April 1999

A. PROPOSED TOOLS FOR THE NEXT *GUIDEBOOK*

This *Guidebook of Financial Tools* is intended as a basic reference document for public and private officials with environmental responsibilities. The editors want the *Guidebook* to remain a dynamic document -- with revisions, refinements, and expansions taking place on a reoccurring basis (every two years or so). In the interim between *Guidebook* revisions, many new financing tools are being developed, tested, and implemented in the real-world by innovative officials in both the public and private sectors.

This Appendix provides users and readers during the time between *Guidebook* revisions some of those exciting new financing tools (and existing tools not included in this revision). The Appendix's primary function is to provide a site for the new tools in the electronic version of the *Guidebook* that is located on the World Wide Web/Internet at **http://www.epa.gov/efinpage/guidbk98/index.htm**.

April 1999

BETTER AMERICA BONDS
(Tax Credit Bonds)

Description: Better America Bonds are a form of environmental tax credit bond. The term of these bonds would be fifteen years. They would be issued by State and local governments (including Indian tribal governments and U.S. possessions) to help address the problems created by urban sprawl. The holders of the bonds would receive annual tax credits in the place of interest payments. Because the tax credits compensate the bond holder for lending money, they would be taxed.

Actual Use: The proposed Better American Bonds program is part of the Clinton Administration's initiative to build livable American communities. The Administrator of the Environmental Protection Agency (EPA) would be authorized to oversee the program and to allocate $1.9 billion in tax credit authority each year for five years, beginning in the year 2000.

Potential Use: The proceeds from the bonds would be used to finance State and local programs which address problems such as traffic congestion, lost farmland, threatened water quality, shrinking parkland and abandoned industrial sites, or Brownfields. These bonds would give local communities increased flexibility and access to cheaper financing to help meet these environmental needs.

Advantages: This program would provide a significant financial incentive for State and local governments and other qualified parties to issue Better America Bonds, as well as incentives for investors to purchase the bonds. Issuers would pay no interest on the bonds and would not have to make principal payments for fifteen years. Purchasers of the bonds would receive an annual tax credit equivalent to the interest earned on taxable double AA corporate bonds and repayment of their principal.

Limitations: State and local governments and other eligible parties must apply to the EPA for authority to issue the bonds as part of an annual competition. The competition for these bonds could be intense and some communities would have advantages in terms of resources and knowledge of how to apply for federal programs. In some cases, the tax-credit bond financing might not provide a large enough subsidy to induce State and local governments to undertake beneficial environmental infrastructure projects. Finally, the program must be authorized by the Congress before it can be implemented.

Reference for Further Information: U.S. Environmental Protection Agency, Office of the Comptroller, Environmental Finance Program, 401 M Street, SW, Washington, DC 20460, Telephone: 202-564-4998, Fax: 202-565-2587, E-Mail: ames.george@epa.gov. For information purposes, U.S. EPA plans in the near future to set up a Better America Bonds site on its World Wide Web home page at **http://www.epa.gov**.

ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL BOND GUARANTEE FUND PROGRAM

Description: The Environmental Protection Agency (EPA) has proposed creating an Environmental Bond Guaranty Program (EBGP) to enhance the credit of municipal bonds issued for environmental infrastructure projects in nations worldwide. The proposal is modeled on the U.S. financial guaranty insurance industry and has been adapted to emerging bond markets. It envisions a program whose funds would be managed in the United States and invested in high grade securities. All of EBGP's assets would be pledged to each obligation guarantied. The EBGP would determine the optimum structure for its guaranties (i.e., credit insurance, financial guaranty insurance, letter of credit, direct guaranty, etc.) in each country in which it operates. Guaranties would provide for full and timely payment. Guaranties, once issued, would be irrevocable, unconditional and uncancelable.

Actual Use: The program remains a proposal under discussion at this time.

Potential Use: The EBGP would be capitalized with up to $100 million which would enable it to guaranty up to $3 billion of municipal bonds over a 10 year period. The EBGP would guaranty financial obligations undertaken by regional or local governments (or those acting on behalf of such governments) for capital projects to provide or improve environmental infrastructure which serves the general public. Projects could include works to provide drinking water purification or distribution, wastewater treatment or collection, the disposal of solid or hazardous waste, the efficient generation of energy, and the abatement of air pollution.

Advantages: The EBGP would help regional and municipal governments enter their own national credit markets, as well as the international financial market. It would do so by enhancing, not supplanting, the credit of these governments who would remain the primary obligors on all bonds guarantied. The interest savings on the bonds to the people of the countries involved could exceed
$900 million. The EBGP would benefit more than the environment. It would: promote the export of U.S. environmental technology; bring fiscal discipline, transparency and openness to local government; and hasten the overall decentralization process. The program would promote investment in the environment, strong financial markets, and the rule of law.

Limitations: Governments must have enacted appropriate reforms and demonstrated the capability to manage their operations on a market basis in order to qualify for the EBGP's guaranty. To obtain the EBGP guaranty, issuers may also be required to make additional pledges of specific revenues payable to it by, or from it to, higher levels of government including the central government.

Reference for Further Information: U.S. EPA Office of International Activities, 401 M Street, SW, Washington, DC 20460, Mail Code: 2650R; 202-564-6406, Contact: William Freemen, E-mail:

freeman.bill@epa.gov.

ENVIRONMENTAL PROTECTION AGENCY
CLEAN AIR PARTNERSHIP FUND

Description: The Clean Air Partnership Fund is a proposed grants program, and is part of the Fiscal Year 2000 EPA Budget. This Partnership Fund is a $200 million program that would provide financing for smart, multi-pollutant control strategies that will reduce air pollution as well as greenhouse gases. Funds would be available for projects demonstrating simultaneous reductions in smog, soot or air toxics. The program would give cities, States and tribes the opportunity to partner with the private sector, the federal government, and each other to provide healthy clean air to their residents. The fund would also extend its assistance projects involving electric utilities and the transportation sector.

Actual Use: The Clean Air Partnership Fund remains a proposal at this time.

Potential Use: Businesses and municipalities face significant cost-restraints which discourage them from investing in short-term single pollutant strategies. The Clean Air Partnership Fund would seek to encourage many industries to develop and demonstrate long-range comprehensive pollution reduction strategies. The Fund would financially support bringing the most creative ideas and innovations for cleaning the air to communities. It would provide communities across the nation with a cleaner environment and help to protect our health and climate.

Advantages: The Clean Air Partnership Fund would encourage the development of innovative, low-cost approaches to air pollution control. It would provide badly needed new assistance to State and local parties attempting to address the nation's significant air pollution challenges.

Limitations: The Partnership Fund has not yet received approval from the Congress. The environmental and financial needs of the eligible recipients in the area of air pollution control dwarf the amount of funding requested for the Fund.

Reference for Further Information: *Summary of the 2000 Budget*, U.S. EPA, Office of the Chief Financial Officer, January 1999. EPA 205-S-99-001. This document is also available on U.S. EPA's Web site at: **http://www.epa.gov/ocfo/budget.htm** U.S. EPA, Office of Air and Radiation, 401 M Street, SW, Washington, DC 20460, Mail Code: 6101, Telephone: 202-260-7400, Fax: 202-260-5155.

April 1999

B. MORE INFORMATION ON THE ENVIRONMENTAL FINANCIAL ADVISORY BOARD (EFAB)

EFAB Advisory Committee Charter
EFAB Membership Roster
EFAB Publications and How To Order

April 1999

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ADVISORY COMMITTEE CHARTER

ENVIRONMENTAL FINANCIAL ADVISORY BOARD

---

1. PURPOSE AND AUTHORITY. This Charter renews the Environmental Financial Advisory Board, which was originally established on February 25, 1991, in accordance with the provisions of the Federal Advisory Committee Act, 5 U.S.C. App.2 §9 (c).

The purpose of the Advisory Board is to provide authoritative analysis and advice to the EPA Administrator regarding environmental finance issues to assist EPA in carrying out its environmental mandates. It is determined that this Board is in the public interest in connection with the performance of duties imposed on the Agency by law.

Environmental legislation reauthorized or proposed by Congress in recent years has placed significant additional resource requirements on all levels of government, increasing their infrastructure and administrative costs. At the same time, limited budgets and changes in Federal tax laws have constrained traditional sources of capital. Growing needs and expectations for environmental protection, as well as increasing demands in all municipal service areas, make it increasingly difficult for state and local governments to find the resources to meet their needs. The resulting strain on the public sector jeopardizes the quality and delivery of environmental services.

2. OBJECTIVES AND SCOPE OF ACTIVITIES. EFAB is assigned the role of providing advice on the critical environmental financing issues facing our nation, consistent with current Federal tax laws. Objectives consistent with this role:

Reducing the cost of financing environmental facilities and discouraging polluting behavior;

Creating incentives to increase private investment in the provision of environmental services and removing or reducing constraints on private involvement imposed by current regulations;

Developing new and innovative environmental financing approaches and supporting and encouraging the use of effective existing approaches;

Identifying approaches specifically targeted to small community financing;

Assessing government strategies for implementing public-private partnerships, including privatization and operations and maintenance issues, and other alternative financing mechanisms; and

Reviewing governmental principles of accounting and disclosure standards and how they affect environmental programs.

ADVISORY COMMITTEE CHARTER

The activities of EFAB will include analyzing problems, conducting meetings, presenting findings, and other activities necessary for the attainment of its objectives. Scope of activities include:

Focusing upon environmental finance issues at the Federal, State, and local levels, particularly with regard to their impact upon local governments and small communities;

Addressing the capacity issue of state and local governments to carry out their respective environmental programs under current Federal tax laws;

Endeavoring to increase the total investment in environmental protection by facilitating greater leverage of public and private environmental resources to help ease the environmental financing challenge facing our nation.

Local governments must pay for the construction and operation of environmental facilities, such as wastewater treatment plants, solid waste facilities, and drinking water facilities. Their need for resources, both financial and technical, particularly in the face of the growing demand for increasingly expensive environmental services, calls for support from all levels of government and from the private and non-profit sectors. At the same time, Federal and state resources for environmental programs are expected to remain fairly constant relative to the growth in costs associated with new legislative and program requirements.

3. COMPOSITION AND SUBCOMMITTEES. The Board will consist of approximately twenty-five (25) members appointed by the EPA Deputy Administrator. Members will be selected from among, but is not limited to, independent experts drawn from all levels of government, including elected officials; the finance, banking, and legal communities; business and industry; and national organizations. Most members will be appointed as representatives of non-federal interest.

EFAB is authorized to form subcommittees or workgroups for any purpose consistent with this Charter. Such subcommittees or workgroups shall report back to the full Board. Subcommittees or workgroups have no authority to make decisions on behalf of the full Board nor can they report directly to the Agency. Subgroups that do not function independently of the parent advisory committee are subject to all FACA requirements except separate chartering.

4. MEETINGS AND BUDGET. It is expected that EFAB will meet approximately two (2) times each year, and more often if deemed necessary by the Designated Federal Officer (DFO). EPA shall designate a Federal Officer or employee, who may be either full-time, or permanent part-time, to be the DFO. EFAB and its subgroup meetings will be called, announced, and held in accordance with FACA. EPA may pay travel and per diem expenses when necessary and appropriate.

Budgetary support for EFAB will be provided through the Office of the Comptroller. The estimated annual operating costs is approximately $133,900.00, which includes 1.55 work years of staff support.

5. DURATION. EFAB may be needed on a continuing basis. This charter will be in effect for two years from the date it is filed with the Congress. After that two-year period, the charter may be renewed for another two years, as authorized in accordance with Section 14 of the Federal Advisory Committee Act.

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Agency Approval Date

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GSA Consultation Date

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Date Filed With Congress

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April 1999

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April 1999

ENVIRONMENTAL FINANCIAL ADVISORY BOARD
EFAB PUBLICATIONS

(in chronological order)

NOTE: *These documents have not been reviewed for approval by the U.S. Environmental Protection Agency: and hence, the views and opinions expressed in them do not necessarily represent those of the Agency or any other agencies in the Federal Government.*

REPORTS, ADVISORIES, LETTERS

A Guidebook of Financial Tools. The April 1999 revision of the *Guidebook* is uploaded. It will be updated, based on comments and the additions of new tools.

Brownfields Tax Incentive Letter Report, Letter to the Administrator, October 1998.

Comments on the OIA Draft Proposal for the NIS Environmental Bond Guaranty Program, letter to the Assistant Administrator for International Activities, August 1998.

Funding Privately Owned Water Providers through the Safe Drinking Water Act State Revolving Fund, July 1998.

Cost-Effective Environmental Management Case Studies, January 1998.

State Revolving Fund: A Decade of Successful SRF Performance, 1987-1997, Council of

Infrastructure Financing Authorities, Environmental Financial Advisory Board, January 1998.

Expediting Clean-Up and Redevelopment of Brownfields: Addressing the Major Barriers to Private Sector Involvement -- Real or Perceived, Advisory, December 1997.

Why Longer Loan Terms are Prudent for SRF's, Technical Report. November 1997.

Applications of the Cross-Collateralization Language to Various State Revolving Fund Structures, November 1997.

Letter to EPA Administrator on Improving Small Business Access to Capital for Environmental Projects, July 1997.

Follow-up EFAB Letter Regarding Cross-Collateralization, June 1997.

Letter to EPA Administrator on Recommendations Based on EFAB's Five Brownfields Reports, March 1997

Barriers and Incentives to Financing Brownfields Cleanup and Reuse. Brownfields Report No. 5, February 1997.

Evaluation of the Transferability Provisions in the Safe Drinking Water Act as a Means for Cross-Collateralization, February 1997.

Common Sense Initiative Access to Capital "Charrette", January 1997, an Environmental Financial Advisory Board/Environmental Finance Center collaborative effort.

Cross-Collateralization Issues Affecting the State Revolving Fund Program, November 1996.

EFAB Indianapolis Meeting on Financing Brownfields Redevelopment. Brownfields Report No. 4, March 1996.

Financing Strategies for Brownfields Redevelopment. Brownfields Report No. 3, March 1996.

Financing Brownfields Redevelopment: Linkages to the Empowerment Zone/Enterprise Community Program. Brownfields Report No. 2, March 1996.

Leveraging the Superfund: Ideas and Opportunities. Superfund Report No. 2, March 1996.

Information Needs of Capital Providers in Brownfields Redevelopment. Brownfields Report No.1, September 1995.

Increasing Flexibility for Financing the Cleanup of Contaminated Sites. Superfund Report No. 1, September 1995.

Creating a Viable Finance Program for the Border Environmental Cooperation Commission and the North American Development Bank Under the North American Free Trade Agreement, August 1994.

Implementing the Environmental Finance Aspects of the North American Free Trade Agreement, April 1994.

Financing the Remediation of Hazardous Waste Sites Under the North American Free Trade Agreement, April 1994.

Financing Environmental Infrastructure along the United States- Mexican Border and in Eastern Europe and the Former Soviet Republics, July 1993.

Urban Environmental Policy: Steps Toward Environmental Equity, Reduced Environmental and Health Risks, and Urban Revitalization, March 1993.

The Clean Air Act of 1990: A Guide to Public Financing Options, Fall 1992. (This report was prepared in collaboration with the Clean Air Act Advisory Committee).

Alternative Financing Mechanisms for Environmental Programs - Final Draft Produced by the Environmental Finance Program for the State Capacity Task Force, Technical Review by the Environmental Financial Advisory Board (EFAB), August 1992.

Narrowing the Gap: Environmental Finance for the 1990s, May 1992. (Progress Report of the EFAB)

Public Sector Options to Finance Environmental Facilities, March 1992.

