiency of sharing information among the Network. See the EFP Home Page at <http://www.epa.gov/efinpage/index.html>

Prospective Activities of the EFC Network:

Forum of Environmental Finance Services -- This project is an intensive, hands-on, two-day symposium of workshops, courses, and charrettes for local government officials and small businesses on paying for environmental protection. The Forum will be held in June 1998 at the Syracuse University Maxwell School EFC where over the two days participants move from session to session attending up to six by the end of the second day. Target participation is 50 to 100 attendees. Continuing education credits will be available to interested eligible attendees.

The centers in the EFC network have developed an impressive array of tools and techniques to help regulated communities pay for environmental protection. They have also identified ways of financing brownfields redevelopment in urban areas. The Forum will be the first time all of these tools and individuals from five EFCS will work together in one setting providing concentrated technical assistance. Participants will benefit from exposure to the full range of outreach services the EFCs have to offer. The EFCs will get immediate and useful feedback from participants on new tools and on ways of improving their current outreach services. The Forum is a very efficient means for the EFCs to reach a large number of communities and businesses.

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Environmental Finance Center Network **1997 ANNUAL REPORT** **EXECUTIVE SUMMARY**

This third Annual Report covers the major accomplishments of 1997 for the six university based Environmental Finance Centers (EFCs) that make up the EFC Network. The first EFC Network Annual Report was issued March 1996 and covers the performance of the EFCs through 1995. The second Annual Report was issued March 1997 and covers the performance of the EFCs through 1996. As reference, the Executive Summaries of the 1995 and 1996 Annual Reports are attached as an Appendix at Tab 10.

The first Center was established in 1992 by the U.S. Environmental Protection Agency's Environmental Finance Program, which has since helped establish five other Centers in Federal EPA Regions throughout the United States, forming a national Network of EFCs. The EFC network, in the order of their establishment, includes the University of New Mexico (Region 6), University of Maryland (Region 3), Syracuse University (Region 2), California State University at Hayward (Region 9), Cleveland State University (Region 5), and Boise State University (Region 10). EPA's Environmental Finance Program works with this Network to set priorities and coordinate and plan activities. The EFC Network's financial outreach services focus on identifying ways of avoiding costs (pollution prevention), lowering costs, and shifting costs as well as increasing private sector investment in environmental systems. Set forth below is the Executive Summary of the EFC Network's Annual Report for 1997.

EFC at University of New Mexico (Region 6)

Established as the first Environmental Finance Center in 1992, The University of New Mexico Environmental Finance Center (EFC) serves USEPA Region 6 and is located at the New Mexico Engineering Research Institute. The EFC initially began with an emphasis on public-private partnerships, particularly public water and wastewater utility systems. With the anticipation of NAFTA, the EFC expanded its technical assistance to border communities on ways to reduce costs for basic sanitary services. Additionally, the EFC researched financing alternatives for environmental infrastructure along the U.S.-Mexico border which later served as a guide to feasible choices for public policy decision making. The EFC field-tested a water and wastewater rate model with several New Mexico communities during 1995. Training in the use of the rate model is a mainstay of the EFC's financial outreach program throughout Region 6 states.

The EFC's recent and current work primarily focuses on assistance with the capacity development requirements (technical, financial, and managerial) of the Safe Drinking Water Act, specifically as they relate to federal, state, tribal, and local governments and public and private small water systems. Identifying financing options and promoting low-cost, alternative, and appropriate technologies for system capacity development projects, at affordable and viable levels, is an omnipresent goal of the EFC. More information about the EFC, including the detailed 1997 Annual Report, is available on its home page at

<http://www.nmeri.unm.edu/ta/efc.htm>

ACCOMPLISHMENTS-CURRENT INITIATIVES

Small Water System Capacity Development

System capacity is the ability of a water system to consistently provide quality service at an affordable cost. This encompasses the technical, financial, and managerial capability of a system to consistently comply with all state and federal regulations. Increasing system capacity is a two-step process: the first step is the assessment of overall system capacity, and the second step is the enhancement of system capacity through direct technical assistance.

The EFC devotes a majority of its time to capacity development endeavors, currently performed under three separate USEPA contracts:

- Increasing Drinking Water Viability In New Mexico
 - Section A: New Mexico Capacity Development Strategy
 - Section B: Rate Model Workshops and Demonstrations
 - Section C: Meetings with Region 6 States
- Capacity Development for EPA Region 6 Native American Tribes and Pueblos; and
- Capacity Development Strategies: Assistance to States and Native American Tribes.

Increasing Water Viability in New Mexico

New Mexico Capacity Development Strategy

The EFC worked closely with the New Mexico Environment Department (NMED) in support of the changes that resulted from the 1996 Safe Drinking Water Act Amendments. The EFC is developing a three-tier capacity assessment tool that may be used to determine those systems in need of technical assistance and also may be used to determine if SRF applicants have adequate capacity. The EFC participates in the New Mexico Safe Drinking Water Advisory Group meetings and is in close contact with the New Mexico Finance Authority and the Environment Department discussing various capacity development issues including the Intended Use Plan, funding for the Set-Asides, the Priority List, and the State Revolving Loan Fund's leveraging plan, application process, and the affordability criteria for Disadvantaged Communities.

Rate Model Workshops and Demonstrations

The UNM-EFC held training sessions in the use of *RateMod Pro*(TM) to demonstrate the utility of the model as a rate setting and financial planning tool. The rate model is useful for both water and wastewater utility operators, managers, owners, and for regulatory and funding agencies. The model was developed in cooperation with the U.S. Environmental Protection Agency and the Environmental Finance Center Network to enhance the financial and managerial capacity of small to medium-size water and wastewater systems. The model incorporates EPA user fee guidelines and methods recommended by the American Water Works Association and the Water Environment Federation. Refer to the Projects Section for more detail on the rate model.

Meetings with Region 6 States

Review of Capacity Development Initiatives in Other States and Region 6 Capacity Development

Clearinghouse: The EFC reviewed existing and on-going capacity development efforts in other states. The EFC is maintaining this capacity development information to serve as a Clearinghouse for Region 6 states.

Capacity Development Outreach to Additional Region 6 States: The EFC worked with EPA Region 6 representatives to develop a Capacity Development Assistance Program for Arkansas, Louisiana, and Oklahoma, and to discuss how the EFC can be utilized to meet those needs including EPA strategy requirements; EPA approval; state flexibility in the strategy; and the potential for EFC assistance through this existing grant.

Capacity Development for EPA Region 6 Native American Tribes and Pueblos

The Reauthorization of the Safe Drinking Water Act in August of 1996 included the establishment of the Native American Revolving Fund for Native American Tribes, Pueblos, and Alaskan Native Villages. The Fund was established to provide resources in the form of monetary and technical assistance to small and medium community drinking water systems in the form of grants rather than loans. The EFC is focusing its initial Native American efforts on adapting the concept of capacity development to fit within the institutional framework of the Tribes and Pueblos in New Mexico. The intended strategies will both define program needs and develop programs to assess the existing capacity of each water supply system; develop and present solutions to enhance system capacity; and implement changes that will allow the system to sustain itself in a viable condition.

Capacity Development Strategies: Assistance to States and Native American Tribes

This collaborative project with the Boise State Environmental Finance Center for EPA Region 10 (EFC-10) as lead and designated grantee, is funded through a grant from the USEPA Office of Ground Water and Drinking Water. Collectively, the EFC-10 and the EFC are providing direct assistance to five states in Regions 6, 8, and 10, in addition to the Native American Tribes located in Region 6 to assist these entities in meeting capacity development strategy requirements. The project scope for EFC-6 is threefold.

New Mexico: Expanding the Effectiveness of a Capacity Development Strategy

The EFC is performing a study of past recipients of water system funding to determine if there is significant difference between the capability of a system prior to and after funding based on the type of funding including grant recipients; grant/loan recipients; and loan recipients.

Texas: Capacity Development Strategy Videotape

The EFC will develop a videotape intended for distribution to water systems across the state to describe the State of Texas Capacity Development Strategy and the requirements related to DWSRF funding.

Native American Tribes in Region 6: Capacity Development Assessment Tool

The EFC will develop a capacity development assessment tool for Native American Tribes within Region 6 for use in evaluating the capacity of tribal water systems. The tool will be specialized for tribal water systems and will be developed with input from tribal representatives.

Capacity Development Strategy Implementation for TNRCC

As a follow-up to the Capacity Development Strategy that was completed in August of 1997, the EFC has been assisting the Texas Natural Resources Conservation Commission (TNRCC) with the implementation of the strategy. Some of the initial implementation activities with which the EFC has been involved include:

- the Invitation-to-Bid for on-site contractor assistance review;
- development of the management process for the on-site assistance contract;
- provide examples of Business Plans for the new system strategy;
- SRF capacity assessment review process; and
- assistance with the capacity assessment questionnaire for existing systems.

New Mexico Finance Authority Request for Proposal Preparation

The EFC is currently providing services related to the preparation of a request for proposal (RFP) for environmental reviews, engineering services, and construction services for the SDWA SRF loan program to

the New Mexico Finance Authority (NMFA). The RFP preparation services include:

- develop text for RFP for contractual services;
- combine RFP text (above) with standard language required for all NMFA RFPs to produce final RFP;
- prepare list of newspaper advertising locations; locate mailing list(s) for mailing RFP to targeted groups and provide to NMFA;
- assist NMFA in developing matrix to rank/rate responses to RFP;
- review responses to RFP and assist NMFA in evaluating responses;
- assist in interviewing potential candidates; and
- assist in final selection of candidates.

Dona Ana County Water & Wastewater Utility Authority Assistance

Dona Ana Mutual Domestic Water Consumers Association is constructing a pipeline from their residences to a connection point with the City of Las Cruces (CLC) sewer system. The EFC is assisting Dona Ana County in determining whether or not the current proposal from CLC to the County is acceptable and appropriate by obtaining billing and other pertinent information from CLC; reviewing the current proposal from CLC; and understanding the proposed rate.

ACCOMPLISHMENTS - PROJECTS

Capacity Development

The 1996 Safe Drinking Water Act Amendments requires states to devise comprehensive strategies to assure small system capacity. States must address both new and existing systems and must incorporate the required strategies into their loan approval process for state drinking water revolving loan funds.

Facilitation of the Capacity Development Strategy for TNRCC

The EFC assisted TNRCC with its capacity development, multi-goal strategy and created the final *Capacity Development Strategy Report* on August 31, 1997. This report, which incorporated stakeholder input from two separate sessions, will serve as the basis for the implementation of the Texas capacity development strategy. The main goals of this project were to:

- involve stakeholders in the development of the Capacity Development Strategy;
- include new system elements, SRF applicant elements, and existing system elements in a combined Capacity Development Strategy;
- include a communication plan and an implementation plan in the strategy; and
- coordinate the Capacity Development Plan with the preparation of an Invitation-to-Bid for technical assistance services.