Private Sector Participation in the Provision of Environmental Services: Barriers and Incentives, November 1991

Incentives for Environmental Investment: Changing Behavior and Building Capital, August

1991.

Small Community Financing Strategies for Environmental Facilities, August 1991.

For more information on Brownfield Reports and the Guidebook of Financial Tools, contact:

Tim McProuty
Environmental Finance Program
mcprouty.timothy@epa.gov

For more information on the other reports, contact:

Alecia Crichlow
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crichlow.alecia@epa.gov

To order reports, contact:

(GCI contractor)
Internet Librarian
efin@epa.gov

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ENVIRONMENTAL FINANCIAL ADVISORY BOARD MEMBERSHIP
AND EXPERT WITNESSES
April 1999

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ENVIRONMENTAL FINANCIAL ADVISORY BOARD
EFAB PUBLICATIONS

(in chronological order)

NOTE: *These documents have not been reviewed for approval by the U.S. Environmental Protection Agency: and hence, the views and opinions expressed in them do not necessarily represent those of the Agency or any other agencies in the Federal Government.*

REPORTS, ADVISORIES, LETTERS

A Guidebook of Financial Tools. The April 1999 revision of the *Guidebook* is uploaded. It will be updated, based on comments and the additions of new tools.

Brownfields Tax Incentive Letter Report, Letter to the Administrator, October 1998.

Comments on the OIA Draft Proposal for the NIS Environmental Bond Guaranty Program, letter to the Assistant Administrator for International Activities, August 1998.

Funding Privately Owned Water Providers through the Safe Drinking Water Act State Revolving Fund, July 1998.

Cost-Effective Environmental Management Case Studies, January 1998.

State Revolving Fund: A Decade of Successful SRF Performance, 1987-1997, Council of Infrastructure Financing Authorities, Environmental Financial Advisory Board, January 1998.

Expediting Clean-Up and Redevelopment of Brownfields: Addressing the Major Barriers to

Private Sector Involvement -- Real or Perceived, Advisory, December 1997.

Why Longer Loan Terms are Prudent for SRF's, Technical Report. November 1997.

Applications of the Cross-Collateralization Language to Various State Revolving Fund Structures, November 1997.

Letter to EPA Administrator on Improving Small Business Access to Capital for Environmental Projects, July 1997.

Follow-up EFAB Letter Regarding Cross-Collateralization, June 1997.

Letter to EPA Administrator on Recommendations Based on EFAB's Five Brownfields Reports, March 1997

Barriers and Incentives to Financing Brownfields Cleanup and Reuse. Brownfields Report No. 5, February 1997.

Evaluation of the Transferability Provisions in the Safe Drinking Water Act as a Means for Cross-Collateralization, February 1997.

Common Sense Initiative Access to Capital "Charrette", January 1997, an Environmental Financial Advisory Board/Environmental Finance Center collaborative effort.

Cross-Collateralization Issues Affecting the State Revolving Fund Program, November 1996.

EFAB Indianapolis Meeting on Financing Brownfields Redevelopment. Brownfields Report No. 4, March 1996.

Financing Strategies for Brownfields Redevelopment. Brownfields Report No. 3, March 1996.

Financing Brownfields Redevelopment: Linkages to the Empowerment Zone/Enterprise Community Program. Brownfields Report No. 2, March 1996.

Leveraging the Superfund: Ideas and Opportunities. Superfund Report No. 2, March 1996.

Information Needs of Capital Providers in Brownfields Redevelopment. Brownfields Report No.1, September 1995.

Increasing Flexibility for Financing the Cleanup of Contaminated Sites. Superfund Report No. 1, September 1995.

Creating a Viable Finance Program for the Border Environmental Cooperation Commission and the North American Development Bank Under the North American Free Trade Agreement, August 1994.

Implementing the Environmental Finance Aspects of the North American Free Trade Agreement, April 1994.

Financing the Remediation of Hazardous Waste Sites Under the North American Free Trade Agreement, April 1994.

Financing Environmental Infrastructure along the United States- Mexican Border and in Eastern Europe and the Former Soviet Republics, July 1993.

Urban Environmental Policy: Steps Toward Environmental Equity, Reduced Environmental and Health Risks, and Urban Revitalization, March 1993.

The Clean Air Act of 1990: A Guide to Public Financing Options, Fall 1992. (This report was prepared in collaboration with the Clean Air Act Advisory Committee).

Alternative Financing Mechanisms for Environmental Programs - Final Draft Produced by the Environmental Finance Program for the State Capacity Task Force, Technical Review by the Environmental Financial Advisory Board (EFAB), August 1992.

Narrowing the Gap: Environmental Finance for the 1990s, May 1992. (Progress Report of the EFAB)

Public Sector Options to Finance Environmental Facilities, March 1992.

Private Sector Participation in the Provision of Environmental Services: Barriers and Incentives, November 1991

Incentives for Environmental Investment: Changing Behavior and Building Capital, August 1991.

Small Community Financing Strategies for Environmental Facilities, August 1991.

For more information on Brownfield Reports and the Guidebook of Financial Tools, contact:

Tim McProuty
Environmental Finance Program
mcprouty.timothy@epa.gov

For more information on the other reports, contact:

Alecia Crichlow
Environmental Finance Program Lead
crichlow.alecia@epa.gov

To order reports, contact:

Diane Doyle (GCI contractor)
Internet Librarian
efin@epa.gov

C. MORE INFORMATION ON THE ENVIRONMENTAL FINANCE CENTER (EFC) NETWORK

EFC Network Contacts Directory
EFC 1998 Annual Report - Executive Summary

ENVIRONMENTAL FINANCE CENTER NETWORK
CONTACT DIRECTORY

1. **EFC/Syracuse University, The Maxwell School of Citizenship and Public Affairs.**
EPA Region 2, New York City EFC established in 1994

William J. Sullivan, Director, Midcareer and Executive Education Programs
206 Maxwell Hall wjsulliv@maxwell.syr.edu (315) 443-3759 fax (315) 443-5330

Kim Collins kjcoll01@maxwell.syr.edu (315) 443-9438 fax (315) 443-5330

EFC/Syracuse University, The Maxwell School, 219 Maxwell Hall,
Syracuse, New York 13244-1090

Website: **www.maxwell.syr.edu/exed/efc**/

Focus: Initially, the EFC dealt with risk and finance issues, including a survey of NY communities of varying size to determine how they factor risk assessment into their environmental funding decisions. The EFC sponsored and hosted a conference examining the issue of full cost pricing of environmental projects, and is conducting a year-long rate model demonstration and training program for local government officials. The Center conducted an extensive study of alternative financing strategies for water infrastructure for EPA's Office of Water.

Regional contact: Robert Gill (212) 637-3884 fax (212) 637-3772

EPA Headquarters lead: Timothy McProuty (202) 564-4996 fax (202) 565-2587
mcprouty.timothy@epa.gov

2. **EFC/University of Maryland, Coastal and Environmental Policy.**
EPA Region 3, Philadelphia EFC established in 1993

Dr. Jack Greer, Director, Coastal and Environmental Policy Program
greer@mdsg.umd.edu (301) 405-6377 fax(301) 314-9581

Elizabeth Hickey, Project Coordinator(301) 405-6383 fax(301) 314-9581
hickey@mdsg.umd.edu

Jeremy Haas (301) 405-6384
jhass@mdsg.umd.edu

EFC/University of Maryland, Coastal and Environmental Policy

0112 Skinner Hall
College Park, Maryland 20742

Website: **http://www.mdsg.umd.edu/MDSG/EFC/index.html**

Focus: Charrettes as a technique to help communities on an individual basis to obtain information on the nature of finance issues facing communities in Region 3. Maryland's Governor recently selected the EFC to produce a report for the state blue ribbon commission on ways to pay for clean up of nonpoint source pollution.

Regional grant manager: Mindy Lemoine (215) 814-2736 fax (215) 814-2201

EPA Headquarters lead: Vera Hannigan (202) 564-5001 fax (202) 565-2587
hannigan.vera@epa.gov

3. **Great Lakes EFC/Cleveland State University, Urban Center**
EPA Region 5, Chicago EFC established in 1995

Don Iannone, Director (216) 687-4590 (assistant: Olga Lee (216) 687-6947)
d.i@wolf.csuohio.edu

Kirstin Toth - Brownfields Outreach
Dr. Ziona Austrian, Assistant Director (216) 687-3988 (330) 528-3237
ziona@urban.csuohio.edu Adina Swirsky - Pollution Prevention
(216) 687-5489

Great Lakes EFC/Cleveland State University, Economic Development Program UB 215
Maxine Goodman Levin College of Urban affairs
Cleveland State University, Cleveland, Ohio 44115 fax (216) 687-9277

Website: **http://www.csuohio.edu/glefc/**

Focus: Brownfield site redevelopment and industrial pollution financing. The initial focus of this EFC is on financial issues affecting the availability of credit and financial tools and incentives to spur investment in abandoned commercial and industrial sites. The objective of the pollution prevention project is to build regional networks to stimulate additional pollution prevention activities by small and medium size manufacturers, and facilitate financing for these deals.

Regional contacts: Jennifer Manville (616) 922-4769 (tribal) fax (616) 922-4499
James VanderKloot (312) 353-3161 (brownfields) fax (312) 353-5541
Keary Cragan (312) 353-5669 (brownfields) fax (312) 353-5541

EPA Headquarters lead: Timothy McProuty (202) 564-4996 fax (202) 565-2587

mcprouty.timothy@.epa.gov

4. **EFC/University of New Mexico, New Mexico Engineering Research Institute (NMERI)**
EPA Region 6, Dallas — EFC established in 1992.

Heather Himmelberger, P.E., EFC Director (505) 272-7357 fax (505) 272-7203
heatherh@unm.edu

Susan Butler, Program Manager [sbutler@unm.edu] (505) 272-7356 fax (505) 272-7203

Lorri Skeie-Campbell, Program Coordinator (505) 272-7356 fax (505) 272-7355
campbell@unm.edu

EFC/University of New Mexico/NUMERI
901 University Blvd., SE Suite 200
Albuquerque, NM 87106-4339
Website: **http://nmeri.unm.edu/efc/efc.htm**

Focus: technical assistance to federal, state, and local governments and public and private entities, specifically in capacity development in small water systems. The UNM-EFC has a particular commitment to identifying financing options and promoting low-cost, alternative, and appropriate technologies for projects that will encourage sustainable development, pollution prevention, and sources reduction -- at affordable and viable levels. Ongoing relationships with several bi-national agencies developed from previous border work have been maintained.

Regional Contact: Freda Wash (mc 6WQ-AT) (214) 665-8342 fax (214) 665-6490

EPA Headquarters lead: Timothy McProuty (202) 564-4996 fax (202) 565-2587
mcprouty.timothy@epa.gov

5. **EFC/California State University at Hayward, Urban Environmental Research and Education Center.**
EPA Region 9, San Francisco — EFC established in 1995

Sarah Diefendorf, Executive Director,
Environmental Finance Center IX
Building 7, Alameda Point
851 West Midway Avenue
Alameda, CA 94501
email: diefendorf@greenstart.org (510) 749-6867 fax (510) 749-6862

Web site: **http://www.greenstart.org/efc9**

Focus: Development of successful models for public-private partnerships financing environmental systems, emphasizing greater participation of small and medium size businesses. The EFC will implement a pilot green project to demonstrate a proposed partnership model.

Regional contacts: Anna Hachenbracht (415) 744-1634 fax (415) 744-2499
Cheryl Filart (mc PMD-7) (415) 744-1705 fax (415) 744-1678

EPA Project Officer: Vera Hannigan (202) 564-5001 fax (202) 565-2587
hannigan.vera@epa.gov

6. **EFC/ Boise State University, Idaho**
EPA Region 10, Seattle EFC established late 1995

Bill Jarocki, EFC Director Carrie Applegate, Secretary
(208) 385-4293 fax (208) 385-4370 (208) 385-1567 cappleg@boisestate.edu
bjarock@boisestate.edu

Environmental Finance Center at Boise State University
1910 University Drive, Boise State University, Boise, Idaho 83725

Website: **http://sspa.boisestate.edu/efc/index.html**

Focus: Coordinate analysis and training/outreach activities relative to the viability assessment of drinking water systems. The Idaho EFC will focus on developing and testing a variety of methods by which system viability can be determined.

Regional contacts: Clark Gaulding (206) 553-1849 fax (206) 553-8338
Jim Werntz (206) 553-2634 fax (206) 553-8338
Susan Morales (206) 553-8580 fax (206) 553-8338

EPA Headquarters lead: Vera Hannigan (202) 564-5001 fax (202) 565-2587
hannigan.vera@epamail.epa.gov

7. EPA's Environmental Finance Website: **http://www.epa.gov/efinpage**

Current as of June 29, 2000

April 1999

Executive Summary
1998
Annual Report
of the
EFC Network

FOREWORD

It is our great pleasure to present the 1998 Annual Report of EPA's Environmental Finance Center Network, including the introduction of a new EFC in Region 4 for 1999. This report updates all principal activities of the University-based Environmental Finance Centers (EFCs) through 1998 and is a continuation of the information contained in the 1997, 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. Finally, a new Center was established for 1999 in Region 4 at the University of North Carolina at Chapel Hill. With seven 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. Indeed, the EFC Network was a semifinalist in the 1999 Innovations in American Government Awards Program sponsored by the Ford Foundation and Harvard University. 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/efinpage/.**

We welcome your comments and suggestions. Thank you

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

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EFC Executive Summary Reports

EFC at Syracuse University, Region 2

Executive Overview

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 Maxwell EFC has aggressively undertaken a wide range of environmental financing projects and activities, and built a considerable record of accomplishment. The focus of the EFC has included full-cost pricing of environmental services, the value of intergovernmental cooperation in addressing environmental improvement projects, collaborative planning among public and private environmental service providers, and the coordination of technical assistance services available to rural communities. In each of these areas, the EFC has either provided customized assistance to communities or facilitated the coordination and delivery of services from public and private agencies. The EFC is making information available on the World Wide Web at **http://www.maxwell.syr.edu/exed.efc**

Summary of Accomplishments

During 1998 the EFC continued to assist 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. Other presentations focused on topics of public finance, capacity development, capital budgeting, and topics relative to the broader area of environmental governance. The highlight of EFC activities in 1998 was the planning and execution of the EFC Network Forum, a two-day event that brought other EFC representatives to Syracuse for the purpose of demonstrating their areas of expertise and sharing expert advice with representatives from rural New York communities. The Forum was well-received and has resulted in numerous requests for a similar program to be conducted in the future. Furthermore, the Forum served as the impetus for additional Network collaborations to ensue. Currently, the Maxwell EFC is collaborating with EFC 10 and EFC 6 to assist the New York State Department of Health in developing a strategic plan to meet the capacity development requirements of the Safe Drinking Water Act.

The EFC continued to participate in and further establish collaborative relationships with other government-supported programs, public agencies, institutions of higher learning, and environmental technical service providers. These relationships have continuously fostered new and exciting opportunities for the EFC to enhance the strength of its program and the capacity is has to deliver much needed services to local governments. Rural communities have become a particular focus of the EFC, particularly since the relationship with the New York State Rural Development Council has developed into a dynamic partnership of great activity in the past year.

The EFC also collaborated with the City of Syracuse to plan a pollution prevention education program and participate in its planning for the redevelopment of area brownfields.

Currently, the EFC and its various partners are planning a network of projects that will prove to assist communities in planning environmental improvement and infrastructure activities. Syracuse University faculty and students have also begun participating in specific EFC projects. Faculty member Stuart Bretschneider, a world renowned expert in the forecasting field, is leading the planning of a survey project to assess the experiences of rural businesses with environmental regulations. It is anticipated that up to six agencies or organizations will fund the survey. Several faculty members, with expertise in international affairs and public finance, have assisted the EFC in the development of a proposal to provide environmental financial technical assistance training to government managers in the Newly Independent States, China, and other regions of the globe. The proposal is scheduled for submission to the EPA Office of International Activities in January, 1999. In May, 1998, six Master of Public Administration students from the Maxwell School dedicated three intense weeks to researching the criteria used to determine the eligibility of communities for environmental funding programs. The Rural Development Council and the New York State Department of State sponsored the research which will be built upon by a new set of students in May,

1999.

The EFC expects 1999 to be a year in which the efforts of all past and present activities will bear results that will serve to further stimulate partnerships and generate enduring programs and, thus, enhance the services it provides to EPA Region 2.

Summary of Activities

Conferences, Special Projects, and Presentations

December, 1997-December, 1998, prepared "Environmental Financial Technical Assistance Program" as a proposal for submission to the EPA Office of International Activities. The proposal involves the delivery of environment-related pubic finance training to government managers in countries seeking to pursue environmental remediation and infrastructure projects.

December, 1997-February, 1998 collaborated with economists and environmental experts from Cornell University and State University of New York College of Environmental Science and Forestry to prepare a proposal to provide assistance to five economically depressed counties in the Catskills Watershed region on New York.

In February, 1998, collaborated with the Water Industry Council and the New York State Conference of Mayors and Municipal Officials to conduct a survey of municipal decision-makers regarding their interest in privatization of water systems.

February-June, 1998, collaborated with the Rural Utility Service of the United States Department of Agriculture to assist a small township in developing plans to create a water district and build a new water system.

In March, 1998, in collaboration with the Water Resource Institute of Cornell University and the State University of New York at Buffalo, presented, "Critical Review of Water Resource Development Plans" to the Genesee County Legislature in Batavia, New York. The presentation was the result of a study undertaken by the three academic institutions to assess five separate approaches to build a new water system in western New York. The EFC portion of the study was presenting alternative strategies of cost recovery for each engineering approach.

In May, 1998, presented, "Environmental Resources for Rural Communities in New York: An Assessment of the Funding Process" to the New York State Department of State and the Rural Development Council.

The presentation was the research product of six Master of Public Administration students who studied the eligibility criteria of environmental improvement funding programs in New York State. Included in the study was an assessment of the extent to which municipalities meet the eligibility criteria and actually use the programs.

In June, 1998, planned and facilitated the EFC Network Forum, a dynamic two-day event that brought together four other EFCs to demonstrate their areas of expertise and to provide assistance to community leaders attending the forum.

In June, 1998, collaborated with the City of Syracuse Department of Community Development, Division of Neighborhood Planning to propose for funding, "Pollution Prevention Education Program", in response to an EPA Environmental Justice Program request for proposals.

In June, 1998, collaborated with State University of New York College of Environmental Science and Forestry, New York State Rural Water Association, Atlantic States Rural Water Association, and New Jersey Rural Water Association to prepare a proposal for a small water systems project.

In July, 1998, facilitated a discussion between City of Syracuse representatives and neighborhood leaders regarding the planning of a brownfields redevelopment project.

In August, 1998, responded to a request from the Bushwick Economic Development Corporation in Brooklyn, New York, to provide assistance in planning a brownfields redevelopment project.

In September, 1998, participated with technical service providers in a panel discussion about environmental programs serving communities throughout the country. The discussion was facilitated by the Maxwell Career and Alumni Services Department at Syracuse University.

In September, 1998, collaborated with the Environmental Facilities Corporation, the Tug Hill Commission, Rural Community Assistance Program, and the Rural Development Council to plan a program to coordinate environmental technical assistance providers in New York. A proposal for funding evolved and was submitted to the New York State Rural Planning Federation, with awards to be announced by the end of December.

In September, 1998, presented, "Water and Wastewater Rate Setting" and "Capital Budgeting" at two separate training conferences sponsored by the New York Rural Water Association.

In October, 1998, presented, "The EFC Network", to the National Securities Studies Program at Syracuse University. Students of the program were high-ranking military leaders and Senior Executive Officers of

the United States Department of Defense.

In October, 1998, facilitated "Economic Development and Community Partnerships", a segment of an environmental conference sponsored by the State University of New York College of Environmental Science and Forestry.

In November, 1998, presented, "Water and Wastewater Rate Setting" and "Capital Budgeting" at two separate training conferences sponsored by the New York Rural Water Association.

In November, 1998, demonstrated EPA-supported software used for water and wastewater rate setting to officials from the City of Batavia.

In December, 1998, facilitated the first Capacity Development Planning Committee meeting for the New York State Department of Health.

On-Going Programs and Projects

Attendance at professional association meetings and presentations on capital planning and financing; the concepts of water and wastewater rate setting; environmental governance; intergovernmental cooperation; collaborative planning; capacity development; sustainable community issues; and brownfields redevelopment.

Maintaining database of past EFC program attendees, prospective clients, and technical service providers.

Participating in planning prospective projects with the Rural Development Council (RDC). In 1997 the EFC facilitated the creation of physical space at the Maxwell School facilities for the RDC to locate its headquarters. The close proximity has resulted in a continuous flow of information exchanges, mutually beneficial professional consultation sessions, and the creation of prospective collaborative projects.

Supporting the New York State Department of Health in preparing a Strategic Plan for the capacity development component of the Safe Drinking Water Act. The EFC is committed to facilitating the process by hosting all meetings, conducting follow-up tasks, and ensuring that all interests are included and their input into the plan is elicited.

Collaborating with the Tug Hill Commission to develop projects that address issues of economic sustainability and capacity development within a 62 township area.

Collaborating with the United States Department of Agriculture's Rural Utility Services to provide assistance to rural communities seeking to address environmental problems.

Serving as a content provider to government and non-profit organizations that conduct workshops for municipal decision-makers.

Continued emphasis on collaborating with other universities and non-profit organizations to develop proposals addressing environmental concerns.

Continue to host and facilitate meetings and programs on behalf of the Infrastructure Working Group of the Rural Development Council.

Developing a scientific survey with public and private partners to assess the experiences rural businesses have with environmental regulations.

Syracuse EFC Organization

Management

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EFC at University of Maryland, Region 3

Executive Overview

The United States Environmental Protection Agency's (EPA) Region 3 Environmental Finance Center (EFC) at The University of Maryland Environmental Finance Center is now one of only eight Environmental Finance Centers in the Country. The EFC's efforts have focused on both point-source pollution issues, such as alternative methods for financing waste treatment facilities and innovative utility rate structures, as well as nonpoint-source pollution issues, such as storm water management, stream corridor buffers and agricultural best management practices. The EFC is making information available on the World Wide Web at **http://www.mdsg.umd.edu/MDSG/EFC/index.html**

Facilities and Expertise

The challenge of environmental finance and management requires an integrated, interdisciplinary, and even

transdisciplinary approach. The University of Maryland's Coastal and Environmental Policy Program (CEPP) provides a powerful network for mounting such an approach. The CEPP is comprised of five units of the University System of Maryland: the Maryland Sea Grant College (home of the Environmental Finance Center), the School of Public Affairs, the Center for Environmental Studies, the College of Agriculture and the School of Law.

CEPP's investigation into environmental finance and the formation of the Environmental Finance Center (EFC) began in 1993 with support from the U.S. EPA. The University of Maryland Environmental Finance Center is now one of only eight Environmental Finance Centers in the Country. The EFC's efforts have focused on both point-source pollution issues, such as alternative methods for financing waste treatment facilities and innovative utility rate structures, as well as nonpoint-source pollution issues, such as storm water management, stream corridor buffers and agricultural best management practices.

Summary of Accomplishments

Charrettes

Part of the EFC's goal is to provide assistance and 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 finance, planning and engineering experts as well as federal and state officials who provide local officials with solutions to their environmental finance problems. The charrettes provide a forum for frank discussions between local officials and experts about financing, planning and management challenges experienced by communities in meeting environmental and quality-of-life demands. 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.

Since its establishment in 1992, the EFC has arranged charrettes that have expanded its understanding of issues related to nonpoint-source pollution, such as urban storm water runoff and agricultural nutrient runoff. Many charrette participants have been faced with the challenge of identifying cost-effective and equitable financing solutions to environmental concerns that will not impede economic development in their community. Indeed, the question of economic viability and environmental sustainability is a key focus of the EFC's work. One of the important challenges found during the charrettes is convincing businesses and homeowners to "pay now" rather than to "pay later," recognizing that paying later will certainly mean higher costs.

An important result of the charrettes is the renewed commitment by communities to dedicate additional time to their environmental finance problems. The EFC has found that, frequently, a charrette's highest and best purpose is to facilitate a meeting of the stakeholders of an environmental finance issue that might not

otherwise take place. The EFC receives many compliments about its ability to convene a meeting of disparate stakeholders, and we expect to continue to provide this vital service to local governments.

Charrette Examples

Starlit Ponds Homeowners Association, Fairfax County, Virginia

On January 29, the EFC planned and conducted a charrette with the Homeowners Association for the private community of Starlit Ponds. The charrette, held in Fairfax County, Virginia, addressed the needs of a small private community confronted with the challenges of deteriorating storm water ponds and the larger issue of failing ponds throughout Fairfax County.

Cuckold Creek Watershed, St. Mary's County, Maryland

On July 21, the EFC planned and conducted a charrette for the Cuckold Creek watershed in St. Mary's County, Maryland. Charrette participants discussed management techniques which could be used during the development process to reduce or eliminate the erosion and gullying of soils within the Cuckold Creek watershed.

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 with which we are currently working.

Location: Northampton County, Virginia
Issue: Financing Phase II of a Sustainable Technologies Industrial Park

One of the most exciting and challenging initiatives undertaken by the citizens of the region is the construction and management of one of the nation's first "eco-industrial parks"—the Port of Cape Charles Sustainable Technologies Industrial Park. In 1994, the President's Council on Sustainable Development chose the county as the site for one of four model facilities to demonstrate the potential of energy-efficient, water conserving, and non-polluting industry.

In its attempt to address challenges such as poverty and unemployment while protecting sensitive natural resources, Northampton County representatives contacted the EFC more than a year ago. It has been the desire of the community to pursue many different yet interrelated issues surrounding economic revitalization and environmental sensitivity.

Location: Port Towns of Anacostia, 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 exploratory meetings with the EFC, it has been suggested that the EFC could conduct a charrette focusing on ways in which to fund the design and construction of improvements within the Bladensburg Industrial area, creating an "eco-industrial park."

Location: Chesapeake City, Maryland
Issue: Environmental infrastructure financing and "smart growth" practices

Chesapeake City is bisected by the Chesapeake and Delaware canal, which provides an important shipping channel from the Delaware Bay to the Port of Baltimore. A consequence of the canal is that the city requires two separate sets of water and sewer infrastructure to serve regions on either side of the canal. This system has created inefficiencies, and now the southern section is reaching capacity. The southern section, however, is the historic downtown area and has recently been rezoned to prevent sprawl-type growth by accommodating concentrated growth in a traditional neighborhood development format. Adding to the city's infrastructure challenges is a burdensome debt and fears that without generating new revenue, the city will be unable to meet its contractual obligations to the private firm that operates the city's water and sewer systems. At the suggestion of the town manager, the water commission has requested that the EFC conduct a charrette to assess alternatives for finding solutions to the water problems. In addition, the City has expressed interest in rate-design assistance.

Location: Octotaro Lakes Community, Cecil County, Maryland.
Issue: Failing pond infrastructure and threat to freshwater rivers

In a situation resembling a previous charrette held for the Starlit Ponds community in Fairfax County, Virginia, the community of Octotaro Lakes, in Cecil County, Maryland, has been struggling to repair a dam on the community's signature 7.5 acre lake. The lakes were originally converted by the developer of the community from existing agricultural ponds, and according to state officials, the dam was improperly built. In 1995, however, a County Court ruled that the community's homeowners are responsible for the repair of the dam. The community then planned to use a low-interest loan from the state to cover the costs of repairs, at a cost of $1,500 per homeowner. Plans have been stalled because of mis-communication between the state, the homeowners association board and the residents. Now the problem is imminent

because a house has been built directly below the unsafe dam and, as a result, the state has ordered repairs to begin or it will drain the lakes.

Location: The Towns of Northern Caroline County, Maryland
Issue: Regional water and waste water management financing

The towns of Goldsboro, Henderson, Marydel and Templeville are located in northern Caroline County on Maryland's Eastern Shore, adjacent to the Delaware state line. All four towns have problems with their on-site, individual waste water disposal systems, and many of their wells are contaminated. Small lot sizes and high groundwater tables are the reasons for the failure of the septic systems and contamination of the wells. During 1997, Federal, state and local representatives met to explore the viability of approaching the waste water and drinking water needs in these four towns collectively and to seek a regional solution. In coordination with the Maryland Rural Development Corporation, the Maryland Environmental Service and others, the EFC has been invited to conduct a charrette with stakeholders to explore financing options for a regional solution.

Location: West Virginia charrette initiatives

In an attempt to expand our community assistance efforts to West Virginia, the EFC continues to discuss charrette opportunities with community representatives and public agency personnel. During the year, the EFC has held many discussions with officials and others in West Virginia about local government environmental financing issues.

The EFC will continue to discuss charrette opportunities with communities in West Virginia. Currently, there are a variety of sources that provide technical assistance to communities in West Virginia. For example, the West Virginia Infrastructure Council reviews proposed community infrastructure projects and offers advice on financing mechanisms. The EFC could partner with this organization in offering a financing charrette. Another possibility is that the EFC would partner with the Public Service Commission or Rural Water Association to provide technical assistance on financing mechanisms for local government environmental projects.

Charrette Partnering Opportunities: Countryside Stewardship Exchange Program

The International Countryside Stewardship Exchange Program (Exchange) brings experienced professionals from Europe and the United States to meet with local community leaders to address concerns about development, conservation and other related issues. The experts visit a community for one week then deliver a set of recommendations for the community to consider in their attempts to harmonize community growth and environmental protection. Since 1993 communities in the Chesapeake Bay region have been participating in the Exchange through the coordination of the Alliance for the Chesapeake Bay

(Alliance) and the Chesapeake Bay Program.

In 1996 the Exchange experts visited the Chesapeake Bay communities in the Spring Creek watershed in Pennsylvania and the Wicomico watershed in Maryland. As the communities within these watersheds attempt to implement the recommendations from the Exchange, they face challenges similar to those that the Environmental Finance Center has helped others address.
During the summer and fall, the EFC discussed with the Chesapeake Bay Program's Land Growth and Stewardship Subcommittee (LGSS) several opportunities to help the communities within the Spring Creek (PA) and the Wicomico (MD) watersheds implement the recommendations of the Exchange. Most of the recommendations fall into two groups: 1) "visioning" types where the community leaders decide on certain core paths to pursue in order to meet their goals; and 2) "concrete" steps to take to solve certain problems and threats. Both of these types of issues can be addressed through the charrette process. As part of the EFC's collaboration with the LGSS and the Alliance, the EFC has proposed several ideas, including:

Spring Creek, Pennsylvania:

Two concerns, which were raised by the community, included "which lands should be set aside for development," and "which lands should be set aside in order to preserve ecological biodiversity." If the watershed association has access to GIS information, the EFC hopes to work with them on options for preserving important parcels while directing development to appropriate areas.