Water/Wastewater Utility Rate Model

The EFC held training sessions in the use of *RateMod Pro* (TM) to demonstrate the utility of the model as a rate setting and financial planning tool. The model is useful for both water and wastewater utility operators, managers, owners, and for regulatory and funding agencies. Utility managers can use it to perform a cost-of-service analysis, develop demand-based and equitable user rates, prepare a six-year budget, schedule capital improvements, and evaluate financing alternatives. Regulatory and funding agencies can use the model to improve project underwriting, determine necessary and appropriate financial assistance, and assess repayment capacity of individual systems. *RateMod Pro* (TM) can also be used as an educational tool for understanding rates.

Water Utility Rate Model Presentations for EPA Region 6

The UNM- EFC demonstrated the utility of RateMod Pro at a pilot workshop in Dallas, Texas. This pilot project involved a one-day training session at the EPA Region 6 offices to demonstrate the model to state and

federal agencies. The EFC has since held a two-day training and demonstration workshop in New Mexico. Given sufficient interest and state funding, the EFC plans to conduct additional two-day workshops in the other Region 6 states.

U.S.-Mexico Border Work

Report on Considerations for a County Regional Utility Authority

Contamination of public water supplies due to over-burdened and antiquated distribution systems and equipment are common in Dona Ana County. Many systems are operating under an inadequate rate structure and are unable to maintain the system at a viable level; some residents are without access to a drinking water supply system or a wastewater collection system. Therefore, the Board of County Commissioners determined that a nation-wide survey of other county-run water authorities would be beneficial in the potential creation of a regional utility authority and approached the EFC to conduct this research.

The EFC reviewed the requirements of several other county-run community drinking water systems and wastewater systems nationwide. The results of this study are documented in the EFC's *Report on Considerations for a County Regional Utility Authority* which outlines the organizational structure of different county-managed utility systems and provides Dona Ana County with information on program considerations and requirements.

Ecological Baseline Model for the U.S.-Mexico Border

The EFC, in collaboration with the UNM Community and Regional Planning Program, received a grant under the US Environmental Protection Agency's Office of International Activities "Border 2000" Planning Grants Program to develop a natural resources inventory in the bioregion along the U.S.-Mexico border. The study area was defined as the area surrounding Columbus, New Mexico, United States and Puerto Palomas, Chihuahua, Mexico.

Working in cooperation with Chihuahua state planning officials, local ranchers, farmers, and village residents, a twelve member field research team constructed a geographic information system (GIS) to examine the location of soil types, vegetation complexes, water source points, and wildlife groups. The results will inform local residents further about their surroundings, enable university and government officials on both sides of the border to model the impact of proposed developments, and provide local governments with more information with which to make planning decisions.

EFC Hosts International Meeting: Rio Grande Alliance Coordinating Council

The EFC assisted in the planning and hosting of a meeting for the Rio Grande Alliance (RGA) Coordinating Council on April 15-16, 1997 facilitated by the Rio Grande Alliance of the Texas Natural Resource Conservation Commission. The Coordinating Council is composed of basin-wide stakeholders with a direct focus on RGA activities concerned with the protection, improvement, and conservation of natural resources and human health. The EFC provided a facilitator for the general sessions and bi-lingual scribes with knowledge of technical-environmental terminology. The EFC has hosted several other high-level international meetings between the United States and Mexico during the past several years.

Cost-Effective Environmental Management

Public-Private Partnership Studies for the Environmental Financial Advisory Board: Cost-Effective Environmental Management Case Study Compendium

The EFC Director served as vice-chair of the Cost-Effective Environmental Management Workgroup of the Environmental Financial Advisory Board. This working group expanded its focus beyond public-private partnerships and added to its evaluation, models that focus on internally optimizing environmental services. To achieve its objectives, this workgroup outlined two major work projects: a compendium of case studies on effective service delivery and a "how to" handbook for local governmental officials interested in looking at

the preliminary steps of implementation. The first work product was completed in October of 1997 and was titled "Cost-Effective Environmental Management Case Studies." The compendium discusses ten cost-effective environmental management efforts in municipalities throughout the U.S. And include internal optimization strategies, such as competitivization, through full privatization.

NEW INITIATIVES FOR 1998

The EFC submitted several proposals at the end of 1997 for the following project ideas.

Wellhead Assessment of a US-Mexican Transboundary Watershed Using a Geographic Information System as a Decision Support Tool

Best Management Practices (BMPs) to mitigate contamination through a wellhead protection area (WHPA) program using a geographic information system (GIS) for the identification of high risk groundwater contamination areas in the Mimbres/Los Muertos watershed near Columbus, New Mexico and Palomas, Chihuahua, Mexico.

Restoring Ecological Balance in Native American Communities: Coupling Comprehensive Community Planning with Ecological Design

Restoration of ecological balance through the appropriate use of comprehensive community planning and ecological design techniques by assisting six Native American communities over the next three years to help them define methods to redesign and redevelop themselves in greater harmony with their surrounding ecosystems and habitats.

Financial Capacity Assistance Along the US-Mexico Border Region

One of the greatest problems along the U.S. Mexico Border in terms of financing water and wastewater infrastructure is the ability to set sustainable and equitable rates and the unwillingness of people in the communities to pay the necessary rates. A lack of understanding by community residents regarding 1) why there is a need to pay for water and wastewater treatment; 2) how to set rates; and 3) what elements should be included in a sustainable and equitable rate. The EFC would partner with a Mexican partner and the EFC Network, as appropriate, to provide education.

North American Development Bank Assistance Work Plan: Environmental Finance Center Network with the Environmental Financial Advisory Board

Improve the financial capacity of communities along the border region by assisting the NAD Bank in its efforts to fund environmental infrastructure projects along the U.S./Mexico border through assistance to the NAD Bank and directly to communities.

Utility Rate Assistance for Wastewater Systems within Dona Ana County

Determine equitable and reasonable utility rates for Dona Ana Village, a designated colonia, through the use of RateMod Pro utility rate model and apply its use to current county-related work for the Dona Ana Village wastewater system in Dona Ana County, New Mexico.

EFC NETWORK COLLABORATIVE EFFORTS

The EFC is continually involved in projects with other Environmental Finance Centers as part of the EFC Network. The following lists the collaborative efforts which took place in 1997.

Reports

- Guidebook of Financial Tools: Paying for Sustainable Environmental Systems
- P3 Studies: Cost-Effective Environmental Management Case Study Compendium

Projects

- Capacity Development Strategies: Assistance to States and Native American Tribes
- Water/Wastewater Utility Rate Model Demonstration for USEPA Region 6 Agencies

Proposals

- Utility Rate Assistance for Wastewater Systems within Dona Ana County
- Financial Capacity Assistance Along the US-Mexico Border Region
- Joint EFC/EFAB NADBank Assistance Work Plan
- Restoring Ecological Balance in Native American Communities

Conferences/Meetings

- ASDWA Conference in Savannah, GA
- Native American Capacity Development meeting in Chicago, IL
- Capacity Development meeting in Salt Lake City, UT

TECHNICAL PRESENTATIONS/ CONFERENCES/ MEETINGS

The EFC attends, or participates in, as many technical conferences and meetings as possible. The level of participation varies from presenting technical topics and papers, exhibiting technical information at "vendor" tables and demonstrations, to hosting events. Specific topic areas in which the EFC participates include small water system capacity development, safe drinking water, community infrastructure and financing, water conservation, water resources planning, liquid waste, and non-point source pollution.

AVAILABLE PUBLICATIONS

The EFC keeps several available publications in which they have authored or co-authored in its library. Publication topics include: various small water system capacity development reports; issues in the development of a county utility department; cost-effective environmental management case studies; an ecological baseline model for an area along the U.S.-Mexico border; a guidebook of financial tools; management and financing options for small community water systems; a wastewater options study; financial responsibility requirements on Tribal lands; public-private partnerships for environmental facilities; and a water and wastewater user charge guide for small municipalities.

EFC at the University of Maryland (Region 3)

The Region 3 EFC, located in the University of Maryland's Coastal and Environmental Policy Program and hosted by the Maryland Sea Grant College, has been an innovator in designing methods for communicating information to a wide-ranging audience. The EFC's efforts to date, in collaboration with the Local Government Advisory Committee of the Chesapeake Bay Program have focused on both point-source pollution issues, such as alternative methods for financing waste treatment facilities and solid waste management facilities, as well as nonpoint-source pollution issues, such as stormwater management. Many of the EFC's recommendations for alternative financing are fee-based--as federal resources become scarce, it is apparent that without fee-based environmental control programs in place, the clean up of our environment will fall short.

Accomplishments

Charrettes:

Capital Access Charrette

The Maryland EFC was asked to host a charrette for the Access to Capital Project of the U.S. EPA Office of Policy, Planning and Evaluation's Common Sense Initiative. The Access to Capital Project aims to characterize and identify methods of overcoming barriers faced by metal platers and others in obtaining the necessary capital for investments in pollution prevention equipment and/or site remediation. By increasing access to funds needed for pollution prevention equipment or remediation, U.S. EPA hopes to reduce emissions from platers and reduce the risk to human health and the environment posed by contaminated plating operations, printed circuit board manufacturers and others.

The charrette, conducted in January 1997, gathered finance experts and others interested in identifying ways in which to help these industries access funds for improvements to help abate pollution. After a presentation by industry representatives on the nature and unique characteristics of the industries in question, the panel of finance experts engaged industry representatives in a dialogue on problems they have encountered in securing funding. After a thorough analysis of the situation, panelists made recommendations on how to help metal finishers and others better secure funding. A follow-up plan will be developed to help the Access to Capital Project realize its goals of helping these industries implement pollution prevention processes and remediation of their property. The summary of the Capital Access Charrette can be found as an Appendix at the end of the Maryland EFC report.

York, Pennsylvania charrette

A significant part of the EFC's work during the summer of 1997 was devoted to planning a charrette with the City of York, Pennsylvania, in close coordination with U.S. EPA's Region III "Green Communities" program. The charrette, held on October 14 and 15 in the City of York, Pennsylvania addressed the needs of a small city confronted with the challenges of a deteriorating urban core and a continued loss of employment opportunities for its citizens.

The charrette brought together a group of experts in the areas of "green" development and design, landscape architecture and general planning. "Green" development refers to the use of recycled materials in construction as well as environmentally sensitive and landscaped site plans. It also pertains to the renovation or construction of buildings which achieve high energy efficiencies as well as enhance or establish a sense of place for those living or working nearby.

Over 75 local government, business and finance representatives attended the charrette, including those interested in learning about how to develop or renovate urban areas in a sustainable manner, one which recognizes cultural as well as economic factors and is supported by the community.

Produce and Disseminate Outreach Materials on How Local Governments Can Protect Streams, Improve Infrastructure and Better Manage Lands

Local government handbook titled "Beyond Sprawl: Land Management Techniques to Protect the Chesapeake Bay"

During the year, the Maryland Environmental Finance Center collaborated with the Local Government Advisory Committee of the Chesapeake Bay Program to write and produce a chapter for the local government handbook titled "Beyond Sprawl: Land Management Techniques to Protect the Chesapeake Bay." This handbook is designed to promote more effective measures to balance growth objectives and resource conservation goals of local governments and will be distributed to the over 1,600 local governments in the Chesapeake Bay watershed, as well as to those interested in smart growth, such as community watershed organizations.

Watershed-based Forums

Pennsylvania State Association of Township Supervisors

The EFC participated in the Pennsylvania State Association of Township Supervisors (PSATS) Annual

Conference on April 28, which drew over 1,000 local government representatives to the four-day event. The Center was part of a session entitled "Chesapeake Bay Restoration and Protection: Townships in the Lead," which presented the recently adopted Chesapeake Bay Program Local Government Participation Action Plan and discussed ways in which local governments could implement this plan, including innovative financing techniques. The Center's presentation focused on the many ways in which a community could define the environmental finance challenge and the many sources of financing available.

Making the Connection: Land Use and the Chesapeake Bay

The Center conducted a session at the Maryland conference, "Making the Connection: Land Use and the Chesapeake Bay," on June 19, which was attended by over 300 local government, business, nonprofit and citizen representatives. The session discussed environmental financing alternatives useful in supporting land use decisions which help direct growth and protect water quality. The Center organized a panel of local government representatives who made presentations on innovative financing techniques developed in their communities. From this discussion, the EFC developed information on land trusts, methods for establishing them, and benefits to land owners and the public. This information has been useful in assisting other communities and individuals interested in this alternative, and has allowed the Center to broaden its repertoire of recommended financing techniques.

Pennsylvania Association of County Commissioners

On August 4, the EFC participated in the Pennsylvania Association of County Commissioners Annual Conference in Philadelphia, which drew over 500 local government representatives to the four-day event. The EFC was part of a session which presented the Chesapeake Bay Program Local Government Participation Action Plan and in particular, stream corridor protection. The Center's presentation focused on the many ways in which a community could define stream corridor protection, including wetlands preservation, railway bed conversion and other recreational activities, habitat restoration and historical protection. The challenge for local governments is to maintain restoration and preservation efforts, which require dedicated sources of ongoing revenues, a challenge for today's fiscally strapped local budgets. A primary focus of the EFC's presentation dealt with ways in which to identify and dedicate revenues for stream corridor restoration maintenance, such as establishing special districts which could assess fees based upon how much a landowner contributed to a stream corridor's health or sickness.

Investigate and Lay the Groundwork for Creating a Regional Nonprofit

During the year, the EFC participated in planning sessions with the Vice Chair of Local Government Advisory Committee of the Chesapeake Bay Program (LGAC), plus a workgroup composed of directors or representatives from the Alliance for the Chesapeake Bay, the Metropolitan Council of Governments, the Chesapeake Bay Commission, and various state agencies. The planning sessions were convened to develop ideas and a mission statement, bylaws and other documents necessary to establish a Chesapeake Bay regional nonprofit organization dedicated to local governments. This nonprofit (tentatively called the "Center for Chesapeake Communities") would provide a number of services to local governments, including proactively disseminating materials such as model ordinances, checklists for homeowners and other materials designed to protect and improve the waters that lead to the Chesapeake Bay.

It is anticipated that the nonprofit would provide assistance in the form of "catalyst" grants and loans for locally initiated environmental projects. This financial assistance could be provided through a regionally based revolving fund, which could be made available for a wide range of innovative watershed projects. The EFC is developing a recommendation paper outlining the benefits of such a fund, and ways in which to establish it. The paper will be delivered to the Chesapeake Bay Program during the winter. The EFC is also engaged in the development of a round table discussion with foundations potentially interested in providing support to the new nonprofit. The round table will explore needs and gaps in assistance to local governments in their efforts to manage economic vitality along with environmental sustainability. The round table is scheduled for this winter.

Maryland Tributary Strategies: Watershed Management

The State of Maryland has created a new kind of institution, multi county, watershed specific "Tributary Teams", and charged the teams with implementing the state's commitment to reduce controllable nutrients that damage the Chesapeake Bay by 40% by the year 2000.

Funding for nutrient reduction has been identified as a primary concern of the Teams. Working with the Office of the Governor, the Maryland EFC advised the Blue Ribbon Panel for Funding the Chesapeake Bay Tributary Strategies in 1994. In this capacity, the Maryland EFC was able to bring to the table insights and ideas it had gleaned from its work in environmental finance and helped the panel produce its useful final study Financing Alternatives for Maryland's Tributary Strategies.

During 1997, the EFC was asked by the University of Maryland Institute for Governmental Service to help design and produce an education program for the 350 members of the Tributary Teams. The program, entitled "Funding for Nutrient Reduction," aims to teach Team members about the political economy of financing nutrient reduction efforts in the individual watersheds. Increased knowledge among Tributary Team members will enable them to become more effectively involved in shaping fiscal policies for nutrient reduction.

As part of this effort, the EFC, in association with support from the Institute for Governmental Services and USDA, helped organize, conduct and speak at a workshop on storm water management for the Patapsco/Back Bay Tributary Team and the Baltimore Metropolitan Council on May 20. During the workshop, the Center's coordinator participated in a panel on financing nonpoint-source pollution control, and the Center's director facilitated a session on innovations in environmental finance. This regional council is exploring ways in which to address nonpoint-source pollution runoff from developed as well as agricultural lands. A key part of that effort is how to pay and who will pay for storm water management.

Extending the State Revolving Loan Program (SRF) to the Agricultural Community

Maryland

In an effort to implement one of the ideas advanced in Financing Alternatives for Maryland's Tributary Strategies, the EFC has coordinated with the Future Harvest Project to develop a stand-alone revolving fund available to Maryland farmers for sustainable agricultural practices. Following the success of the pilot project, legislation was passed in the Maryland General Assembly to expand its State Revolving Loan program (SRF) to the private sector for nonpoint-source pollution control activities. It is anticipated that such activities as septic system replacement or repair and individual storm water management efforts could be funded with SRF loans.

In addition, the EFC is currently working with Maryland's Departments of Agriculture, Environment and Natural Resources to further modify the state's SRF program to allow for an innovative "linked deposit" program. A linked deposit program would encourage participation by private lending institutions to assume the lion's share of administering the SRF's loans to private individuals, such as farmers interested in funding agricultural best management practices. These practices have demonstrated a marked reduction in nutrients running off farmland, and hold great promise in improving water quality and stream corridor restoration.

Pennsylvania

As a result of efforts in Maryland, the EFC was asked by the Pennsylvania Joint Legislative Air and Water Pollution Control and Conservation Committee to consult on its efforts to expand the state's SRF to the farming community for funding agricultural best management practices. An expanded SRF would increase the availability of low-interest loans to farmers, which should encourage wider implementation of BMPs and other sustainable agricultural practices. In addition, increased purchases of conservation tillage equipment and building of structures for management of nutrient flows may improve rural economies by enhancing job opportunities as well as protect the environment.

Training Materials on Expansion of the State Revolving Fund (SRF) for Watershed Use

The Maryland EFC, in cooperation with USEPA, has developed and produced a resource booklet and training curriculum designed to highlight the benefits of using the SRF for such nontraditional activities as septic system repair or replacement, storm water management and certain agricultural best management practices. SRF programs are also making progress in providing loans for nonpoint-source and other pollution control projects.

As state innovation in providing SRF loans for nonpoint-source control projects has developed, the EPA has, at times, found it difficult to balance the need to encourage innovation with the need to ensure that projects funded by the SRF comply with the goals of the Clean Water Act. To address this issue, the Agency invited states to participate in a mediated approach to devising a national nonpoint-source eligibility framework for the SRF program. As a first step to encouraging state SRF programs to move to an integrated watershed planning and priority setting process, the EPA has asked the EFC to develop and produce a resource booklet and training curriculum designed to highlight the benefits of using the SRF for such nontraditional activities as septic system repair or replacement, storm water management and certain agricultural best management practices.

The training curriculum has been developed in modules which can be mixed and matched to accurately address the needs of different audiences, such as state SRF program representatives, state nonpoint source control and other water quality program representatives, and local officials and citizens. In addition, there is a module dedicated to the integrated priority-setting process, one designed to highlight successes from 6 pilot projects and other cases from around the country, and a marketing module. Presentations on the training materials and certain stand-alone modules have been presented to local and Federal representatives at conferences throughout the nation.

NOAA/Gulf of Mexico

- The Maryland EFC was invited to act in an advisory capacity to the Gulf of Mexico Program, created in 1988 in response to increasing signs of environmental degradation in the region. The Program is comprised of 18 Federal agencies and five Gulf of Mexico states. Recognizing the importance of shellfish area closures as an indicator of coastal water quality, the Program initiated the Shellfish Challenge Project. The Shellfish Challenge seeks to increase Gulf shellfish beds available for safe harvesting by 10 per cent.
- The Maryland EFC was contacted after strategies were developed to address the shellfish bed closure problem. The Barataria-Terrebonne watershed in Louisiana was selected by the Gulf of Mexico Program as the site for the first pilot implementation of the strategies. The results of the Barataria-Terrebonne pilot will serve to guide subsequent shellfish restoration efforts in the Gulf of Mexico region. The EFC's role in this pilot is to share our experience and insights on watershed financing mechanisms developed from our work with the Governor's Blue Ribbon Panel, which produced Financing Alternatives for Maryland's Tributary Strategies. In addition, our watershed management experience in developing an agricultural revolving loan program, our promotion of storm water management through conferences and forums, and our community charrette experience were all instrumental in our Center's being invited to participate.
- The EFC was invited to speak at a workshop in the Barataria-Terrebonne watershed about barriers to implementation and innovative financing techniques to overcome these barriers. As a result of the Barataria-Terrebonne Watershed Oyster Restoration Project Targeting Workshop at Nicholls State University in Thibodaux, Louisiana on February 24-25, 1997, stakeholders of the watershed were able to identify a priority list of activities to restore degraded shellfish beds and possible ways in which to fund these activities. In addition to speaking and providing guidance on finance issues at the workshop, the EFC developed a list of financing mechanisms that could be employed to help pay for

implementation of the eight priority candidate oyster restoration projects.

New Initiatives for 1998

Other Charrette Initiatives

In addition, during the year, the EFC continued to solicit interest in conducting charrettes with other local governments in the Bay watershed. As always, it is important to work closely with communities to ensure that a charrette is the right tool for a community during its policy-making and implementation process. Below is a summary of the local governments and officials with which we are currently working.