Another recommendation generated by the Exchange experts was to reuse industrial water. Currently, the EFC is working with two communities about financing eco-industrial parks (e.g., Port Towns, MD and Northampton County, VA). The EFC's work has identified and analyzed funding ideas for this type of project, which might be applicable to the Spring Creek case.

Lastly, agricultural land preservation was a common theme in several recommendations, and the EFC may be able to assist in the establishment of a transfer-of-development-rights (TDR) program or other financing mechanisms that may be appropriate for preserving agricultural lands.

Wicomico River Watershed:

The Exchange experts recommendations initially revolve around a community visioning process, which the EFC may be able to help coordinate. In addition, there are a few specific areas where the EFC can provide assistance, including:

< Developing alternative transportation systems within the watershed to link communities and residential areas with job centers;

< Directing growth towards "village centers." The EFC may be able to assist the communities in selecting smart growth incentives, such as tax incentives, information about alternative septic systems, and other planning tools.

In addition, there was a recommendation to develop a plan for preserving forest and agricultural lands. The EFC may be able to conduct a charrette to identify funding ideas for land preservation.

The EFC continues to coordinate with the Alliance, the LGSS, and representatives from the communities to identify the most appropriate action. We anticipate a spring event for one of these communities.

List of Charrettes

Since 1993, the University of Maryland EFC has conducted sixteen charrettes addressing such issues as waste water and drinking water facility upgrades/expansions, determining sites for new landfills, storm water management, access to capital for investment in pollution prevention practices, urban revitalization and uses for revolving funds. The charrettes and their topics are listed below. The full text of the case studies drawn from these charrettes can be found in past EFC Annual Reports as well as on the University of Maryland EFC website at **www.mdsg.umd.edu/MDSG/EFC/** or at the Environmental Finance Branch website at www.epa.gov/efinpage

Charrette Video

Using the EFC's experience conducting twenty charrettes, the EFC is developing a handbook and accompanying video as an educational resource for communities and organizations interested in using the charrette process as a problem solving tool. There are many potential users of the handbook and video because the charrette process can be used to solve problems on many scales, from neighborhood-based issues to national issues. It is particularly effective when various groups of people in a community gather to resolve common problems, such as watershed-based issues, which can benefit from the assistance of outside experts.

Along with conducting charrettes, the EFC has conducted a participant survey from which it received important information from communities regarding the structure and usefulness of the charrettes. This information will also be incorporated into the handbook and video, which will
cover topics from the entire charrette process. The handbook and video, made available as a set, will be distributed to a wide audience through a marketing plan which will include the EFC web site and brochures, local government associations, university public education programs, citizen groups and business organizations.

Training, Technical Assistance and Education

Utility Rate Design Workshop: Rate setting and financial planning for water and wastewater utilities

As local governments continue to shoulder increased responsibility for everything from environmental infrastructure to environmental protection, budgets are stretched to capacity. To help ensure that clean water is available for both human consumption and wildlife habitat, these systems must not be a drain on local government budgets, but should be financially self-supporting. Utility rates are one way in which to capture most of the costs of operating and maintaining water and waste water systems. Knowledge of alternative financing mechanisms available to communities and an understanding of how these mechanisms can be used to pay for new system improvements is also important in the rate design process.

The EFC participated in the Pennsylvania Rural Water Association's Annual Conference. The EFC presented a session describing innovative utility rate structures to effectively manage water resources. The session also included a presentation by the director of our sister EFC at Boise State University, who has conducted similar presentations, as well as training workshops, throughout the country.

As a result of the success of our first Rate Design Workshop, the EFC has been invited by the Pennsylvania Rural Water Association to conduct future workshops throughout Pennsylvania, and to develop and moderate a session in the Association's upcoming spring Annual meeting.

In addition, and as a result of the first workshop, the EFC was invited by the Maryland Rural Water Association to design and develop a series of training seminars for water and wastewater systems in Maryland, which they conducted in two areas of the state, Frederick (serving central Maryland) and Fruitland (serving the Eastern Shore). The seminars presented basic financial management information, such as proper accounting techniques, important financial ratios to manage, and characteristics of responsible rate design. In addition, the seminars explored ways in which utilities could better communicate important information, which could help conserve water while maintaining their system's viability and health. As a follow-up to the seminars, the Maryland Rural Water Association has invited the EFC to develop and conduct a series of utility rate design workshops for the spring of 1999.

The EFC has also been in contact with the West Virginia Rural Water Association and the Virginia Rural Water Association about future workshops in their states.

Site Planning Demonstration Project

In order to change the direction of conventional design, pattern and density of development and its impacts on local quality of life and the environment, there must be on-the-ground examples of development techniques that local governments and the development community can embrace. As part of its ongoing involvement with the Center for Chesapeake Communities and in coordination with the Chesapeake Bay Program, the EFC has joined the *Site Demonstration Project*, which aims to demonstrate the benefits of smart growth and sustainable development in the Chesapeake Bay region.

Workshop: Identifying Solutions to Creating Sustainable Communities

The Maryland EFC participated in a series of workshops entitled *Identifying Solutions to Creating Sustainable Communities*. The workshop, organized by the Center for Chesapeake Communities and supported by the Alliance for the Chesapeake Bay, the Chesapeake Bay Program's Citizen Advisory Committee and the Local Government Advisory Committee, was the first in a series of six workshops held throughout the Bay watershed. The goals of the workshops are to identify the impediments and barriers, as well as the solutions, to promoting sustainable communities. The results of the workshops will be used to establish the agenda for a watershed-wide *Summit Toward a Sustainable Chesapeake* planned for March 1999.

Presentation of Tributary Strategies to School Teachers in the Patuxent Watershed

The Patuxent River is the largest river that is completely within Maryland. The river drains 930 square miles and parts of seven counties before entering the Chesapeake Bay. The river supports more than 100 species of fish and is an important commercial and recreational blue crab fishery. In addition, the watershed is used for nesting and overwintering by bald eagles. Because the watershed is one of the fastest growing areas in the state, part of the Bay tributary strategy includes how to accommodate growth while preserving watershed and community goals. Threats to water quality include air degradation and resultant water deposition, polluted storm water runoff, failing septic system groundwater infiltration and runoff, agricultural nutrient and pesticide runoff and loss of forests and wetlands.

In order to better integrate the concepts of watershed management into the lives of Bay-area citizens, the EFC is often invited to speak to citizen stakeholder groups. At the request of the Patuxent River Commission (a watershed association) the EFC gave a presentation to Maryland high school teachers that described the tributary strategy approach to watershed management. Issues addressed during the presentation included how the prevention of pollution can be incorporated into the everyday lives of citizens, especially its children. The presentation allowed teachers to understand the current Bay clean-up effort and encouraged them to involve Bay restoration and watershed management ideas in their classroom lessons.

Expansion of the State Revolving Fund (SRF)

As part of another effort entered into last year, the EFC helped pass legislation in the Maryland General Assembly to expand its State Revolving Loan program (SRF) to the private sector for nonpoint source pollution control activities.

Continuing our advisory work, the EFC worked with Maryland's Departments of Agriculture, Environment and Natural Resources to modify the State's SRF to allow for an innovative "linked deposit" program,

which encourages participation by private lending institutions to assume the lion's portion 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 promise in improving water quality and stream corridor restoration. Maryland Senate Bill 0177, the Linked Deposit bill, passed, and is now in effect.

Publications

Stream Corridor Restoration Funding Matrix

The EFC occasionally takes the initiative in responding to an identified need by developing a new product. Such is the case with the Stream Corridor Restoration Funding Matrix. Developed over the last year, the matrix identifies over thirty-five Federal, state and local funding programs which could be used by public as well as private landowners interested in preserving water quality.

Community Solutions for Environmental Finance: Charrettes

The EFC printed a 40-page booklet *Community Solutions for Environmental Finance: Charrettes*. The booklet contains information for communities seeking solutions to their environmental finance problems, including a discussion of the charrette process and summaries of 16 charrettes held for communities in Delaware, Maryland, Pennsylvania and Virginia. The booklet presents recommendations implemented by charrette communities, as well as a discussion of the complexities faced by communities as they struggle to address conflicting demands. In addition, the booklet lists local and national governmental and nonprofit resources available for communities facing environmental finance challenges.

Issues in Environmental Finance: Highly Valued Lands

During the year, the EFC added another fact sheet to its *Issues in Environmental Finance* series. The fact sheet, *Highly Valued Lands*, describes alternative techniques for improving water quality by protecting and restoring highly valued lands, such as wetlands, forests, meadows and lands bordering water resources.

This fact sheet is a complement to the *Stream Corridor Restoration Funding Matrices* because these techniques can be used in conjunction with Federal and state assistance programs described in the matrix to help achieve water quality improvements. Because of the often high cost of removing pollution from water resources, it is often cheaper to prevent pollution in the first place. Thus, those techniques that strive to reduce the amount of pollution entering the waterways can be thought of as financing techniques.

Other Training Opportunities through Conference Forums and Sessions

Pennsylvania Rural Water Association's Annual Conference

The EFC participated in the Pennsylvania Rural Water Association's Annual Conference.. The EFC presented a session describing characteristics of good financial management and innovative utility rate structures to effectively manage water and waste water systems. The session was a collaborative effort between the Maryland EFC and the director of the EFC at Boise State University. Our plan is to generate interest in conducting a series of training workshops for local officials interested in the full-cost pricing of environmental services. Full-cost pricing of environmental services allows local governments to better manage environmental resources to protect habitat and human health.

As a result of this workshop, the Pennsylvania Rural Water Association invited the EFC to conduct a Utility Rate Design Workshop (described in a previous section of this report) for Pennsylvania utility operators.

Team Wetlands Conference

The EFC was invited to moderate a problem-solving roundtable entitled *Development and Wetlands: Making them Compatible,* at The Terrene Institute's Team Wetlands Conference, in Arlington, Virginia. The EFC presented the Starlit Ponds charrette as a case study addressing failing storm water ponds and the possibility of converting them to wetlands. After the presentation, the EFC Coordinator moderated a discussion for participants interested in options for retrofitting or converting ponds for enhanced water quality. Participants from Utah, Michigan and Maryland engaged in a lively discussion about pond functions beyond storm water management, such as community public space and wildlife habitat.

Best Management Practices (BMP) Selection for Urban Storm Water Management workshop

The EFC participated in a workshop, *BMP Selection for Urban Storm Water Management* in Dumfries, Virginia. The workshop was sponsored by the Chesapeake Bay Program Nutrient Subcommittee and was attended by over 100 people from the public and private sector. The Maryland EFC presented an exhibit highlighting financing alternatives for funding urban storm water BMPs through a mix of Federal, state and local program and non-regulatory initiatives such as recognition programs. The Funding Matrices and the Fact Sheet *Highly Valued Lands*, were used as the basis for the exhibit.

Conservation of Biological Diversity Conference

At the conference *Conservation of Biological Diversity* held in Annapolis, Maryland, the EFC was selected to present a poster titled "Funding for Water Quality: Stream Corridor Restoration Projects." The poster provided planners and other decision makers with tools or ideas to help them better manage stream corridors for water quality and wildlife habitat.

Maryland Municipal League Convention

At the 1998 Convention of the Maryland Municipal League), attended by 153 municipal governments and over 500 local government representatives, the EFC designed and presented an exhibit which outlined approaches to watershed-based financing techniques for environmental projects, in particular those involving water quality. The purpose of the convention is to allow municipal governments to exchange ideas and information. Our exhibit encouraged local government representatives to think about watershed-based approaches to solving environmental quality problems that cross jurisdictional borders.

Wetlands '98: Integrating Wetland / Floodplain Ecosystems in to Water Resources / Watershed Management

During the fall, the EFC was invited to speak at the conference *Wetlands '98: Integrating Wetland / Floodplain Ecosystems into Water Resources / Watershed Management*,. This national conference, held on September 21-24, 1998 in St. Louis, Missouri, was co-sponsored by the Institute for Wetlands Science and Public Policy and the Association of State Wetland Managers.

Urban Revitalization and Regional Prosperity: Opportunities for Partnership

The EFC was invited to develop a panel and moderate a session at the *12th Annual Conference of the National Council for Public Private Partnerships*, held in Atlanta. The subject of the panel was the challenge of re-integrating under-utilized and even abandoned properties into the economic web of a community, utilizing public-private partnerships.

Maryland Environmental Service/Maryland Department of the Environment Co-Sponsored Conference

The EFC co-sponsored, with Maryland Environmental Service and Maryland Department of the Environment, a conference *How to Make Dollars and Sense out of Federal and State Environmental Grants and Loans*. The EFC Coordinator opened the conference with a presentation, "Thinking Outside the Box: an Overview of Broad-based Funding Support." The presentation began by acknowledging that water and waste water systems and other environmental services go beyond providing communities with human health protection, but are primary providers of other benefits, including:

< Conservation, preservation and enhancement of water quality

< Protection and restoration of habitat including source water protection and wetlands management

< Aesthetics, recreation, cultural identity through management of water resources

Global Programme of Action Coalition for the Gulf of Maine

Although the EFC Network does not have a Center in Region 1 at this time, the Maryland EFC, supported by NOAA, has been collaborating with a Gulf of Maine initiative—the *Global Programme of Action for the Protection of the Marine Environment from Land Based Activities for the Gulf of Maine* (GPAC). In 1996 the Gulf of Maine (GOM) was chosen by the Commission for Environmental Cooperation (CEC) as the site of a pilot project to help North American countries implement an international program to protect their marine and coastal areas from land-based activities. CEC was created as a result of NAFTA negotiations to facilitate cooperation and public participation and to foster conservation, protection and enhancement of the North American environment. In the GOM region, the CEC has brought together a diverse group of individuals, known as GPAC, to develop a project of their own design. The EFC has played an important role in advising GPAC on environmental finance matters.

New Initiatives

Urban Environmental Quality and Public Health: An EFC Network Collaboration

The Maryland EFC's proposal to the USEPA, on urban environmental quality, has been accepted. Submitted on behalf of the Environmental Finance Center Network, the collaborative project will address the issue of sustainable urban growth and regional vitality.

Riparian Forest Buffers: Opportunity costs and opportunities lost

The Chesapeake Bay Program has compiled information about the effectiveness of riparian buffers and wetlands to protect surface water quality. This information is based on scientific research conducted within the Bay watershed and has been distributed in various forms to students, state agencies, policy makers and government officials. As a result, the Bay states, as signatories to the Chesapeake Bay Agreement, have pledged to increase riparian forest cover by the year 2010. To reach this goal, the states have developed draft implementation plans.

At the local level concerns have been raised by local officials, the development community and others, about limiting development in the riparian zones by taking high-priced streamside land out of the tax base. Of primary concern for local elected officials is preventing a decrease in revenue generation and resulting operating budget deficits. The fear of decreasing the local tax base is therefore hindering realization of the buffer goals of the Chesapeake Bay Agreement.
In order to address these concerns, the Environmental Finance Center will provide examples of ways to recoup costs associated with limiting development in the riparian zones. Along with the scientific results

from the Bay Program, this information will help local government officials persuade their constituents that preserving the stream buffer area will not negatively affect the local economy.

Land Trust Assistance: Creative Financing Of Sensitive Areas

Land trusts often acquire property with the goal of preserving a particular natural, historical or cultural feature. In the Chesapeake Bay region there are a large number of land trusts, with over 41 in Maryland alone (the largest concentration in the country). Some trusts function with full-time staff and a coordinated acquisition plan, but the majority of land trusts are small. In addition to the lack of an acquisition plan, many small land trusts lack the staff necessary to identify and secure funding necessary to meet their goals. Based on suggestions from the Chesapeake Bay Program, the Canaan Valley Institute (WV) and various land trusts in the region, the EFC will develop a collection of "tools" to assist land trusts in their efforts to preserve important lands.