- **Location:** Port Towns within Prince George's County, Maryland
Issue: Urban revitalization and environmental protection

The Port Towns of Anacostia, Bladensburg, Colmar and Cottage City, have a rich history which has been overshadowed by decades of urban decay and neglect. In an effort to revitalize, the towns have completed a vision and action plan which includes a section on environmental and recreational opportunities which could be pursued. How to finance some of these activities is a pressing question which the county would like to address in a charrette. After several meetings with the director of capital projects for the county, it was decided that the Port Towns issues were similar to those of York, PA. The director attended the York charrette and is deciding whether he would like to develop a similar charrette for his project. In the meantime, the EFC is gathering examples of innovative public/private partnerships nationwide which could be incorporated into the Port Towns project.

- **Location:** North Hampton and Accomack Counties, Virginia
Issue: Water source contamination

The Route 13 corridor, which runs down the eastern shore of Virginia and is the major thoroughfare in the region, has been experiencing development pressures in recent years. The North Hampton/Accomack Regional Planning District is concerned about agricultural and suburban contamination to ground water sources. They would like to consider planning and finance options available to help address this imminent situation and have expressed an interest in a charrette. One topic of great concern is sustainable development, including social equity issues. North Hampton County, in particular, continues to discuss this opportunity and has indicated an interest in conducting a charrette later in the winter.

- **Location:** Fairfax County, Northern Virginia
Issue: Failing storm water pond

A private community in Fairfax County, Virginia, has a pond which formerly functioned as a storm water management pond, but is now filled with weeds and mosquitoes. The County will not assume management of the pond unless it is drained and reverts to a dry retention pond, which is against the wishes of the community. The community has indicated an interest in a charrette, so the Center is coordinating with the homeowners association, the county, the state and others. Discussions are proceeding and the EFC anticipates conducting a charrette this winter.

Environmental Finance Center Public Outreach Brochure

To ensure that communities in the Chesapeake Bay Region understand how the EFC can assist them in finding ways to fund their environmental projects, the Center is developing an EFC marketing packet to be sent to local governments in the Chesapeake Bay Region. This brochure will highlight the ways the Center, in partnership with the Local Government Partnership Initiative, can assist local governments and others. For example there will be a section describing how an EFC charrette gives small communities access to technical and financial experts from the public, private, and academic sectors to discuss their issue.

Development of a Web Page for the Environmental Finance Center

The EFC is developing a web page which will improve environmental finance information delivery and exchange via the world wide web. Some of the information to be included on the web page includes an interactive sign-up page for communities interested in participating in a charrette; feedback from communities on environmental finance areas of concern; Riparian forest buffer financing alternatives; financing issues fact sheets; results of the Charrette Update Survey; financing Alternatives for Maryland's Tributary Strategies (Blue Ribbon Panel report); and periodic updates of current projects.

Fact Sheets

The EFC is developing a series of short (one-page), targeted fact sheets that will address the three major themes of the local government participation plan; maintaining drinking water or waste treatment systems, providing stream corridor protection, and managing growth. One possibility is to select activities outlined in the Chesapeake Bay Program Bay Partners Benchmarks, which lists over 40 activities local governments can undertake to help protect the Chesapeake Bay. Several fact sheets are already in draft form.

Stream Corridor Protection Funding Matrix

The Environmental Finance Center designed and developed a matrix of Federal, state and local funding sources which, separately or combined, could be used to help pay for stream corridor protection and restoration. The Center currently has developed this Matrix for the State of Maryland, and expects to finalize a matrix for the states of Pennsylvania and Virginia during 1998.

The Funding Matrix can be used by private landscaping companies, coastal restoration firms and private landowners, as well as public agencies, to quickly identify funding sources for stream corridor activities. So far, the Funding Matrix has been used by private landscape firms in their marketing packages to private landowners who have deteriorating or un-buffered stream banks.

EFC Network Collaborations

The Maryland EFC has cooperated with and benefited from the other EFCs in the national network. The following lists several highlights from those collaborations:

- The Associate Director of the Great Lakes EFC in Cleveland, Ohio served as an expert panelist for our Capital Access Charrette, held in Washington, D.C. This was extremely beneficial, since this individual had recent and direct experience in the area of pollution prevention, and special public funds created for that purpose.
- The Director of the EFC at Boise State has been extremely helpful in advising us in drinking water issues, especially in the critical area of rate-setting. He has already helped establish contacts between our EFC and other clients in our region (Region III), and he will visit shortly to serve as instructor and advisor on rate setting.
- The Director of the EFC at Cleveland State served as an expert panelist for our charrette in York, Pennsylvania, bringing a wealth of expertise in the area of brown fields revitalization and urban renewal. His presentation has influenced the direction of our work in York, Pennsylvania and elsewhere as well.

EFC at Syracuse University (Region 2)

The United States Environmental Protection Agency's (EPA) Region 2 Environmental Finance Center (EFC) at Syracuse University's Maxwell School of Citizenship and Public Affairs was established in October 1993. Since its establishment, the Syracuse EFC has aggressively undertaken a wide range of environmental financing projects and activities, and built a considerable record of accomplishment. A focus of the EFC has been the important issue of full-cost pricing of environmental services. The EFC has sponsored and hosted conferences to examine the issue as it impacts the sustainable provision of local water and wastewater services. The EFC has also assisted communities with the use of an EPA supported windows-based computer software program for setting financially responsible water and wastewater rates. This computerized rate model was developed for use by local water and wastewater systems.

During 1997 the EFC continued to sponsor demonstrations and training programs for environmental officials in EPA Region 2, and continued to provide environmental finance outreach services and information to local governments through presentations to professional associations and membership organizations. The presentations focused on topics of public finance, capacity development, water and wastewater rate setting, and topics relative to environmental governance. Also in 1997, the EFC increased its involvement in collaborative projects with other government-sponsored programs, institutions of higher learning, and EFC Region 10. For example, the EFC arranged for the New York State Rural Development Council to have in-kind physical space in the Maxwell School of Citizenship and Public Affairs at Syracuse University. This facilitated the ability for the EFC to work on a continuous basis with the Council's Infrastructure Working Group, particularly on capacity development for drinking water.

Currently, the EFC and the Council are proposing projects for funding by New York State to support public education in environmental policy and regulatory compliance processes. The EFC also played a central role in the Environmental Community Assistance Consortium (ECAC), a consortium of academic programs that provide assistance to communities. ECAC is currently involved in projects that focus on capacity development of community water supply systems, watershed management, and the development of strategies for Source Water Assessment Protection required in the 1996 Safe Drinking Water Act. The EFC in EPA Region 10 recently collaborated with this EFC and the Program on Analysis and Resolution of Conflicts to conduct a seminar workshop on rate setting and conflict management. Environmental and legislative officials from the Village of Valatie (near Albany, NY) and cities within Genesee County in western New York participated in the workshop. In collaboration with the State University of New York (SUNY) College of Environmental Science and Forestry, the Center for Environmental Policy Analysis, the Global Affairs Institute, and the Department of Public Administration at the Maxwell School of Citizenship and Public Affairs, the Syracuse EFC established a multi-disciplinary working group to address issues of environmental conflict. The EFC is currently planning discussion forums in 1998 as an avenue to identify sources of environmental conflict and is formulating activities to enhance the likelihood of resolution to those conflicts. Finally, the EFC has completed an analysis of the economic and fiscal impact of the Onondaga Lake Remediation Plans for the Onondaga Lake Management Conference. The EFC is making information available on the World Wide Web at <http://www.maxwell.syr.edu/exed/efc>

Accomplishments

NYS Rural Development Council, Infrastructure Working Group (IWG)

In the past, the Syracuse Environmental Finance Center (EFC) hosted the Rural Resource Roundtable series with two workshops for New York State rural community technical assistance providers. The first was held in September, 1994. Workshop topics included effective financing strategies, citizen communication approaches, rural environmental finance service needs, compiling data for financial assistance, and opportunities for cooperative efforts to improve assistance to rural communities. The second workshop was held in April, 1995. Topics included the "ENVEST Volunteer Program of the American Council of Consulting Engineers, qualification-based selection for professional services, EPA Small Town Task Force recommendations, and conflict negotiations and mediation skills. The New York State Rural Development Council's Infrastructure

Working Group (IWG) replaced the Rural Resource Roundtable in 1995. The group meets regularly (six-nine times a year) with smaller working groups reporting back to the full group. Through membership and participation in the IWG, the EFC forged a relationship with the New York State Rural Development Council as an entity. As a result more opportunities for collaborative planning and assistance have evolved. The EFC has worked closely with the NYS RDC and IWG in 1997. The meetings have fostered an ongoing dialogue for future purposes. At the most recent meeting, in November 1997, Bill Jarocki from EFC Region 10 did a presentation on capacity development which was followed by an informal round table discussion.

The most important outcome in the past year was the role of the EFC in facilitating the creation of physical space for the New York State Rural Development Council in the facilities of the Maxwell School of Citizenship and Public Affairs at Syracuse University. This effort enabled the EFC to broaden the scope of its involvement to be relevant to the NYS RDC as an entire entity rather than limited to the Infrastructure Working Group within the NYS RDC. There are plans to continue working together in the design and delivery of subsequent programs for both technical service providers and rural community representatives. The EFC will also continue its work with the New York Infrastructure Working Group, a coalition of technical service providers whose purpose is to address the need for infrastructure and related financing issues that are facing the state's rural communities.

Presentation: "Water and Wastewater Rate Setting" and "Conflict Management in Intergovernmental Collaboration"

In October 1996, "Water and Wastewater Rate Setting" and "Conflict Management in Intergovernmental Collaboration" was presented to environmental and legislative officials from the Village of Valatie, located in central New York, and Batavia, Pembroke, Oakfield, LeRoy and other cities of Genesee County and Monroe County, located in western New York.

The EFC has been involved in the Genesee County Water Advisory Task Force since April, 1997. The Task Force was initially formed to explore the possibility of funding collaborative county projects through the New York State Environmental Bond Act. Genesee County has a host of water procurement and distribution concerns represented by the many individual systems currently operating in the county. Environmental and legislative officials recognized the potential value of combining resources and designing a water system capable of serving several municipalities within the Genesee County area. At this juncture there are technical, political, and funding considerations at issue in the decision-making process with respect to which system approach is the most appropriate for the long term. The EFC offered to make presentations about rate setting to decision makers and citizens alike to assist in the process. The fact that up to twelve government bodies have been involved in the Task Force prompted the request for a conflict management component of the presentation.

The rate setting presentation included: general policy issues, the process for setting rates, and the mechanics of establishing basic rate structures. Additionally, at the conclusion of the presentation, the rate model demonstration and training program was described and a majority of the audience viewed a brief demonstration of the model as it was displayed on a computer projector. The conflict management presentation included interactive exercises that promoted skills in consensus building, compromise, and working in teams to achieve goals of common need.

The 20 session attendees were enthusiastic participants in the rate setting and conflict management presentations. Subsequent presentations to other officials took place in December 1997 and were arranged for February 1998. There has also been an interest expressed in "building" on the conflict management presentation to include sessions dedicated to government and citizen interaction.

Economic and Fiscal Impact of Onondaga County (Syracuse), New York Remediation of Onondaga Lake

On July 31, 1995 the Syracuse EFC entered into an agreement with the Onondaga Lake Cleanup Corporation (the administrative service unit of the federally created Onondaga Lake Management Conference or OLMC) to conduct a 17 month, \$409,000 economic and fiscal analysis of the effects of lake remediation expenditures to be made by Onondaga County.

Created by Congress in 1990, and consisting of six voting members (US Army Corps of Engineers, US EPA, Governor of New York, Attorney General of New York, Onondaga County Executive, and the City of Syracuse Mayor), the OLMC was charged with developing a comprehensive restoration, conservation and management plan for Onondaga Lake and for coordinating implementation of the plan by the OLMC members. The Maxwell EFC study of Onondaga Lake Remediation proposals has three major components:

- Analysis and Baseline Forecast of the Local Economy.
- Analysis and Baseline Forecast of County Fiscal Conditions.
- Policy Simulation and Analysis of Remediation Proposals.

Taken together, the results of these three components of the study will provide OLMC members with information that will help to resolve the many difficult issues involved in devising an effective and affordable plan to remediate the part of Onondaga Lake's pollution attributable to the County's sewage treatment and combined sewerage overflow discharges.

Environmental Community Assistance Consortium (ECAC)

The EFC, the Water Resources Institute at Cornell University, the Darrin Fresh Water Institute at Renesselear Polytechnic Institute, and the Great Lakes Program at the State University of New York at Buffalo have combined their expertise and resources to further the activities of the Environmental Community Assistance Consortium (ECAC) which was formed in 1996. The motivation behind ECAC's formation were the opportunities presented by the New York Environmental Bond Act, the New York City Watershed Agreement, and other legislatively approved environmental programs. ECAC has been actively proposing to work with smaller communities across the State by assisting in the identification of needs and the development of proposals. The expertise ECAC is able to provide includes assistance in the financial, managerial, process and conflict resolution, and engineering processes necessary to proposals for environmental purposes.

The critical analysis of the water system approaches in the Genesee County region of New York is one of the most significant outcomes. The Great Lakes Program is providing the engineering assessment portion of the analysis. The EFC is providing the fiscal impact assessment portion. The critical analysis will address the long-term viability of the alternative design approaches proposed and the long-term cost-benefit to each of the communities the approaches will affect. Information gleaned from the analysis will assist decision-makers in determining which approach is most suitable for their communities.

ECAC has provided an opportunity for officials to learn the need for and mechanisms of rate setting, and to openly discuss the concerns of their individual communities in the approaches. ECAC will propose to target key stakeholders for developing an understanding of the new context posed for economic development in the New York City watersheds and how they can enjoy new opportunities provided by the new partnership for protected water.

Maxwell Environmental Joint Working Group

The interaction the EFC has had with faculty at the Maxwell School of Citizenship and Public Affairs and Syracuse University has been somewhat limited to specific projects that necessitate the expertise of specific faculty members. In September 1997, the EFC, Maxwell and Syracuse University faculty from several hard science and social science disciplines met to discuss the viability of forming a collaborative group to develop

theoretical and applied strategies in the arena of environmental conflict. The College of Environmental Science and Forestry at the State University of New York (ESF SUNY) was also included. The EFC believes that since it is housed in an academic institution, a plethora of expert resources are available to use in a variety of capacities useful to the municipalities it serves. The disciplines incorporated into the Maxwell Environmental Working Group include engineering, economics, business management, law, public administration and social policy, anthropology, environmental science and forestry, and technology and information.

The Maxwell Environmental Working Group has been meeting on a weekly basis since its inception. The current emphasis is refining a proposal to address environmental conflict in land use and land management in the Adirondacks region of New York, as well as selected areas in California and abroad. Another area of emphasis is developing seminars in which local government officials and students of the environmental study fields can broaden their knowledge and skills through the development of actual case studies and applied experiences.

Conferences, Special Projects, and Presentations

- Authored "Balancing Risk and Finance: The Challenge of Implementing Unfunded Environmental Mandates" in the January/February Public Administration Review (volume 57 number 1, 1997).
- April 1997 - presented at the Village Clerks Association Annual Conference, "*Concepts, Practices and Tools of Rate Setting for Municipal Water and Wastewater Services*".
- May 1997 - presented, "Balancing Risk and Finance: The Challenge of Implementing Unfunded Environmental Mandates" to the International Institute of Municipal Clerks.
- June 1997 - prepared "*The Economic and Fiscal Impact of Lake Remediation on Onondaga County*" for the Onondaga Lake Management Conference.
- June 1997 - presented, "*Environmental Infrastructure Projects and the New York State Environmental Bond Act: Capital Planning and Budgeting Policy Issues*" to the New York Planning Federation, 1997 Spring Regional Training Institute, SUNY-New Paltz.
- June 1997 - prepared, "*An Introduction to Local Government Finance*" for the 1997 Municipal Clerks Academy for Advanced Education.
- November 1997 - presented, "*Water and Wastewater Rate Setting and Conflict Management in Intergovernmental Collaboration*" to environmental and legislative officials from the Village of Valatie and cities in Genesee and Monroe County, New York.
- November 1997 - presented, "*Discussion on Capacity Development*" to the New York State Rural Development Council.
- November 1997 - presented, "*The Role of the EFC*" to the Master of Public Administration Class of 1998 at the Maxwell School of Citizenship and Public Affairs at Syracuse University.

New Initiatives for 1998

- Initiating collaborative opportunities with the Environmental Business Association (EBA) to explore privatization through the development of case studies. The EFC and the EBA are currently planning a joint conference that will include forums and presentations on privatization in addition to showcasing innovative projects undertaken in municipalities in EPA Region 2.

- Planning a Spring 1998 conference on water quality and transboundary water issues with the College of Environmental Forestry of the State University of New York and the Environmental Law Policy Institute of the Syracuse University College of Law. The EFC plans to provide assistance with a session dedicated to public finance and regulatory compliance. Meetings dedicated to conference planning take place monthly. The group plans to establish an annual Earth Day event.
- Participating as a member of a multi-disciplinary group, referred to as the "Maxwell Environmental Working Group", to address issues of environmental conflict using academic and community expertise to propose viable alternatives and solutions to conflicts as they occur. The group currently meets on a weekly basis and is preparing to write a proposal for the funding of a University program dedicated to environmental conflict.

EFC Network Collaborations

In 1997 virtually all EFC activities contained elements of collaboration with internal and external entities. Collaborative partners of the EFC include the following:

- EFC Region 10 - to build on the ability to provide expertise in the areas of rate setting and capacity development.
- Syracuse University College of Law Environmental Law Policy Institute - to establish an annual event for Earth Day, with plans for 1998 to hold a conference on water quality and transboundary issues.
- Maxwell Environmental Joint Working Group - for purposes of capitalizing on the available faculty expertise to address issues of environmental conflict.
- New York State Rural Development Council - to maintain dialogue between technical assistance providers, rural advocacy groups, and State and federal funding agencies, and plan projects to assist rural municipalities in environmental services and conditions.
- Environmental Community Assistance Consortium - for purposes of providing communities assistance in proposal development and capacity building.
- Environmental Business Association - to address issues of privatization and pool resources to conduct conferences for officials that include case studies of privatization projects, in addition to innovative projects undertaken by local governments.

EFC at University of California at Hayward (Region 9)

The Environmental Finance Center, Region 9 (EFC9), is a University-based Center providing expertise on environmental financing and economic issues. EFC9 is affiliated with California State University, Hayward (CSUH), and is supported under the auspices of the U.S. Environmental Protection Agency (EPA). The Mission of the EFC9 is to educate and assist business/financial managers, owners, and advisors, public and private, in the application and use of innovative financing techniques that can further the implementation of environmental programs and projects; and to support the establishment of new environmental businesses and environmental technology development enterprises.

EFC9 achieves its mission through various undertakings, which include: conferences and seminars demonstrating methods of applying financial and economic mechanisms to environmental aspects of management; course curriculums developing environmental finance course content and case studies for use by education institutions throughout Region 9's environmental infrastructure; and financial research evaluating

the effectiveness of existing financial mechanisms and the development of finance models that enhance the utilization of capital in the environmental needs marketplace. EFC9 is particularly interested in the use of public-private partnerships, supporting small business owners in capitalizing on environmental business opportunities and achieving regulatory compliance, promoting the adoption of pollution prevention technology by existing businesses, and encouraging and facilitating the funding of environmental innovation. The EFC is using the World Wide Web to make information available through its home page at <http://barney.sbe.csu Hayward.edu/~efc9>

Accomplishments

Funding Directory

In keeping with our focus on small environmental businesses, EFC9 continued work on *Financing Environmental Technology: A Funding Directory for the Environmental Entrepreneur*. Additional information has been researched on the environmental industry as a whole, and two new sections have been prepared as well. The first addition is a section on private investors known as Angels. The second addition is a short review of small business incubators in California.

Learning From The Past

This year, EFC9 has taken time to review our experience with Environmental Business Development Conferences, a staple of EFC9 work since it began. As we switch our focus to more intimate workshops, we reviewed what has worked and what hasn't and will be applying that knowledge to Environmental Finance Workshops.

Environmental Entrepreneurial Charrette - Exploring Technology Transfer

At the end of 1997, EFC9 held its first charrette which focused on the process of technology transfer between the National Laboratories located in East San Francisco Bay and small environmental entrepreneurs. The environmental technology industry is extremely diverse, covering a variety of high and low technologies and services. Currently, there are over 60,000 small and medium-sized environmental firms in the United States, making up the bulk of the industry. Most of these environmental enterprises are specialized, owner managed and offer a limited range of equipment and services.

Federal investments in environmental technology have increased from approximately \$550 million in 1970 to \$4 billion in 1994. There are many environmental problems to be researched, and a host of new technologies that need to be developed, transferred or introduced. Developing, commercializing and expanding new technologies requires capital, however, and the environmental industry attracts very little private investment. Because government regulations are the primary drivers of the market, the environmental technology industry can be at the mercy of uncertain legislation and sporadic and/or uneven enforcement. The unintentional result is higher perceived risk associated with investment in the industry and a reluctance on the part of lenders to underwrite significant environmental technology purchases.