Program for Community Partnership

The EFC has joined with a group of University System partners and State agency representatives to develop capacity at the local level to manage local challenges using a variety of techniques and resources. The initiative, called the *Program for Community Partnership* (PCP), is a collaborative effort between the University System of Maryland, the State of Maryland and the Fannie Mae Foundation, and is supported by Fannie Mae with a three-year $1.0 million grant. The plan is to identify three pilot communities, representing an inner city urban neighborhood, an aging suburb, and a rural community, and work with them over three-years to help them solve their most critical problems. The objective is to provide intensive exposure to techniques and skills for enhancing community problem-solving via innovative workshops, role-playing and other collaborative efforts.

Financing Coastal Watershed Efforts

An abstract from the EFC was selected for an oral presentation at the Coastal Zone '99 national conference in July, 1999. Over 600 submissions on topics of coastal zone management were reviewed. The EFC will discuss the "Community Quilt Concept of Environmental Financing," which stresses the use of multiple financing techniques, including local government initiatives, the use of grants and loans, and pollution prevention, when addressing environmental problems within a coastal watershed. The conference will be attended by hundreds of participants, and the Maryland EFC will seek to include the work of other EFCs in our presentation.

Utility Rate Design Workshops

The EFC has tentatively scheduled a series of utility rate design workshops in coordination with the

Maryland Rural Water Association. These workshops, scheduled for May and June, 1999, will introduce the concepts of good financial management as well as develop rate structures for utility system participants. Using RateMod Pro software developed with the support of USEPA, participants will create sample rate structures for their systems using their own data. In addition to a rate proposal, participants will finish the workshop with a better understanding of how rates should be set, and how to persuade elected officials and rate payers of the benefits of a self-supporting system.

The EFC is also coordinating with the Pennsylvania Rural Water Association and Maryland Environmental Service (a public agency charged with managing over 150 water and waste water systems in Maryland) to bring utility rate design workshops, and other financial management training, to clients and members.

Toward A Sustainable Chesapeake Summit

The EFC is part of an Advisory Team dedicated to developing an engaging agenda and bringing together exciting speakers and participants for a summit on sustainable communities in the Chesapeake region. The Summit, to be held in Baltimore on March 22 & 23, 1999, will address:

- Promoting innovative site planning
- Preparing watershed management plans
- Nurturing sustainable economic growth
- Building community capacity

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 and others in the Chesapeake Bay Region. This brochure will highlight ways in which the Center can assist local governments, businesses, land trusts, nonprofit organizations 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 continues to update and revise its presence on the web with a series of pages which present some of our work, including charrette summaries and the Stream Corridor Restoration Funding Matrices (**http://www.mdsg.umd.edu/MDSG/EFC/index.html**).

Fact Sheets

The EFC continues to develop one-page, targeted fact sheets that address important environmental finance issues. In addition to the Stream Corridor Restoration Funding Matrices, which are expanded fact sheets, the *Issues in Environmental Finance* fact sheet series includes:

- Community Solutions: Charrettes As a Useful Tool in Public Policy
- Highly Valued Lands

Future fact sheets may include such issues as equitable and self-sustaining utility rate structures, user fees and their application, and non-regulatory techniques such as recognition and award programs. A fact sheet on land trust financing options for preserving lands in also being developed.

Network Collaborations

The Maryland EFC has cooperated with and benefitted from the other EFCs in the national network. Here are several highlights from those collaborations:

The Director of the EFC at Boise State has been extremely helpful in advising us on waste water and drinking water issues, especially rate-setting. He has already helped establish contacts between our EFC and other clients in our region (Region III), and he has served as instructor and advisor on several rate setting workshops. He has also traveled to the region to co-present at training seminars and conferences.

The Director of the Maryland EFC traveled to the EFC at Syracuse University to participate in a Network-wide forum. The Director moderated a charrette for the New York village of Long Eddy, which has resulted in the award of grant money for the community's waste water system upgrades.

The Maryland EFC facilitated a Network-wide discussion on urban and regional development patterns, which resulted in a Network-wide proposal to the USEPA. The proposal, discussed elsewhere in this report, has been funded and will begin in 1999.

In addition to specific collaborations, the Region III EFC is in constant contact with the other EFCs in the network, via monthly conference calls and numerous information-sharing activities.

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Great Lakes EFC at Cleveland State University, Region 5

Executive Overview

The Great Lakes Environmental Finance Center was established at Cleveland State University in 1994. The Center serves public and private sector clients in Federal Region 5, which includes the states of Ohio, Michigan, Indiana, Illinois, Wisconsin, and Minnesota. The GLEFC has a current focus in three environmental policy areas: 1) Brownfields cleanup and redevelopment; 2) Industrial pollution prevention; and 3) Sustainable development, especially in Native American communities. Future priorities will include providing water rate modeling services for smaller communities, and developing market-based solutions

to air quality management. The Center's brownfields work is expected to focus increasingly on urban sprawl and smart growth management in the future. The EFC is making information available on the World Wide Web at **http://www.csuohio.edu/glefc**/

Introduction

This annual report describes the major accomplishments of the Great Lakes Environmental Finance Center (GLEFC). The report also provides a perspective of future priorities for the Center's work in 1999 and beyond. The Great Lakes Environmental Finance Center was established at Cleveland State University in 1994. The Center serves public and private sector clients in Federal Region 5, which includes the states of Ohio, Michigan, Indiana, Illinois, Wisconsin, and Minnesota.

Expertise and Resources

GLEFC is housed within The Urban Center at Cleveland State University, which is a nationally recognized public policy research institute. The Urban Center is engaged in a wide range of research, technical assistance, and training activities related to urban and regional development. Over 30 fulltime staff professionals work in The Urban Center's ongoing programs in economic development, environmental management, housing and neighborhood development, public management and finance, urban design, and regional development policy.

The Urban Center serves as the research and outreach arm of the Maxine Goodman Levin College of Urban Affairs, rated in 1997 as one of the top ten public policy schools in the United States by *US News and World Reports Magazine*. The College of Urban Affairs offers advanced training in the fields of public administration, urban planning, urban studies, and environmental studies.

The GLEFC has a current focus in three environmental policy areas:

1. Brownfields cleanup and redevelopment;
2. Industrial pollution prevention; and
3. Sustainable development, especially in Native American communities.

Future priorities will include providing water rate modeling services for smaller communities, and developing market-based solutions to air quality management. The Center's brownfields work is expected to focus increasingly on urban sprawl and smart growth management in the future.

SUMMARY OF ACCOMPLISHMENTS

There are three parts to this section of GLEFC's annual report: 1) Brownfields Cleanup and Redevelopment; 2) Industrial Pollution Prevention; and 3) Native American Communities Initiative.

Brownfields Cleanup and Redevelopment

< Completed four community site visits, providing on-site assistance and consultation on brownfield redevelopment projects.

- General technical assistance and information related to brownfields redevelopment to Great Lakes communities and organizations.

- Prepared useful research and planning materials that helps communities solve brownfields redevelopment problems

Community Site Visits and Other Brownfields Outreach Activities

Kenosha, Wisconsin Community Technical Assistance Project

The Great Lakes EFC conducted a one-day intensive strategy-building workshop to address the redevelopment of the Harborpark site. Harborpark was once the home of the Simmons Box Company and later became a major automotive plant for Chrysler Corporation. The GLEFC facilitated a workshop to address specific redevelopment issues for discussion by local community stakeholders. Local developers, civic leaders and real estate professionals came together to more fully exchange ideas about the planning and redevelopment of the Harborpark site and to share the complexity of decision-making required of each stakeholder in order to complete the project. GLEFC's final report identified 6 action recommendations:

- Summarize the existing report into an easy-to-read public document, making environmental issues easier to understand.

- Engage the local community in more public education and information gathering.

- Investigate and benchmark similar redevelopment projects in other cities.

- Convene a private developers' roundtable to further explore developer interest in the site.

- Utilize environmental insurance only if warranted on parts of the site, if at all, and investigate feasibility.

- Select a qualified developer or partners before talking to lenders. Environmental issues are only one of many variables in the financing of a real estate development deal.

These and other recommendations were made as the result of a participatory process enjoyed by 18 community members in the workshop. The Harborpark site is now under final demolition and a site plan has been developed. The City is actively engaging developers in dialogues about the redevelopment plan and potential for a variety of projects on the site.

Cincinnati, Ohio Community Technical Assistance Project

The GLEFC conducted an intensive strategy-building session for the Port Authority for Brownfields Redevelopment in Cincinnati and Hamilton County. This newly re-created port authority sought to better define its mission and vision as a new entity established to focus specifically on brownfield redevelopment. Port Authority board members, the Brownfield Community Advisory Council and other civic and community leaders came together to participate in this workshop. Other organizational issues were addressed as well for this one-year old Port Authority, and one of the first in the country to be solely dedicated to brownfield redevelopment. The GLEFC's final report has been published and includes recommendations in the areas of organizational goal-setting, site prioritization and work planning, and strategy implementation.

Peoria, Illinois Community Technical Assistance Project

The Great Lakes Environmental Finance Center (GLEFC) conducted a consulting workshop for the City of Peoria, Illinois. The purpose of the workshop was to assist the City of Peoria in its efforts to develop actions leading to the successful redevelopment of the Darst Street site. Particular emphasis was placed on strategies pertinent to properties with a history of environmental contamination, often characterized as brownfields. Redevelopment of the site and the prospect for a variety of users was the major focus of the discussion and produced some enlightening and refreshing options for the City to consider. The key issues that the Advisory Team addressed were to: 1) determine the highest and best use of the site; and 2) identify and overcome barriers to redevelopment.

Cleveland, Ohio Community Technical Assistance Project

The GLEFC helped facilitate the kick-off meeting of the Cleveland West Side Economic Development Initiative. The GLEFC participation is part of a two-session consultation providing research and advisory services to WIRE-Net, a non-profit community development organization that is managing the national Brownfield Pilot project for the City of Cleveland.

The first meeting's purpose was to develop a complete and prioritized list of site selection criteria in order to decide from 20 sites which would be included in the final redevelopment design for the pilot. The goal was to devise six or seven criteria to apply to all of the possible sites. From this analysis, also largely provided in by the GLEFC, the ten-member Working Group will determine the final six to eight sites that will undergo Phase I and Phase II environmental assessments leading to final redevelopment planning. This second major step in the site prioritization process occurred at a strategy-building session facilitated by the GLEFC.

Pocatello and Boise, Idaho Community Technical Assistance Projects

Under the auspices of the Boise State University EFC, the GLEFC provided technical assistance and information to the cities of Pocatello and Boise, Idaho. GLEFC representatives traveled to the City of Pocatello and provided a national brownfield redevelopment perspective, and helped to facilitate a two-day strategy-building session for the City's public officials and community leaders. The Advisory Team of the Boise EFC and the GLEFC helped the City to determine approaches to tackling their brownfield properties. Specific attention was paid to developing implementation of redevelopment planning and a national brownfield pilot application for four sites: the Volkswagen "graveyard"; the Harrison-West site; First Street East; and Kraft Road.

For the City of Boise, the Boise State University EFC conducted a half-day conference on brownfield redevelopment for public and private officials in the City of Boise. The GLEFC presented a major overview of brownfield redevelopment activities in the US and the Great Lakes region, and answered numerous questions from the audience. The statewide *Idaho Statesman* newspaper covered the event and published an article about the GLEFC perspective and information

Other Brownfields Outreach and Assistance Projects

North Span Inc. (Duluth, MN): Major planning and assistance was provided to North Span Inc., in Duluth, MN, to prepare them for a strategy-building session on revolving loan fund administration for brownfields. North Span is working as the contractor for the City of Duluth and the Minnesota Pollution Control Agency (MNPCA) in administering a brownfields revolving loan fund grant awarded to the MNPCA.. Information and referrals were provided to North Span, as well as initial economic research that was complied in preparation for a workshop. The City of Duluth and North Span have postponed a session with the GLEFC pending administrative restructuring at the City as well as at the MNPCA's brownfield area.

Olney, Illinois: The county's development agency in Olney, Illinois was assisted by the GLEFC with information and referrals on environmental insurance.

Minnesota Pollution Control Agency: The Minnesota PCA received information and referrals for their Water Quality Funding Conference in December of 1997.

Brownfields Presentations

- The EFC Syracuse Forum held June 25-26, 1998: provided a major overview of brownfield redevelopment and research findings for New York state and city officials in addition to other EFC representatives. (Kirstin Toth)

- The National Council of Public-Private Partnerships October 15, 1998, Atlanta, GA. EFC was a Panelist and presenter.

- Region 5 EPA, Chicago: EFC provided major overview and findings of brownfield advisory service to EPA and state officials.

- Brownfield Finance Partnership, Ohio Water Development Authority, Columbus, Ohio. EFC presented the Cincinnati project and discussion.

- Brownfields 1998, Los Angeles, CA. EFC presented results of annual brownfields community benchmark survey, and other research results related to brownfields strategies at two sessions.

Brownfields Meeting Participation/Representation

Council of Infrastructure Financing Authorities/State Revolving Funds, Atlanta, GA:

- Ft. Wayne/USEPA Brownfields National Partnership Workshop.

- National Association of State Development Agencies, Washington, DC .

Brownfields Research and Resource Materials Development

Brownfields Financing and Redevelopment Planning Guidebook

GLEFC prepared a detailed resource guidebook to assist community and state officials in planning solutions to brownfield sites. The guidebook contains valuable information and spreadsheets on how to estimate the costs of cleanup and redevelopment of brownfields. Several case studies are included that illustrate the process associated with residential, commercial, and industrial properties.

Brownfields Community Benchmark Survey

This is the second year that GLEFC has surveyed 100 Midwestern communities to assess their progress in cleaning up and redeveloping brownfields. Over 60 communities responded to the 1998 survey, which examined clean up methods, costs, redevelopment performance measures, and a host of other key issues associated with local brownfields redevelopment efforts. The survey results are described in a summary report, and are available at GLEFC website.

Turning Brownfields Into Greenbacks Book

The EFC has prepared a new book on brownfields redevelopment for the Urban Land Institute in 1998. While the project was funded by ULI, and therefore is ULI property, the work is identified with GLEFC's brownfields activity. The book can be purchased from ULI in Washington, DC.

GLEFC Internet Website

This is the second year of operations for GLEFC website, which can be located at: http://www.csuohio.edu/glefc. The website receives about 75-100 visits per month on average from a wide cross-section of organizations and individuals. The site has been updated on a regular basis in 1998. Several new reports and report summaries are available for downloading at the site. At this point, the website is primarily a source of information about brownfields redevelopment, but the amount of information about Native American environmental issues, pollution prevention, and other issues is growing.

In 1998, GLEFC received more than 50 follow-up phone calls for information and assistance from those initially browsing the GLEFC website. Most were minor information requests.

New GLEFC Services Brochure

A new GLEFC services brochure was produced in 1998 to increase visibility of the center to Great Lakes and national clients. About 150 copies of the brochure were distributed at Brownfields 1998 in Los Angeles. Another 125 copies were distributed at the National Public-Private Partnership Conference in Atlanta in October 1998. A mailing to brochures to 100 environmental resource organizations is planned in early 1999.