Transferring technology from the Labs is highly beneficial. Businesses can obtain superior technology, increased market exposure, and improved technical credibility when they adopt Lab technologies. The majority of the industry (small entrepreneurs) cannot afford to take advantage of new and innovative technologies from the Labs, and the Labs are forced to rely on a reduced pool of businesses to commercialize new technologies. As a result, too many creative new technologies languish on the "shelves" waiting for an entrepreneur willing to navigate the cost and complexities of technology transfer.

Putting Lab personnel and small businesses together, the Technology Transfer Charrette identified some key areas where the Technology Transfer process could be enhanced. Attendees at the charrette included representatives from all three Bay Area National Laboratories (Sandia, Lawrence Berkeley, and Lawrence

Livermore), Stanford Office of Technology Transfer, Environmental Protection Agency, Alameda Center for Environmental Technology, Bay Area Regional Technology Alliance, and various small environmental businesses.

Arizona EFC9 Environmental Business Opportunities Conference

Eighty people attended the sixth Environmental Finance Center, Region IX Environmental Business Opportunities Conference in Phoenix, Arizona on June 4, 1997. Topics covered at the Arizona conference included: green building products & practices, exporting, environmental technology, eco-tourism, and marketing and sub-contracting for environmental products and services.

Pollution Prevention (P2) Demonstration Project

The goals of the P2 project is to understand what role the lack of available debt and equity finance plays in the development of the pollution prevention industry. EFC9 started the P2 project in the summer of 1997 by getting acquainted with the local Bay Area organizations involved in the P2 industry. The final product for this project will include a model for P2 integration in industry.

Popular Conference Topics for small businesses

Through our conference experience, we have found that most businesses are interested in alternative modes of financing from bootstrapping to venture capital and angels. EFC9 held panels on financing and invited representatives from various financial institutions (banks, venture capital firms, public sector financing and private placement). Small business owners and entrepreneurs want to hear what works what will bring them money. The EFC found that using a case study approach with a successfully funded small business was extremely popular. The business owner described his attempts at getting his business financed which provided valuable information for both small businesses and financing organizations.

Networking and a Hands-On Approach

Most importantly, however, our EFC learned that most small businesses appreciate a small, hands-on approach, with plenty of time for networking during our conferences. We also found that in the process of planning, we helped build networks in the community by telling people about each other and each others' organizations.

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New Initiatives for 1998

Pollution Prevention Charrettes

In conjunction with EFC5, EFC9 has scheduled at least two charrettes for 1998 which will focus on pollution prevention. These charrettes will help determine the strengths and weaknesses of local P2 organizations and identify needed improvements. The charrettes will also focus on issues of finance and to what extent the lack of available funding hinders the Pollution Prevention industry. The first charrette will occur sometime in late January or early February.

Environmental Finance Workshops

EFC9 organized and held six conferences throughout the EPA's Region 9 focusing on environmental business

development opportunities. Starting in early 1998, EFC9 will embark on a new series of small, hands-on environmental finance workshops that will build on the knowledge we have gathered from past conferences held throughout the Region.

- Two Workshops, one in San Francisco and one in Nevada - Learning from past experience, EFC9 will promote small, hands-on affairs where local environmental entrepreneurs can meet and exchange ideas with local equity providers. Invitees would include angel forums, representatives from the SBA ACE-Net program, small venture capital firms known to have financed environmental technology, etc. Local banks which favor loans for small businesses would also be included. The Funding Directory, which EFC9 prepared in 1996, will be utilized to determine local contacts in the debt/equity arena in the Bay Area.
- The third Workshop is proposed for Southern California, probably the San Diego area, where our EFC will expand its focus to include an emphasis on finance for environmental technology export. EFC9 will make this the largest of the three Workshops and will look for co-sponsors including the North American Development Bank, the Border Environment Cooperation Commission, and the Border Environment Commerce Alliance. This event will be heavily marketed, which means it requires extended "lead time to get the word out and line up additional sponsors. Ideally, it will occur in September or October of 1998.

Continued Development of the Funding Directory

Financing Environmental Technology, the funding directory that EFC9 started in 1997 will be expanded to include Nevada, Arizona and Hawaii. The venture capital section will also be expanded to include a review and analysis of a series of telephone interviews with venture capitalists who have funded environmental technology companies, and environmental technology companies that have received venture capital. Eventually, EFC9 would like to expand this directory to cover the United States, with each EFC taking the lead in their own regions.

National Conference on Environmental Finance

EFC9 is currently researching the possibility of hosting a National Conference on Environmental Finance in 1999. Interested partners include the Alternative Agricultural Research and Commercialization, Inc.(AARC) Program from the Department of Agriculture and the EPA. The Conference would involve segments on equity finance including presentations and workshops on private placements, angel investors and venture capital. A venture capital forum may also be included.

Privatizing Water

In keeping with its emphasis on the private sector, EFC9 is interested in pursuing the issue of privatizing public utilities, especially drinking and waste water systems. While many cities in the United States are considering the possibility of turning over their systems to the private sector, much of the available information is confusing and often conflicting. Through interviews and case studies EFC9 plans to assemble a comprehensive review, focusing on both pros and cons, of the local experience with privatizing a water system.

EFC Network Collaborations

Pollution Prevention (P2) Demonstration Project

In conjunction with the Great Lakes Environmental Finance Center for Region 5, EFC9 is working on a Pollution Prevention (P2) Demonstration Project which involves a series of tasks. Beginning with a series of meetings with local economic development organizations, EFC9 will assess the role of financing as a barrier to the expansion of P2 in business and industry.

Bay Area Pollution Prevention (P2) Directory extension

The Pollution Prevention (P2) Demonstration Project will extend the EPA Region 9 directory of Pollution Prevention service providers for the Bay Area in conjunction with the EPA P2 Team.

Plan for a Bay area Industry

A specific industry will be targeted by EFC9 in conjunction with the US EPA Region 9. A plan will be produced for stimulating more P2 activities in that Bay Area Industry. A case study of successful P2 implementation in that industry will be developed.

New and Emerging Issues

California Environmental Technology Consortium (CETC)

EFC9 has begun a new partnership this year with the California Environmental Technology Consortium. Promoting and sustaining technology development for environmental solutions, the Consortium unites three California environmental technology incubators (Alameda Center for Environmental Technology, Border Environmental Commerce Alliance and Environmental Business Cluster) that assist start-up companies with basic business infrastructure needs like subsidized office space, secretarial services and business planning. These services save precious capital and costly mistakes for a newfound entrepreneur.

Alameda Center for Environmental Technology (ACET)

Having worked together on the Funding Directory for the Environmental Entrepreneur, EFC9 will seek new ways to work with the Alameda Center for Environmental Technology. The Alameda Center for Environmental Technologies is a business cluster and incubator supporting the development and growth of entrepreneurial environmental businesses. Special emphasis is placed on the establishment of environmental technology companies and, in particular, those technology enterprises that wish to transfer environmental technologies developed at the three National Laboratories located in the San Francisco Bay Area to the private sector. ACET will utilize the EFC9 experience on streamlining and expediting existing national laboratory technology transfer processes to better assist ACET businesses in acquiring technology licenses from the Labs. ACET businesses can call upon the start-up business expertise at the EFC9 for consultation.

EFC at Great Lakes Environmental Finance Center at Cleveland State University (Region 5)

EPA established the Great Lakes Environmental Finance Center (GLEFC) in May 1995 in Region 5 at Cleveland State University. GLEFC is based within The Urban Center in Cleveland State University's Levin College of Urban Affairs. The GLEFC serves a six-state area, which includes Ohio, Indiana, Illinois, Michigan, Wisconsin, and Minnesota.

The GLEFC's primary mission is to assist state and local governments and private sector organizations in devising effective financing strategies for environmental improvement projects. It accomplishes this mission through technical assistance, training, and research services to client organizations.

Brownfield redevelopment is the top priority of the center. Through its Community Brownfield Technical Assistance Service, GLEFC helps communities to prepare and implement financial and marketing strategies supporting the cleanup and redevelopment of former industrial and commercial sites with environmental contamination problems. Another area of GLEFC's expertise is Pollution Prevention. The GLEFC is active in encouraging businesses to finance and adopt clean production and processing technologies that reduce or prevent pollution. Ecological design and comprehensive community planning are two new areas of service that will be introduced by GLEFC in 1998. These new services will be used to help communities address brownfield problems, and a host of other environmental challenges. Financial strategies would be developed

to implement recommended ecological design and community improvement plans. The GLEFC is using the World Wide Web to make information available through its home page at <http://www.csuohio.edu/glefc/>

ACCOMPLISHMENTS

The Great Lakes Environmental Finance Center's activities were for the most part focused on brownfield redevelopment and industrial pollution prevention projects during 1997. Local government officials have been the primary beneficiaries of the GLEFC's brownfield services, and local industry trade associations, economic development organizations, and private businesses have served as the principal clients for the pollution prevention work of the center.

I. Brownfields Issues

A. Brownfields Cleanup and Redevelopment

The environmental contamination of existing and former industrial and commercial sites is a top environmental priority in all six states served by GLEFC. Inner cities encountered special problems in financing site cleanup and redevelopment. Two major goals have guided the GLEFC's work in this area:

- Provide local and state governments with assistance in identifying and implementing financial, marketing, and redevelopment solutions to brownfield problems.
- Increase public awareness about appropriate financial and other solutions to brownfield problems.

B. Community Brownfield Technical Assistance Service

Full-scale technical assistance projects were completed in four Great Lakes communities: Elkhart, Indiana; Benton Harbor, Michigan; East St. Louis, Illinois; and Kenosha, Wisconsin. In-depth preparatory work was undertaken in Duluth, Minnesota, and a consortium of communities just south of Detroit, Michigan.

- Elkhart, Indiana: The GLEFC was able to assist the City of Elkhart to better identify issues surrounding several specific brownfield sites and to assess and select strategies to obtain financing. The workshop format also worked especially well in Elkhart as it pulled the local private development community into the city's strategy process.
- Benton Harbor/St. Joseph, MI: The Benton Harbor/St. Joseph technical assistance visit provided the local chamber organization, Cornerstone Alliance, the ability to pull together the stakeholders who might otherwise not have convened a strategy session. While the communities must grapple with complex social challenges to overall economic development, the GLEFC was able to provide solid guidance in redeveloping three critical brownfields and helped the group to develop financing strategies for the Lakeshore Corridor development. EPA representatives are also committed to a follow-up session as the community sees progress and considers further actions to redevelop the three key sites addressed during the workshop.
- East St. Louis, IL: East St. Louis faces enormous social and economic barriers to any type of redevelopment, let alone brownfield. The GLEFC was able, however, to provide much-needed education and guidance to the community in developing financial and redevelopment priorities, both on a site-specific basis and overall for the community's future planning efforts. Recommendations that resulted from discussions at the workshop

were grouped into four broad categories: 1) a redevelopment plan, 2) sources of project financing, 3) site marketing, and 4) other non-brownfield recommendations.