Pollution Prevention Project

Introduction

The GLEFC completed its two-year pollution prevention project *Integrating Pollution Prevention with Community-Based Economic Development*. This project was funded by a grant from the U.S. EPA's Division of Pollution Prevention. During 1998, two industry-specific demonstration projects were held in the Cleveland and San Francisco areas. The Cleveland demonstration project, conducted by GLEFC, focused on the metal finishing industry in northeast Ohio. The San Francisco project, conducted by EFC9, concentrated on the dry cleaning industry in the San Francisco Bay area. The final report, issued to the U.S. EPA in December 1998, describes the achievements of these demonstration projects and the steps that would be taken beyond this grant.

Accomplishments

Pollution Prevention Project Highlights

The project's findings can be summarized in four areas: 1) conclusions from research undertaken during the first year of the grant, 2) key points from the Northeast Ohio demonstration project, 3) leading findings from the San Francisco demonstration projects, and 4) the project's contribution to economic development.

Findings

Small business access to capital in general and to banks' loans in particular is enhanced by the latest financial changes, such as loan standardization, credit scoring, and securitization that address many traditional barriers. Banks do not specialize in loans for pollution control or pollution prevention and most do not request details regarding the use of the funds being loaned.

The assessment of financing programs for pollution control and pollution prevention revealed that existing pollution control and/or prevention financing programs experience low demand relative to expectations and available funds. Interviews with many financing programs' directors, bankers, economic development programs, technical assistance programs, and others revealed that the lack of financing is not the main barrier preventing manufacturers from undertaking more pollution prevention investments. Moreover, it was suggested by many that pollution prevention is not a high priority for small businesses. Information gathered on Capital Access Programs (CAPs) led to the suggestion to extend the use of CAPs to address financing of pollution prevention investments.

Northeast Ohio Demonstration Project: Metal Finishers Industry

The Great Lakes Environmental Finance Center (GLEFC) decided to focus its demonstration on the local metal finishing industry, based on meetings with local stakeholders, conversations with others, and a mail survey. The GLEFC has been working with the Surface Finishers Committee as representatives of the

industry in Northeast Ohio. Working with the industry revealed that the main barrier to more pollution prevention (P2) activities is uncertainty regarding P2 technologies. As a result, GLEFC has focused its work with the industry on developing a technology verification project.

San Francisco Demonstration Project: Dry Cleaning Industry

According to a sub-contract with the GLEFC, the Environmental Financing Center of EPA Region 9 (EFC9) targeted a specific industry and produced a plan for stimulating more pollution prevention in that industry in the San Francisco Area. After consultation with EPA Region 9, the Bay Area Hazardous Waste Reduction Committee, and the GLEFC, EFC9 determined that the dry cleaning industry would make the most suitable industry. The main conclusion reached is that lack of adequate financing (as initially hypothesized) is not the primary barrier preventing dry cleaners from transitioning into alternative fabricare technologies. EFC9 identified the following barriers to alternative fabricare: dry cleaners do not believe that the traditional chemical used in dry cleaning (perchloroethylene, known as perc) is bad for their health; they believe that alternative forms of fabricare are not as financially and technically feasible as perc; they face an uncertain regulatory environment; and they are unsure about the market for wet cleaning.

Recommendations from the demonstration project call for the regulators to clarify the human health impacts of perc. It has been suggested that there is a need to show that alternative dry cleaning technologies work in a commercial setting and that they are financially feasible. EFC9 will continue to work on these issues, beyond this project. Especially, they will educate the dry cleaners and the public on the merits of alternatives to dry cleaning.

Contribution to Economic Development

The Cleveland demonstration project targeted, the metal finishing industry is part of an industrial cluster of metal working industries that was identified as one of seven clusters in which Northeast Ohio has competitive advantage. At present, the major economic development agencies in the area are working with these clusters to improve their regional competitiveness. The businesses and organizations that are part of a cluster are working together to identify barriers to continued growth and work jointly on developing new opportunities for increased business. The more profitable an industry is, the more it adds to the regional economic base. Thus, if pollution prevention is integrated into a firm's business plan, and it is economically feasible, or even profitable, stimulating pollution prevention could become not only a means of gaining a cleaner environment in the region, but also could contribute to the industry's efficiency and its ability to retain local jobs.

The dry cleaning industry chosen for the San Francisco demonstration project is a local service industry that exists in every region of the country. Many of the cleaners in the San Francisco East Bay area are small, independently operated, or franchise neighborhood cleaners. Although dry cleaning is not

characterized as a highly profitable business, it has relatively low start-up costs. It is attractive for those individuals with limited capital and a willingness to substitute labor for capital. There are many dry cleaner trade associations in the Bay Area with jurisdictions varying from local, regional, and ethnic to national and international. There are also governmental regulatory agencies as well as nonprofit organizations that promote pollution prevention.

Conclusions

The project overall concludes that *financing is not the main barrier preventing small- and medium-sized companies from undertaking pollution prevention projects.* This is a very significant issue, because the hypothesis going into this project was that the lack of financing is one of the main barriers to pollution prevention and that closing the financing gap would increase pollution prevention activities. This conclusion was reached three ways: in the assessment of selected environmental financing programs across the country that showed relatively low demand to these funds and in each of the two demonstration projects that identified other barriers as more critical than financing. The more important task became how to encourage small businesses to think about and consider pollution prevention investments in their facilities. The two demonstration projects focused on individual industries in their efforts to develop a plan for stimulating more pollution prevention.
Both Environmental Finance Centers (GLEFC and EFC9) are planning to continue to work with the industries they worked with in this project, to continue to advance technology verification for metal finishers in Northeast Ohio and contribute to the shift to wet cleaning in the San Francisco Bay Area.

Native American Sustainable Communities Building Project

Need

Tribes in the Great Lakes region are struggling with serious environmental degradation problems and other challenges that threaten the vitality and sustainability of their communities and the unique cultures found there. Many tribes are actively working to address these issues and needs. This project will help increase the tribes' success in building sustainable communities in the future. The restoration of ecological balance in these communities is essential to their preservation and future development.

Guiding Principles

This project will follow six guiding principles ensuring that appropriate outcomes are achieved through GLEFC's work with the tribes:

< All work will be done at the specific request of tribal officials.

< Work completed will be consistent with tribal values and culture.

< Tribal officials will lead all community planning project efforts.

< A desired outcome from this project will be to reconnect Native American communities with their surrounding natural environment and other resources that encourage sustainable community development.

< Balanced and integrated community solutions will be pursued.

< Work will be conducted in partnership with the tribes, EPA, and other appropriate resources.

Overall Goal

Assist tribal leaders to restore ecological balance in Native American communities in the Great Lakes region by assisting them in using culturally-appropriate comprehensive planning, sustainable development, and ecological design services. This project will expand local capacity within the tribes to develop more sustainable communities.

Accomplishments

1998 marked the initiation of the Native American Communities Project. Funding was received from USEPA to begin tribal assistance efforts in June 1998. GLEFC has made considerable progress in accomplishing Phase 1 activities. These accomplishments include:

- Participated in EPA's General Assistance Grant (GAP) training program in March 1998 for Great Lakes tribes. The GAP Meeting was held in Chicago at Region 5 EPA Offices. Made a presentation on GLEFC services and how these services could benefit tribes. Representatives from all 34 tribes were present at the presentation. GLEFC was present, along with the Idaho EFC (Region 10) and the New Mexico EFC (Region 6).

- Participated in the 4th Annual National Indian Environment Conference in Redwing, MN. Made a presentation on GLEFC services, and managed an exhibition booth on GLEFC and the EFC Network. Over 500 people attended the conference, which was held on the Prairie Island Indian Reservation, near Redwing.

- Presented a proposal to EPA for funding the Native American Communities Project, which was successfully funded by EPA's Region 5 Office over a three-year period. The Idaho and New Mexico EFCs were helpful to GLEFC during the proposal marketing process in the Spring 1998.

- Visited three reservations (Oneida, Menominee, and Mole Lake) conducted a day-long planning meeting with officials from six Wisconsin-based tribes. 15 tribal officials attended the meeting. Prepared a visit report outlying future assistance priorities with Wisconsin tribes in 1999.
- Visited two reservations (Grand Traverse Bay and Little Traverse Bay) and conducted a day-long planning meeting with officials from nine Michigan -based tribes. 19 tribal officials attended the meeting. Prepared a visit report laying out future assistance priorities with Michigan tribes in 1999.

- Visited two reservations (Bois Forte and Fond du Lac) and ran a day-long planning meeting with officials from ten Minnesota-based tribes. 29 tribal officials attended the meeting. Prepared a visit report outlying future assistance priorities with Minnesota tribes in 1999.

- Prepared a plan for three training workshops to be conducted for tribal officials in the Great Lakes region during the February-April 1999 time period. The workshops will address strategic issues identified through GLEFC's site visits and group meetings with tribes. Top priorities are: 1) housing improvement; 2) ecological design; 3) comprehensive community planning; 4) green business development; and 5) innovative financing for environmental and sustainable development projects.

- Prepared a first draft of a guidebook to be used in the three tribal workshops planned for early 1999. The guidebook focuses on the key issues discussed in the workshops, and it provides relevant resource material to aid future planning by tribal officials.

NEW INITIATIVES

Water Rate Model Assistance

GLEFC plans to initiate assistance efforts in the rate modeling arena in 1999. Bill Jarocki, Director of the Idaho EFC, visited GLEFC and provided initial training in model operation and use this past year. Smaller communities in the Great Lakes region are the target audience for these services.

Air Quality Emissions Trading

GLEFC hopes to contribute to the air quality arena in 1999. Because of the increased importance of permit trading, GLEFC hopes to help Great Lakes metropolitan areas to prepare for new developments in this area.

EFC NETWORK COLLABORATION

Pollution Prevention

The demonstration projects' phase of the pollution prevention project involved collaboration between GLEFC and the California EFC in Region 9. EFC9 was a subcontractor to GLEFC under the pollution prevention grant. Although each demonstration project was conducted independently, the goals and objectives guiding the projects were the same. Both worked with specific industries to understand the barriers to pollution prevention and plan on how to overcome these barriers.

Smart Growth Initiative Proposal

GLEFC helped the University of Maryland EFC prepare a network proposal to USEPA to encourage smart growth of US metropolitan areas. The proposal is pending a funding decision by USEPA.

Native American Communities Project

GLEFC collaborated with the EFC Network, especially the Idaho EFC and the New Mexico EFC, in preparing a GLEFC proposal to EPA Region 5 to establish the Native American Communities Project. The proposal was successful in producing funds for GLEFC assistance to the 34 Federally recognized tribes in the Great Lakes states.

1998 EFC Annual Meeting

GLEFC hosted the EFC Network Annual Meeting in September in Cleveland. The two new Region 4 Centers at the University of Louisville and North Carolina, Chapel Hill were represented. The meeting was productive in advancing the EFC Network Strategic Plan, and in discussing future organizational options for the Network.

Great Lakes EFC Organization

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EFC at University of New Mexico, Region 6

Mission Statement

To promote and facilitate effective and efficient environmental infrastructure through innovative financial and engineering techniques.

Executive Overview

Established as the first EFC in 1992 at the New Mexico Engineering Research Institute, the University of New Mexico Environmental Finance Center (EFC) promotes innovative environmental financing techniques by blending the disciplines of environmental engineering and finance. Serving USEPA Region 6, the EFC facilitates efficient environmental infrastructure through innovative and alternative engineering techniques and provides state and local officials with education and training, advisory services, publications, and analyses of financing trends and techniques. The EFC documents and disseminates information about innovative and cost-effective environmental financing alternatives and disseminates information on cost-effective management techniques, such as, public-private partnerships and internal optimization. The EFC initially began with an emphasis on the application of 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 and public health services. Additionally, the EFC researched financing alternatives for environmental infrastructure along the US-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. Current efforts primarily focus on assistance to state agencies 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. New efforts include assisting residents in northern New Mexico in developing a Unified Source Water Protection Plan, a pilot project initiative with EPA and USDA Rural Utilities Service. Identifying affordable and viable financing options and promoting low-cost, alternative, and appropriate technologies for system capacity projects is an ever present goal of the EFC. The EFC is making information available on the World Wide Web at http://nmeri.unm.edu/ta/efc.htm

EFC Expertise and Organizational Structure

Located at the University of New Mexico Research and Technology Park, the University of New Mexico Environmental Finance Center is a division of the New Mexico Engineering Research Institute (NMERI) and serves the US Environmental Protection Agency's Region 6 states. The EFC director is a registered Professional Engineer in the states of New Mexico and Pennsylvania and holds a master's degree in

environmental engineering. Educational backgrounds of the staff include master degrees in environmental engineering, water resources administration, and community planning / public administration. The EFC also employs five graduate students in the areas of engineering, planning, and business administration and one engineering undergraduate.

Since its inception in the 1960s, NMERI, a multi-disciplinary research and development extension of the UNM School of Engineering has continued its research, development, and education services both locally and abroad. Serving the needs of both the private and public sectors, NMERI focuses strategic research efforts in the areas of sustainable development; global environmental technology; fire science; and non-conventional energy systems. Additional capabilities and expertise are available to the EFC through close working relationships maintained with UNM faculty, staff, and graduate students from the Schools of Architecture and Planning, Engineering, Law, and Public Administration; the Institute for Public Policy, the Latin American Institute; the Bureau of Economic and Business Research; the Earth Data Analysis Center; and the Water Resources Administration Program.

COMPLETED INITIATIVES

Capacity Development - Increasing Drinking Water Viability

August 1996 - December 1998

The EFC has been involved in several projects in the last four years relating to assessing and increasing the capacity of small drinking water systems. In addition to capacity development projects, the EFC staff continues to serve as technical staff to the New Mexico Drinking Water Advisory Group.

The EFC completed a capacity development project, "Increasing Drinking Water Viability In New Mexico," which expanded from New Mexico to all the states within Region 6 during the its project duration. This Assistance Agreement had three main components:

- Section 1: New Mexico Capacity Development Strategy
- Section 2: Rate Model Workshops and Demonstrations
- Section 3: Meetings with Region 6 States (Clearinghouse and Outreach).

Section 1: 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 Amendments to the Safe Drinking Water Act (SDWA). The EFC hosted a public meeting for NMED on the New Mexico Safe Drinking Water Program and State Revolving Loan fund.

Section 2: Rate Model Workshops and Demonstrations

The EFC demonstrated the utility of and presented ways in which the EFC could assist agencies with RateMod Pro™, a water/wastewater utility rate setting software program, through several day-long training sessions. Strategic planning and an in-depth discussion regarding how the model can be used to meet the needs of the state regulatory and funding agencies was also part of the day's agenda. The use of the model was demonstrated on two levels: for water and wastewater utility operators, managers, and owners; and, for regulatory funding. For a more detailed description of rate setting using RateMod Pro, please refer to *Water Utility Rate Model Presentations and Training Demonstrations*.

Section 3: Capacity Development Clearinghouse and Outreach

One of the initial activities was a review of existing and on-going capacity development efforts in other states. Contact with other states was maintained throughout the duration of the project regarding capacity development efforts throughout the nation. This allowed the EFC to share information regarding those programs with Region 6 states and to present information regarding other successes and failures. The EFC still maintains this capacity development information to serve as a Clearinghouse for Region 6 states. In addition, the EFC attended meetings and conferences related to capacity development efforts in New Mexico, other states within EPA Region 6, other states outside of EPA Region 6, and national initiatives. This attendance has enhanced the EFC's ability to act as a resource for EPA Region 6 states and to EPA Region 6 itself.

The EFC director worked with EPA Region 6 representatives to develop a Capacity Development Assistance Program for Arkansas, Louisiana, and Oklahoma. The EFC met with agency representatives from these states to present the capacity development efforts of New Mexico and Texas. They discussed EPA requirements, requirements for EPA Region 6 approval of the strategy, and state flexibility in the strategy. Meetings were held for two days in each of the states. Discussions with individual states focused on their determinations and perceptions of the greatest need in the formulation of a Capacity Development Strategy.

Water Utility Rate Model Presentations and Training Demonstrations

Ongoing

Background

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. The model is designed to be flexible and easy to use while applying accepted rate setting guidelines and methodologies. It is capable of being customized for each utility system's unique design, customer, and financial characteristics, and accommodates a broad range of common accounting and budgeting practices. Small users may enter very limited data, select the model's defaults and obtain results with minimum effort. Alternatively, larger systems, and those requiring more advanced rate setting techniques, may input very detailed information in order to take advantage of all the model's features.

Model Use

The model is both a rate setting and a financial planning tool that has the ability to:

- perform a cost-of-service analysis;
- develop demand-based user rates; and
- prepare a six-year budget, rate, and financial forecast on a desktop personal computer.

The model is useful on two levels. The EFC demonstrated the utility of the model for both of the following levels:

- water and wastewater utility operators, managers, and owners; and
- regulatory and funding agencies to:
  - improve project underwriting;
  - determine necessary and appropriate amount of financial assistance;
  - assess repayment capacity of individual systems;
  - schedule capital improvements; and
  - evaluate financing alternatives.

New Mexico Finance Authority Request for Proposal Preparation

The New Mexico Finance Authority (NMFA) contracted with the EFC to prepare a Request for Proposal (RFP) for environmental reviews, engineering services, and construction services for the SDWA SRF loan program. Prior to the SRF program, the NMFA had not had a need for RFPs since it did not typically need these types of services.

Survey of Water System Operating Permits throughout United States

In the fall of 1998, the EFC staff conducted a telephone survey of all 50 states to find out which states issue operating permits for public drinking water systems. Specific states were questioned in depth to understand

how the operating permit system works in an effort to link permits to requirements under the Safe Drinking Water Act Amendments.

Survey and Database of GIS Usage in New Mexico

February 1998 - September 1998

Under the cooperative program between the University of New Mexico and the State of New Mexico General Services Department - Information Systems Division (GSD-ISD), the EFC staff conducted a telephone survey and mailing list compilation of geographic information system (GIS) specialists and administrators from New Mexico municipalities, counties, and regional economic development organizations. The same survey was conducted on state agencies, tribal chapters, and federal governments with local offices in New Mexico. The database will be used for the distribution of RGIS newsletters, information, and announcements about future RGIS-produced CD-ROMs.

Texas Capacity Development Strategy Implementation

As a follow-up to the Texas Capacity Development Strategy completed in August of 1997, the EFC assisted the Texas Natural Resource Conservation Commission with the implementation of the strategy. There are numerous steps and phases of the implementation process and full implementation may take up to three years due to the need for a revised computer database program and a revised sanitary survey deficiency score process.

CURRENT INITIATIVES

Small Water System Capacity Development

The EPA defines capacity as "*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. Capacity can also be seen in a much broader context than merely regulating compliance; it can involve economic development, population growth, and the role of the government and private sector in providing public infrastructure.

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. System capacity exists along a continuum and information about present and future needs of water systems must be incorporated in the process in order to encompass the long term requirements of a sustainable system.

The EFC devotes a majority of its time to capacity development endeavors. At present, capacity development work is performed under three separate USEPA contracts:

< Capacity Development for Native American Tribes and Pueblos

< Capacity Development: Assistance to States and Native American Tribes
Subcontract Agreement with EFC-10

< Capacity Development Assistance to Region 6 States

Native American Capacity Development: EPA Region 6 Tribes and Pueblos

Sponsor: EPA Region 6

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 is administered by EPA Regional Offices and is similar to the state-administered revolving loan funds in that it was established to provide resources in the form of monetary and technical assistance to small and medium community drinking water systems. But in the case of the Native American Revolving Fund, the funds are 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.

In addition, the EFC has established the Tribal Set-Aside Task Force. Because of the importance of stakeholder involvement in the process of developing and implementing a drinking water system capacity program, the Task Force includes people who represent a broad range of Tribal and Pueblo interests. Task Force meetings are held quarterly.

Capacity Development Strategies: Assistance to States and Native American Tribes

Sponsor: EPA Headquarters

This collaborative project with the Environmental Finance Center at Boise State University (EFC-10) is funded through a grant from the USEPA Office of Ground Water and Drinking Water. Although both Centers are doing equally proportionate work, the EFC-10 is the designated grantee while the EFC-6 is a subcontractor for the grant.

The EFC-6 is currently providing direct assistance to two states in Region 6 and one in Region 2, in addition to the Native American Tribes located in Region 6 to assist these entities in meeting capacity

development strategy requirements of the 1996 SDWA Amendments. The states involved include New Mexico and Texas in Region 6 and New York in Region 2. Four additional states will be selected based on interest and need.

New Mexico: Expanding the Effectiveness of a Capacity Development Strategy

The EFC is completing 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. This project is designed to assist the State in expanding the role and effectiveness of the overall capacity development strategy described in further detail later in this section. The systems are being compared to themselves before and after funding to note any differences or improvements, to the extent feasible given the limited information that is currently kept for systems. In addition, similar size and type systems that completed similar projects are being compared based on funding type (grant, grant/loan, loan) to examine whether any of the systems requested additional funding during the selected time period.

The study of past grant and loan recipients ties into Section 1420(c)(2)(B) of the Safe Drinking Water Act. A major impairment to capacity development in New Mexico is the wide availability of "free" money, i.e., grants, and other sources of loan funds. If the capacity development strategy ties only to the DWSRF and not to these other funding sources, it will be very difficult for the State to improve overall viability of drinking water systems throughout the state. In fact, systems may intentionally avoid the DWSRF if they know they have to follow viability criteria verses other moneys that do not require a capacity review. Therefore, this study will be a component in the State's efforts to link all of the funding sources under the umbrella of the capacity development program. This linkage would be a tremendous enhancement to overall capacity development efforts within New Mexico.

Texas Capacity Development Strategy Implementation

The EFC assisted the Texas Natural Resource Conservation Commission (TNRCC) with the implementation of the capacity development strategy it developed for them during the summer of 1997. Implementation activities are listed under the Completed Initiatives section of this report.

Native American Tribes in Region 6: Capacity Development Assessment Tool

The EFC developed a capacity development assessment tool for Native American Tribes within Region 6 for use in evaluating the capacity of tribal water systems. Customized for tribal water systems, the tool was developed with input from tribal representatives based on ongoing dialogue the EFC maintains with

Tribal officials and task force members. The draft assessment tool is under revision and will be sent to EPA Region 6 and tribal task force members for comment early in 1999.

Capacity Development Strategy Assistance to Region 6 States

Sponsor: USEPA Region 6
1998 - Present

The overall goal of this assistance agreement is to assist the Region 6 states of Arkansas, Louisiana, New Mexico, and Oklahoma in the development of a capacity development strategy as required by the Safe Drinking Water Act Amendments of 1996. This project is intended to help states meet SDWA deadlines and to prevent them from having funds withheld from the SRF for a failure to do so.

The EFC is assisting Arkansas, Louisiana, Oklahoma, and New Mexico in preparing a Capacity Development Strategy as required under the 1996 Safe Drinking Water Act. The EFC does not propose to complete the entire capacity development strategy for each of the four states, but intends to assist each state in several tasks that will lead the state to the completion of a strategy.

Services Related to the Establishment of Reasonable Water Rates for Regulated Utilities

Sponsor: Texas Natural Resources Conservation Commission
1998 - Present

This project is divided into three sections: 1) Establishment of Reasonable Water Rates for Regulated Utilities, 2) Development of Characteristics of Well Run Water Systems, and 3) Affordability of Water Treatment Alternatives. For details, see 1998 Annual Report.

Unified Source Water Protection Plan Pilot Project

Sponsors: USEPA Headquarters and USDA Rural Utilities Service
1998 - Present

The objective of this project is to establish a Unified Source Water Protection Plan (USWPP) for communities located near the Village of Mora and within the Mora County portion of the North-Central New Mexico Enterprise Community (La Jicarita EC). This project will build upon applied research and projects conducted by the project team which includes the University of New Mexico Environmental Finance Center (UNM-EFC), the Rural Community Assistance Corporation (RCAC), and the La Jicarita EC. For details, see 1998 Annual Report.

Restoring Ecological Balance in Native American Communities through Comprehensive Community Planning, Sustainable Development, and Ecological Design

Sponsor: USEPA Region 6
1998 - Present

The objective of this project is to assist Native American communities in identifying ways to restore ecological balance through the appropriate use of comprehensive community planning and ecological design techniques. The intent is to assist 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. These six communities would then be used as role models to inform other Native American communities about how to accomplish similar sustainable community development goals.

This project exemplifies how the Environmental Finance Center Network; Native American tribal organizations; governmental entities; and other resource providers and experts can work as a team in helping Native American communities restore ecological balance through the appropriate use of comprehensive community planning, sustainable development, and ecological design techniques. All work efforts will be undertaken at the specific request of Tribal authorities within EPA Region 6. The work will be consistent with the Tribes' cultural values and governmental policies. The work will also be coordinated with other state and federal agencies involved in Tribal environmental issues, including, but not limited to, the EPA, the Indian Health Service, and the Bureau of Indian Affairs. The EFC will ensure that the efforts of this project will complement, not duplicate, efforts of these other agencies. For details, see 1998 Annual Report.

Cost-Effective Environmental Management

Ongoing

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

The Director of the EFC served as vice-chair of the Cost-Effective Environmental Management workgroup of the Environmental Financial Advisory Board. The Environmental Financial Advisory Board (EFAB) is a federal chartered advisory committee that consists of independent experts from all levels of government, including: elected officials; the finance, banking, and legal communities; business and industry; and national organizations who advise EPA on environmental finance issues.

PROPOSED INITIATIVES

Technical Assistance to Nizhnii Tagil, Vodokanal, Russia

Submitted to: Syracuse University Environmental Finance Center (EFC-2)
lead Center, for an EPA assistance agreement

This proposed effort entails implementation of a capacity development project for the Nizhnii Tagil Vodokanal in Nizhnii Tagil, Russia. The UNM-EFC proposes to complete two project components: managerial and financial strengthening; and technical strengthening. For details, see 1998 Annual Report.

Task 1. Managerial and Financial Strengthening – Study Tour and Capacity Development Workshop
The UNM-EFC proposes to arrange, organize and support a 13-day study tour in the United States for the Director of the Nizhnii Tagil Vodokanal and two additional people. This tour would include visits to Washington, DC; Dallas, Texas; Albuquerque, New Mexico; and Denver, Colorado.

Task 2. Technical Strengthening

The UNM-EFC proposes to order specific equipment and ship this equipment to Nizhnii Tagil, Russia. The equipment includes flow meters for water systems and laboratory equipment for water quality testing. The specific equipment list is based on discussions with USEPA.

Infrastructure Planning Conference for the Navajo Nation
Submitted to: The Navajo Nation Office of Engineering Services

The Navajo Nation approached the EFC to organize an infrastructure planning conference in Gallup, New Mexico for the Navajo Nation. The purpose of the conference is public education and awareness targeted to Chapter officials and to a grassroots level public audience. For details, see 1998 Annual Report.

Small Water System Capacity Development for Native American Tribes and Pueblos - Amendment

Sponsor: USEPA Region 6
In Support of: EPA Region 6 Native American Revolving Loan Fund for Drinking Water

Developing a capacity development program for the Native American communities, in conjunction with the Native American Revolving Fund, presents unique challenges. One factor is the governmental structure. Each Tribe and Pueblo has its own governmental structure and there is often rapid turnover in Tribal leaders, which may create a continuity problem in terms of program implementation. The Tribes and Pueblos have varying capacities in terms of environmental programs. Some have quite extensive programs with many employees and much expertise, while others are just beginning the process of establishing environmental agencies. Many of the water systems lack meters, which creates

difficulties in terms of establishing adequate rate structures or implementing water conservation programs. Many of the systems lack trained operators to run the systems. Traditionally, the clean water revolving funds set up by congress have not extended to the Native Americans, therefore, there is not a past history of implementing such a program in Native American communities as there is within the States.

With the additional funding, the EFC intends to add a third component - direct assistance to tribes in technical, managerial, and financial capacity development and direct assistance with Tribal SRF grant preparation. For details, see 1998 Annual Report.

North American Development Bank Assistance Work Plan: Financial Capacity Assistance along the US-Mexico Border Region

Submitted to: North American Development Bank and EPA Office of International Activities

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. Although this problem is not unique to the border area, it is particularly common and pronounced along both sides of the border. Part of this problem relates to a lack of understanding of how to set rates and what elements should be included in a sustainable and equitable rate. Another part of this problem is a lack of appreciation within the community regarding the need to pay for water or wastewater treatment.

This proposal is being submitted to provide a means to address some of these issues in border communities. Another component would be improving the financial capacity of communities along the border region by assisting the NADBank in its efforts to fund environmental infrastructure projects along the US-Mexico Border through assistance to the NADBank and directly to communities. To achieve this end, the EFC would partner with a Mexican partner and the EFC Network, as appropriate, to provide education in rate setting on both sides of the border.

Sustainable Urban Areas: Guiding Growth

Submitted to: EPA OAQPS as an EFC Network proposal

Urban sprawl comprises one aspect of a larger issue: regional patterns of development. Regional development frequently occurs in fragmented patterns, with little coordination between levels of government, between public and private sectors, or between different disciplines including economics, landscape ecology, and natural resource management. However, in reality, these issues are all interconnected: land use, brownfields redevelopment, transportation, and economic vitality are all

interrelated with habitat restoration, water and air quality, and natural resource protection. Feasible, more cost-effective solutions to ensure sustainable urban areas lie in a multi-governmental, multi-issue problem solving process. The challenge is how to integrate this process into local decision making. To address this challenge, the EFC Network proposes to conduct a series of charrettes, which would explore the long-term sustainability of urban areas through a process of "interconnectedness of issues" and between levels of government and the private sector. The charrettes would begin by recognizing the traditional ways in which policy makers approach local challenges. Each charrette would not only focus on issues of local concern, but also demonstrate how a single issue is connected to broader issues and broader geography.

The UNMEFC would concentrate on transportation issues and its effect on sprawl development, including consequences of new roads, land use decisions, and transportation choices by local and regional entities. Specifically, the UNMEFC charrette would examine proposed road construction of a new road through National Park land, which would facilitate growth on the west side of the park. The location of this type of road construction would be a national precedent.