- Kenosha, WI: The Kenosha advisory visit provided an opportunity for local leaders and community stakeholders to gather and discuss the importance of the HarborPark site. These diverse groups had not previously sat down to discuss the strategies and challenges for redeveloping this former Chrysler manufacturing facility located on prime lakefront land. The issues addressed included overcoming developer fears of contaminated property, the role of environmental insurance and lender liability.

Other site Visit Preparation

- Downriver Consortium, Michigan: Extensive planning occurred during June through August 1997 in the development of a large seminar for the six communities comprising the Downriver Consortium, south of Detroit, Michigan. This group has received a USEPA Pilot Grant to address two sites in each of their communities, totaling twelve sites. The client canceled the planned workshop due to collaboration and timing challenges presented by organizing such a large group of public entities, but hopes to review their capabilities early next year.
- Duluth, MN: Detailed planning is also currently underway in developing a technical assistance advisory visit to the city of Duluth, MN. The client is NorthSpan, a non-profit management group being utilized by the Minnesota Pollution Control Agency and the City of Duluth to manage a newly awarded (from EPA) revolving loan fund for brownfields. The visit is tentatively planned for late January 1998.

C. Brownfield Outreach Efforts

Awareness is the starting point to solving problems. The GLEFC has worked to inform public and private sector leaders, and the general public about the feasible solutions to brownfield cleanup and redevelopment problems. Some of the major accomplishments in this area are described below.

- GLEFC Web Site
The center implemented an Internet Web Site, located at: www.csuohio.edu/glefc The web site averages about 40-50 visitors each month. GLEFC has also provided paper copies of its reports and articles upon request. These requests come from states across the country including a few web site visitors from Canada, Europe, Japan, and Mexico.
- Lincoln Institute for Land Policy
Presented training session to 60 public and private sector officials at a St. Louis conference organized by the Lincoln Land Institute in March 1997.
- Urban Land Institute - Urban Land Journal
Two articles on brownfield redevelopment by GLEFC staff were published in the prestigious Urban Land Journal in 1997. Summaries of these articles are available from GLEFC's web site.
- Governor's Conference on Brownfield Redevelopment
GLEFC provided assistance to the Ohio Water Development Authority and the Ohio EPA in designing and planning a brownfield conference held in Columbus, Ohio in the Fall 1997.

- USEPA - Region 5 Brownfield Meeting
Presented information about brownfield finance and marketing to existing Brownfield Pilot cities and other communities at a EPA-organized conference in Chicago on April 30, 1997.
- Ohio Urban Sprawl and Growth Management Conference
Two GLEFC staff members gave presentations on brownfield issues to a state-organized conference on March 25-26, 1997 in Columbus. Both presentations dealt with strategies to reduce urban sprawl through brownfield cleanup and reuse.
- Publications
GLEFC staff published ten articles and technical reports on brownfield issues in 1997. These included publications in Urban Land Institute's journal, the Appraisal Journal, Environmental and Planning Law Journal, and Economic Development Commentary.
- EPA Brownfield 97 Conference
Presented paper on brownfield supply and demand at EPA's annual brownfield conference in September 1997.
- American Society of Real Estate Society
Presented paper on an analysis of brownfield financial deals at the Society's 1997 meeting in Sarasota, Florida.

II. Industrial Pollution Prevention Initiative

The Great Lakes Environmental Finance Center (GLEFC) at Cleveland State University's Levin College of Urban Affairs received a grant from the U.S. Environmental Protection Agency's Division of Pollution Prevention.

A. Objectives

- Identify the barriers to small-business lending in general and for environmentally-sensitive businesses in particular. Also, understand the changes in capital markets affecting small-business lending.
- Inventory and assess existing financing programs for pollution prevention.
- Assess small-business lending needs for pollution prevention.
- Assess industry-specific expertise of banking officials.
- Conduct two demonstration projects in Cleveland and San Francisco that integrate pollution prevention activities with local economic development organizations, small business development, and industrial technology extension activities to increase pollution prevention deals. Financial strategies will be an important component in the demonstration projects.

B. Pollution Prevention Outreach

- **Presentations**
The GLEFC coordinated and moderated a panel of presentations on available financing programs for P2 projects in Ohio. The presentations were given during a U.S. EPA three-day P2 training course for metal finishers. Cleveland was one of three locations chosen to test the course's curriculum.

- **Reports**

Reports were written to describe selected environmental financing programs as well as to explain the concept of a special public-private financing program that could be applied to environmental financing, Capital to Access Program (CAP). These reports are posted on the GLEFC's website. One report is a detailed technical working paper while the second is a summary report. Comments from the U.S. EPA were incorporated into both reports. These reports were distributed to U.S. EPA, the six Environmental Finance Centers, the Environmental Financing Advisory Board, and to individual economic development or environmental organization upon request. The reports are posted on the GLEFC's website.

- *"Cross-sector Collaboration: The Great Lakes Environmental Finance Center"* in Metropolitan Universities, An International Forum. Winter, 1997.
- *"An Inventory and Assessment of Pollution Control and Prevention Financing Programs"*. A working paper, October 1997.
- *"Small Business Lending: Barriers and Trends"*. A working paper, October, 1996.

C. Demonstration Projects

Two demonstration projects are being organized, one in Cleveland and one in San Francisco. Each demonstration project includes various stakeholders in building a more effective regional network to undertake pollution prevention deals that enhance environmental quality and urban economic development.

1. The Cleveland P2 Demonstration Project

Purpose is to establish a local network of organizations that support P2 activities. Two meetings were held with the major stakeholders in the Cleveland area. The first meeting consisted of three parts. One, introduction of all participants, their organizations, and their specific activities related to pollution prevention. Two, the GLEFC presented the major findings from its first year work and its conclusions and recommendations. And Three, the plan for second year activities was presented and was followed by a lively discussion among all participants on the recommendations and the plan.

Following the first meeting and in preparation for formulating a strategic plan, GLEFC developed a survey and mailed it to local organizations that are associated with P2 activities. A report describing the survey results was written and submitted to U.S. EPA. It will also be included in a more comprehensive report detailing the process, plans, and activities that are part of the Cleveland demonstration project aimed at increasing demand for P2 in specific manufacturing industries.

During the second meeting with the local group of stakeholders, GLEFC presented an analysis of survey responses. The group decided that developing a plan on how to stimulate more P2 deals should focus on specific industries because different industries may have different needs. Industries that received the most votes are metal finishers, printers, and dry cleaners.

In the Fall of 1997, GLEFC began its work on a strategic plan with local representatives of the metal finishers industry. GLEFC is working with a local group, the Surface Finishers Committee (SFC), which is a partnership of the American Electroplaters and Surface Finishers Society (AESF), CAMP Inc., and Ohio Association of Metal Finishers (OAMF). The local SFC identified the main barrier to increasing pollution prevention activities as the uncertainty regarding the quality of existing pollution prevention technologies. The GLEFC is working with SFC to design

a "Technology Verification Project" which will test several pollution prevention technologies in local metal finishing shops. GLEFC and the SFC are negotiating with Concurrent Technology Corporation (CTC), a non-profit, federally-funded entity, in Johnstown Pennsylvania to conduct the project with mobile technology units CTC owns. GLEFC is also writing a proposal to get funding to conduct the project. One possible funding source is the Small Business Assistance Center in Cleveland.

2. The San Francisco Demonstration Project

The San Francisco demonstration project is being conducted by EFC-9, the Environmental Finance Center at California State University, Hayward. EFC-9 is the EFC for EPA Region 9, both located in the San Francisco area. Initial contacts have been made with the Pollution Prevention team at U.S. EPA, Region 9 and with local Bay Area nonprofit organizations, including technical assistance programs, which were established to promote and stimulate P2 activities. After several discussions among the GLEFC, EFC-9, U.S. EPA in D.C. and U.S. EPA Region 9, it was decided to refocus and redefine EFC-9 work under this pollution prevention grant. The new tasks include:

- A "directory" of P2 organizations and or activities in the San Francisco area. EFC-9 will integrate the current EPA Region 9 inventory of Bay Area pollution activities with updates based on contacts made during this project.
- Jointly with EPA Region 9, EFC-9 will convene a series of meetings with Bay Area organizations dealing with P2 and economic development organizations to determine the level of P2 activities in San Francisco and the importance of financial tools to additional activities.
- Design a plan for a specific industry of how to stimulate more P2 activities in the San Francisco area. The plan will be produced by EFC-9 in cooperation with other P2 stakeholders and industry representatives in the area. A successful role model (an example) of implementing P2 in that industry will be included. The targeted industry will be decided jointly by EFC-9 and U.S. EPA, Region 9.

PLANNED INITIATIVES FOR 1998

• Brownfields

The Community Brownfields Technical Assistance Service will provide customized technical assistance to four or five communities in 1998. Prospective communities may include: Canton, Ohio; Toledo, Ohio; Peoria, Illinois; Duluth, Minnesota; Ft. Wayne, Indiana; and, Flint or Grand Rapids, Michigan.

This year's focus on community technical assistance will concentrate on a mix of formats to be utilized, including workshops, and including more customized consultations with small groups of stakeholders. The maximum number of participants will be limited to 20. In this way, we will be better able to serve the client's needs for action-oriented ideas and participation from the group.

• Pollution Prevention

The GLEFC will continue its work with local metal finishers. GLEFC objective is to help SFC get funding for the "Technology Verification Project", to follow the project, and to assist in planning for information distribution, so if "good" P2 technologies are identified, metal finishers will have access to the analysis and the findings. The GLEFC will also initiate work with local printers to try to stimulate

pollution prevention activities in that industry.

- **New areas**

Three new areas of service will be introduced in 1998:

- A. Ecological Design
- B. Comprehensive community planning
- C. Rate Model to help small- and medium-size communities to set utility rates

EFC NETWORK COLLABORATIONS

- **Charrette Assistance to U.S. EPA and the Common Sense Subcommittee for Metal Finishers**

The GLEFC participated on a panel of experts in a charrette on "Access to Capital" held in Washington D.C. in January 1997. Other participants included representatives of large commercial banks, environmental insurance companies, the Environmental Finance Advisory Board, and the U.S. SBA. The charrette was organized by U.S. EPA and the Maryland EFC to provide advice to the metal finishers, printers, and printed wired boards industries.

The charrette had three objectives: one, define obstacles (and methods for overcoming them) that these industries face in obtaining capital, especially for environmental investments; two, explore availability and potential benefits of environmental insurance policies; and three, determine the appropriate role for U.S. EPA, other federal agencies, and public/private sectors in facilitating these industries' ability to improve environmental performance through greater access to capital.

- **York, Pennsylvania Charrette**

GLEFC assisted the Maryland EFC with the York Pennsylvania Ecological Design Charrette in September 1997. Don Iannone conducted a session on how to recognize the ecological, historical, and cultural essence of place' in planning for the redevelopment of brownfield sites in the central city. The two-day session was rated a success by the City of York and the Maryland EFC.

- **Pollution Prevention**

The Cleveland State EFC is working with the EFC at Cal State Hayward in advancing strategies for industrial pollution prevention. GLEFC provided funding to the California center to plan and undertake a pollution prevention demonstration project in 1997 and 1998. This work will be incorporated into an overall report to US EPA's Office of Pollution Prevention.

- **Rate Model**

GLEFC is working with the Idaho EFC to develop skills in using the Rate Model to assist small and medium-sized communities in the Great Lakes region. Bill Jarocki visited Cleveland in early December 1997 and conducted a Rate Model training workshop for GLEFC staff. The Cleveland EFC plans to introduce Rate Model services in the second half of 1998.

- **Tribal Assistance**

GLEFC is collaborating with the Idaho and New Mexico EFCs in developing a successful proposal to provide environmental services to Native American communities in the Great Lakes, Northwest, and Southwest regions. A preliminary proposal was developed and presented to USEPA's Region 5 Office. Two meetings were held with EPA officials last year. It is hoped that the new initiative will startup in

the second half of 1998. GLEFC will act as the lead organization for the project, with considerable assistance from the Idaho and New Mexico EFCs, as well as the other three EFCs.

EFC at Boise State University (Region 10)

The Region 10 Environmental Finance Center at Boise State University was created in 1995 and first received funding in the fall of 1996. The EFC at BSU is contained within the Department of Public Policy and Administration of the College of Social Sciences and Public Affairs. It serves the communities in the Pacific Northwest and Intermountain states of Oregon, Washington, Idaho and Alaska.

The mission of the Region 10 EFC is to help communities and the states with the "how to pay" issues of environmental protection. The EFC is taking the lead nationally in designing and testing drinking water system capacity assessment methodologies required by the 1996 Amendments to the Safe Drinking Water Act. The Center at BSU is also assisting the states in improving institutional capacity and in formulating and implementing drinking water program capacity development strategies required by SDWA. Addressing the needs of public water systems and wastewater systems to improve financial and managerial capacity is also an important component of the Center's services.

Prior to the establishment of the EFC, the Department of Public Policy and Administration had been an important partner to state and local governments in addressing the infrastructure financing issues relative to unfunded and "underfunded" mandates. BSU faculty, along with Idaho's state drinking water program staff, provided important information from applied research projects that encouraged the inclusion of the multivariate capacity assessment and the strategic planning components in the SDWA Amendments of 1996. The EFC is making information available on the World Wide Web at <http://www.idbsu.edu/sspa/efc>

ACCOMPLISHMENTS

Building Capacity for Sustainable Systems -- Utility Rate Setting Training

Financial capacity -- the ability to both obtain the resources necessary for sustainable infrastructure systems and to manage those resources well -- is one of the three capacity components required under the 1996 Amendments to the Safe Drinking Water Act. The Environmental Finance Center at Boise State University has placed significant emphasis in 1997 on training activities related to utility rate setting and alternative methods for financing water and wastewater system improvements. This activity occurred in the form of demonstration workshops for rate setting technical assistance and training in each of the four states in Region 10, and post-demonstration workshops in the Region. Additionally, the EFC10 is now positioned to provide technical assistance and training to staff at the other Environmental Finance Centers.

All of the training workshops incorporated RateMod Pro v.3.0. RateMod Pro is a sophisticated, yet user-friendly computer model for water or wastewater utility financial analysis and rate setting. The model was developed in response to local government officials who participated in EFC sponsored infrastructure finance charrettes in the early 1990s.

The EFC contacted representatives of the statewide associations of local governments and state environmental protection agency personnel to schedule demonstrations of the Utility Rate Model Workshops in the Region. Four demonstrations were presented:

- Idaho Utility Rate Setting Demonstration Workshop, Boise State University (March 27, 1997)
- Alaska Utility Rate Setting Demonstration Workshop [Co-sponsored by the Alaska Municipal League],

Juneau, Alaska (April 2, 1997)

- Washington Utility Rate Setting Demonstration Workshop [Co-sponsored by the Washington Department of Ecology], Spokane, Washington (July 25, 1997)
- Oregon Utility Rate Setting Demonstration Workshop [Co-sponsored by the Oregon Association of Clean Water Agencies], Portland, Oregon (September 26, 1997)

Other Demonstration/Informational Training Sessions:

The Idaho Rural Water Association (IRWA) sponsored a full-day rate-setting training event with EFC10 staff as the trainer on July 17 at Coeur d'Alene, Idaho. The IRWA has asked the EFC10 to present another workshop at Lewiston, Idaho on January 6, 1998. It is expected that IRWA and EFC10 will continue to work together to provide this training in future years.

Additional rate-setting training workshops were conducted at Boise (Boise State University) on August 28 and October 30, 1997. Finally, a second demonstration workshop -- co-sponsored by the Washington Department of Ecology -- was presented at Olympia, Washington on December 5, 1997.

Informational workshops

EFC10 staff also presented sixteen informational workshops about the utility rate setting training services of the Center during 1997.

Environmental Finance Program *Guidebook of Financial Tools*

The EFC10 has been active in distributing copies of the Environmental Finance Program's new publication, the *Guidebook of Financial Tools*. The *Guidebook* is the most comprehensive document available today detailing the variety of infrastructure financing techniques implemented by communities. Copies of the *Guidebook* are usually made available at all training workshops of the EFC and at other workshops and technology transfer events. The Center has distributed over 200 copies of the *Guidebook*; reproduced on two 3.5-inch computer diskettes. EFC10 also makes the *Guidebook* available through the EFC10 Internet Web Site and provides "hard" copies of the document upon request.

The following are specific meetings and workshops conducted in 1997 showcasing the *Guidebook of Financial Tools*:

- May 18 -- Timber and Salmon Communities Symposium [Governor's Rural Community Assistance Team] at Ellensburg, Washington
- August 18 -- Oregon Association of Water Utilities, Alternative Financing Workshop, at Seaside, Oregon
- September 11 -- Meeting of the Finance Committee of the Pacific Northwest Section of the American Water Works Association, at Chehalis, Washington
- September 19 -- Annual Institute of the Idaho City Clerks, treasurers and Finance Officers Association, at McCall, Idaho
- November 11 -- Alaska Municipal management Association, Alternative Financing Workshop, at Ketchikan, Alaska
- November 19-20 -- Oregon Finance Officers Association, Alternative Financing Workshops (2), at Portland, Oregon

Safe Drinking Water Act Capacity Development

With support from the EPA Office of Ground Water and Drinking Water, EFC10 has joined the Environmental Finance Center at the University of New Mexico (EFC6) to assist state drinking water programs in Region 10 and Region 6 in fashioning capacity development strategies required by the 1996 Safe Drinking Water Act (SDWA) Amendments. Through this work -- begun in the summer of 1997 -- the EFCs are adding capacity to the states of Alaska, Arkansas, Idaho, Louisiana, New Mexico, Oklahoma, Oregon, Texas, and Utah to either assist in the development of new capacity development strategies, or to make a major contribution to capacity development strategic work already under way.

To date, the EFC10 has conducted several meetings with key drinking water program staff in the states of Utah, Idaho, Oregon and Alaska to lay the groundwork for the development of the capacity development strategies. Significant progress toward the completion of the individual state strategies is expected by the third quarter of 1998.

SDWA Capability Analysis and DWSRF Loan Application Technical Assistance.

For the first time, Congress also ensured that states would receive financial resources in the form of capitalization grants for Drinking Water State Revolving Funds (DWSRFs). These funds are to be made available in the form of loans to public water systems, both privately and publicly owned, to both help assure long-term compliance with SDWA and provide safe drinking water to the public. Each state needs to develop and implement an assessment methodology that will yield a determination of public water system (PWS) capability.

The EFC10 has assisted the Idaho State Drinking Water Program in developing a capability screening mechanism for State Revolving Fund loan applications as well as providing technical review of loan applications based on that screening mechanism. At the request of the manager of the Oregon Drinking Water Program and the Oregon Drinking Water Advisory Committee (ODWAC), the EFC10 provided technical assistance and staff support to the ODWAC as it developed Oregon's capacity assessment tool for Safe Drinking Water Revolving Loan Fund assistance to public water systems. Other states interested in incorporating the EFC10-developed assessment tool in their drinking water SRF programs include Alaska, Hawaii, Nevada, Montana, Texas and Utah.

1996 Water and Wastewater Resource Directory

The EFC assisted the Idaho Department of Commerce in producing the 1996 Water and Wastewater Resource Directory for Idaho City Leaders. This publication is produced every two to three years and contains comparative information about the financing of municipal water and wastewater systems.

NEW AND EMERGING INITIATIVES FOR 1998

Native American Tribal Issues

The Environmental Finance Center in Region 10 is currently working with EPA's Operations Office in Idaho to provide services to tribal governments in the region. The EPA Liaison is currently scheduling meetings to introduce EFC10 Director to tribal leaders to discuss the potential of this relationship.

Region 10 Water Pollution Trading Demonstration Project.

The State of Idaho was selected as the site of an experimental study on pollution trading by the Region 10 office of Innovation. This project, directed by the Region 10 Office of Innovation and the Idaho Division of Environmental Quality will provide needed information to states and communities as they strive to meet water pollution control targets or total maximum daily loading limits (TMDLs) of critical waterways. The EFC10 will provide these analyses and other services to Region 10 and the Idaho Division of Environmental Quality in order to inform the policy debate on water pollution trading and to assist Idaho, Region 10 and other interested states currently investigating pollution trading scenarios.

EFC NETWORK COLLABORATIONS

Capacity Development Strategies

The Centers at the University of New Mexico and Boise State University are currently working with states in Regions 6 and 10 in developing capacity development strategies required by the SDWA. This assistance project, funded by the USEPA Office of Ground Water and Drinking Water, brings EFC staff resources and expertise on capacity development to several western states that have begun work on meeting this SDWA requirement.

Native American Tribal Issues

The Environmental Finance Center at Cleveland State University is currently working on an initiative to assist Native Americans in their efforts to create sustainable environmental communities. The proposed project will utilize three centers in the EFC Network and a ecological design institute to introduce the use of comprehensive community planning and ecological design techniques to help Native American Communities restore ecological balance.

Financial Capacity Building

The Environmental Finance Center's training and education programs are designed to meet the need of utility managers to design equitable utility rates and to match financing mechanisms to capital projects. The Environmental Finance Center at Boise State University is available to provide on-going assistance and training materials to those interested in offering this training to communities in their region.

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