EFC NETWORK COLLABORATIONS

Collaborative Projects

Capacity Development Strategies: Assistance to States and Native American Tribes

University of New Mexico EFC-6 working with:
Environmental Finance Center at Boise State University (EFC-10)

Water/Wastewater Utility Rate Model Demonstration for USEPA Region 6 Agencies

University of New Mexico EFC-6 working with:
Environmental Finance Center at Boise State University (EFC-10)

Restoring Ecological Balance

University of New Mexico EFC-6 working with:
Great Lakes Environmental Finance Center at Cleveland State University (EFC-5)
Environmental Finance Center at Boise State University (EFC-10)

Collaborative Proposals

Sustainable Urban Areas: Guiding Growth

University of New Mexico EFC-6 working with:
University of Maryland Environmental Finance Center (EFC-3), lead Center,
Environmental Finance Center Network

Capacity Development Assistance for the Nizhnii Tagil, Vodokanal, Russia

University of New Mexico EFC-6 working with:
Syracuse University Environmental Finance Center (EFC-2), lead Center

NADBank Assistance Work Plan: Financial Capacity Assistance along the US-Mexico Border Region

University of New Mexico EFC-6, lead Center, with:
Environmental Finance Center Network
Environmental Financial Advisory Board

Collaborative Meetings/Conferences/Workshops

Rate Model Workshops

March 1998 in Albuquerque, NM
University of New Mexico EFC-6 with:
Environmental Finance Center at Boise State University (EFC-10)

Meeting on Ecological Design in Tribal Settings

April, 1998 in Chicago, IL
University of New Mexico EFC-6 with:
Great Lakes Environmental Finance Center at Cleveland State University (EFC-5)
Environmental Finance Center at Boise State University (EFC-10)

Environmental Finance Center Network Forum

June, 1998 in Syracuse, NY
University of New Mexico EFC-6 with:
Syracuse University Environmental Finance Center (EFC-2) - host Center
Environmental Finance Center Network

Association of State Drinking Water Administrators National Conference

October 1998 in Keystone, CO
University of New Mexico EFC-6 with:
Environmental Finance Center at Boise State University (EFC-10)

TECHNICAL PRESENTATIONS-CONFERENCES, MEETINGS, and TRAINING

EFC Presentations - Conferences

Event	Date	Location	Description
Training for Tribes in EPA Region 5	4/1/98	Chicago, IL	Presentation at tribal training on capacity development Issues with EFC's 5 and 10
Workshop on Capacity Development Requirements for New Water Systems and State Revolving Loan Applicants for Arkansas Department of Health	5/12–13/98	Little Rock, AK	Training meeting facilitated by EFC and attended by 20 staff members of Arkansas Dept. of Health representatives from EPA Region 6
Meeting with Representatives from Angel Fire, New Mexico	8/25/98	Albuquerque, NM	Demonstration of Resource Geographic Information System
New Mexico Rural Water Association Training and Workshop for Water System Operators	9/24/98	Tucumcari, NM	EFC presentation and training on Utility Rate Setting and RateModPro
Meeting of New Mexico Municipal League Zoning Official	9/24/98	Taos, NM	EFC presentation on the use of Geographic Information Systems
Association of State Drinking Water Administrators Annual Conference:	10/5–8/98	Keystone, CO	Presentation and Exhibit Table
Middle Rio Grande Conservancy District Meeting	10/6/98	Albuquerque, NM	EFC presentation on Resource Geographic Information and GIS support
New Mexico Environmental Health Conference	10/13–15/98	Albuquerque, NM	Presentation on Texas Rate Study Project and Exhibit Table

E-911 Overview and NMGIC Meeting	10/15-16/98		
Meeting of Council of State Community Development Agencies	10/28-30/98	Portland, OR	Presentation on Blending Engineering and Financing to Assist Small Communities
Louisiana Regional AWWA Meeting	12/15-16/98	Alexandria and Baton Rouge, LA	Presentation on Blending Engineering and Financing to Assist Small Water Systems

EFC Meetings

Event	Date	Location	Description
Meeting with Representative from EPA Office of International Activities	1/8/98	Albuquerque, NM	Discussion of potential EFC assistance along US/Mexico Border
Meeting with Bohannan Houston and Lodestar Project Team	2/4/98	Albuquerque, NM	Discussion of water issues
Meeting with Texas Natural Resource and Conservation Commission	2/4-5/98	Austin, TX	Discussion of capacity development implementation
EFAB Meeting; EFC Directors Meeting	2/9–12/98	Washington, DC	
Meeting with Indian Health Service and other providers of infrastructure support	2/23/98	Santa Fe, NM	Discussion on capacity development for Tribes
Meeting with New Mexico Environment Department	2/26/98	Santa Fe, NM	Discussion of capacity development issues in New Mexico
Oklahoma Department of Environmental Quality, Stakeholders Meeting on Capacity Development	3/2/98	Oklahoma City, OK	Meeting facilitated by EFC. Attendees included representatives from various stakeholder groups, EPA, and Oklahoma DEQ
New Mexico Drinking Water Advisory Group Meeting	3/5/98	Santa Fe, NM	Discussion of capacity development issues for medium and large systems, and Source Water Protection Program

Meeting on Funding Tribal Drinking Water Infrastructure Improvements	3/17/98	Albuquerque, NM	Meeting sponsored by EPA Region 6 and facilitated by EFC
Meeting with New Mexico Environment Department	3/24/98	Santa Fe, NM	Discussion of capacity development issues in New Mexico
Meeting with Representatives from Nambe Pueblo	4/7/98	Albuquerque, NM	Discussion of Tribal Set-Aside Program
Meeting with New Mexico Environment Department	4/14/98	Santa Fe, NM	Discussion of capacity development issues in New Mexico
Meeting with EPA and Cadmus Group	4/16/98	Washington, DC	Discussion of coordination of assistance providers to states on capacity development issues
Meeting of New Mexico Geographic Information Council	4/17/98	Albuquerque, NM	
Tribal Drinking Water Set-AsideTask Force Meeting	4/28/98	Albuquerque, NM	Discussion of Tribal Set-Aside Program
New Mexico Drinking Water Advisory Group Meeting	5/14/98	Santa Fe, NM	Discussion of Safe Drinking Water Program and Operator Certification Program
Meeting with Texas Natural Resource Conservation Commission	6/10–12/98	Austin, TX	Discussion of capacity development implementation issues
New Mexico Drinking Water Advisory Group Meeting	6/11/98	Santa Fe, NM	Discussion of proposed application process for loans, upcoming public meetings and subcommittee meetings
Meeting with Representatives from Sandia National Laboratory and Navajo Nation	6/15/98	Albuquerque, NM	Discussion of potential use of Smart Sampling on Navajo Nation for hazardous waste cleanup
EFC Forum for Funding Agencies and Communities in New York	6/25-26/98	Syracuse, NY	
Meeting with EPA Region 6	7/6/98	Dallas, TX	Discussion of Tribal Set-Aside Task Force, priority list, ranking system, and date of availability of grant funds
The Third Annual New Mexico Infrastructure Finance Conference	7/12-14/98	Albuquerque, NM	EFC Exhibit Table

Meeting with Rural Community Assistance Corporation and La Jicarita	7/15/98	Mora, NM	Discussion of proposal development for Unified Source Water Protection Project in Mora County
New Mexico Drinking Water Advisory Group	7/29/98	Santa Fe, NM	Meeting of Capacity Development Subcommittee
Tribal Drinking Water Set-Aside Task Force Meeting	7/22/98	Santa Fe, NM	
Meeting with Texas Natural Resource Conservation Commission	8/ 3-6/98	Austin, Texas	Discussion of implementation of rate study
New Mexico Drinking Water Advisory Group	8/12/98	Santa Fe, NM	Capacity Development Subcommittee Meeting
EFC Network Director's Meeting	9/13–15/98	Cleveland, OH	
Meeting with New Mexico Environment Department, Drinking Water Bureau	9/17/98	Santa Fe, NM	Discussion of New Mexico Capacity Project
Meeting with Representatives from Nambe Pueblo	9/21/98	Albuquerque, NM	Discussion and Review of Capacity Development Assessment Form
Navajo Nation Infrastructure Planning Conference Meeting	9/24/98	Albuquerque, NM	Discussion of potential project to develop and facilitate conference on infrastructure planning and financing
New Mexico Drinking Water Advisory Group Meeting	9/29/98	Santa Fe, NM	
Meeting with Representatives from Zia Pueblo	10/2/98		Discussion of capacity development issues
Middle Rio Grande Conservancy District Meeting	10/6/98	Albuquerque, NM	EFC presentation on Resource Geographic Information and GIS support
Meeting with New Mexico Environment Department and EPA-6	11/9/98	Santa Fe, NM	Discussion of capacity development program in New Mexico
Meeting with EPA Region 6	11/10/98	Albuquerque, NM	Discussion of EFC activities
Meeting with Rural Community Assistance Corp	11/13/98	Santa Fe, NM	Discussion of Unified Source Water Protection Project in Mora County

Meeting with Louisiana Department of Health & Hospitals, Office of Public Health	11/16-17/98	Baton Rouge, LA	Discussion of capacity development program and business plan requirements for Louisiana
New Mexico Drinking Water Advisory Group Meeting	12/2/98	Santa Fe, NM	Discussion of state-wide needs survey of water systems and water conservation program
Meeting with Rural Community Assistance Corporation and La Jicarita	12/16/98	Mora, NM	Team Meeting for Unified Source Water Protection Project in Mora County
New Mexico Drinking Water Advisory Group	12/17/98	Santa Fe, NM	Source Water Protection Subcommittee
Meeting with Rural Community Assistance Corporation	12/18/98	Albuquerque, NM	Discussion of EFC participation in Tribal Conference in Reno, NV

EFC Training Workshops

Event	Date	Location	Description
EPA Region 4 and 6/States Training on Capacity Development	1/12-14/98	Dallas, TX	EFC presentation on different aspects of capacity for public drinking water systems
UNM Civil Engineering Graduate Seminar	1/29/98	Albuquerque, NM	Presentation on the role of engineering in capacity development
Colorado Rural Water Association Annual Conference	2/19/98	Colorado Springs, CO	EFC presentation and training on Utility Rate Setting and RateModPro
Workshop on Utility Rate Setting and RateModPro	3/23/98	Albuquerque, NM	Meeting with EFC Region 10 and presentation and training of representatives from water systems in Colorado
Workshop on Capacity Development Requirements for New Water Systems and State Revolving Loan Applicants for Louisiana Department of Health and Hospitals, Office of Public Health	4/22-23/98	New Orleans, LA	Workshop facilitated by EFC and attended by Louisiana Dept. of Health and Hospitals Staff and Representatives from EPA Region 6
Workshop on Capacity Development Requirements for New Water Systems and State Revolving Loan Applicants for Arkansas Department of Health	5/12–13/98	Little Rock, AK	Meeting facilitated by EFC and attended by 20 staff members of Arkansas Dept. of Health representatives from EPA Region 6

EFC Forum for Funding Agencies and Communities in New York	6/25-26/98	Syracuse, NY	
Landfill Bioreactors and Biogas Seminar hosted by City of Albuquerque	6/26/98	Albuquerque, NM	Attended seminar
ESRI Annual Conference and Training	7/27–30/98	San Diego, CA	Attended conference
Demonstration of RateModPro	8/11/98	Albuquerque, NM	EFC demonstration and training of El Dorado Water System
Meeting with representatives from Bloomfield, New Mexico	8/17/98	Albuquerque, NM	Demonstration of Resource Geographic Information System
New Mexico Rural Water Association Workshop and Training for Water System Operators	8/27/98	Socorro, NM	EFC Training on Utility Rate Setting and RateModPro
Technology Demonstration by National Laboratories and EPA	9/13-25/98	Albuquerque, NM	Hosted by NMERI/EFC
Introduction to Hydrology Course at Southwestern Indian Polytechnic Inst.	11/16-20/98	Albuquerque, NM	Taught Course
ArcView GIS Course	11/23-24/98	Albuquerque, NM	Taught Course

AVAILABLE PUBLICATIONS

- *Survey and Database Summary Report on GIS Usage in New Mexico*, September 1998
- *Evaluation of a Subsurface Flow Wetland and Evaporation Pond for a Single Family Dwelling in the East Mountain Are of Bernalillo County,* Final Report April 1998
- *Report on Issues in the Development of a County Utility Department: Final Report to Doña Ana County, New Mexico*, November 1997
- *Cost-Effective Environmental Management Case Studies*, October 1997
- *Ecological Baseline Model for the U.S.-Mexico Border*, Final Report September 1997
- *Capacity Development Strategy Report for Texas Natural Resource Conservation Commission*, Final Report August 1997

- *Civil Engineering Options Assessment for the Enchanted Skies Park,* Draft Report July 1997
- *Bioflotation Treatment Unit Demonstration Project*, Final Report July 1997
- *Examples of Capacity Development Assessment Tools & Business Plans from Various States,* July 1997
- *A Guidebook of Financial Tools, prepared by the EFAB and EFC Network*, June 1997
- *Environmental Finance Center Network 1996 Annual Report*, January 1997
- *Management and Financing Options for Small Community Water Systems on the US-Mexico Border Region: Final Report to Doña Ana County, New Mexico*, July 1996
- *A State Survey of Capacity Building Tools*, November 1996
- *A State Viability Survey*, August 1996
- *The Otero County Small Water System Restructuring Project,* November 1995
- *North Valley Wastewater Options Study: Final Report for Bernalillo County, New Mexico and Village of Los Ranchos de Albuquerque,* June 1995
- *Meeting Financial Responsibility Requirements on Tribal Lands,* October 1994
- *Public-Private Partnerships for Environmental Facilities: The Management Challenge for Local Governments,* October 1993
- *Water and Wastewater User Charge Guide for Small Municipalities,* September 1991

ADDITIONAL WORK

The EFC staff also performs contractual work under the Engineering and Environmental Finance Center Division of NMERI (New Mexico Engineering Research Institute). Most of this work consists of research-based projects under contract with state and local governments and other university departments.

New Mexico Resource Geographic Information System

On-going

The New Mexico Resource Geographic Information System (RGIS) Program is a cooperative program between the University of New Mexico and the State of New Mexico General Services Department. Representatives from three UNM public service and research units comprise the RGIS Team including the EFC director representing the New Mexico Engineering Research Institute, Earth Data Analysis Center, and the Bureau of Business and Economic research. Program components include the RGIS Clearinghouse --a publicly accessible resource, database development, technical

support, training, geographic information coordination, and project support for state agencies and local government.

RGIS facilitates the use of GIS in New Mexico in three ways: mapping, communicating, and educating. First, it provides counties and municipalities with public maps in a format appropriate for the most commonly used GIS software. Second, it assists state and local governments with interactive communication and cooperation in the use of GIS. Third, it educates public organizations about the advantages of GIS and trains them in its use. Thus, RGIS promotes statewide-use of GIS for planning and spatial analysis of current and historical trends throughout the state. For more information refer to the RGIS web page at http://rgis.unm.edu:8080.

LodeStar Project: Civil Engineering Options Assessment Report

The EFC provided ongoing civil engineering support services to the LodeStar Project's Enchanted Skies Park and Observatory, which will be a public access park dedicated principally to providing a balanced program of education, research, and public outreach. The *Civil Engineering Options Assessment Report* (August 1997) overviewed factors requiring consideration regarding water source, wastewater treatment and disposal, and other infrastructure decisions at the Enchanted Skies Park. Water usage rates were estimated based on the facility information and a survey of similar parks and monuments where low flow systems and other conservation measures have been implemented. Several different wastewater treatment options were considered and evaluated for engineering difficulties, construction costs, and maintenance costs. The report also included information on geology, hydrology, water supply, and wastewater treatment options. Other issues addressed in the report include legal rights, permitting requirements, construction considerations, facilities and exhibits considerations, and safety and emergency considerations.

ArcView GIS Certified Training Instruction

Ongoing

EFC staff completed the certification process to become an ESRI Authorized ArcView GIS (geographic information system) instructor. The Introduction to ArcView GIS course provides instruction in the basic skills needed to use the software's display editing, analysis, and presentation mapping functions. Classes are typically offered quarterly.

Visiting Faculty at the Southwest Indian Polytechnic Institute (SIPI)

Ongoing

EFC staff taught a five-day course at the Southwestern Indian Polytechnic Institute in Basic Hydrology. SIPI is a National Indian Community College located in Albuquerque, NM. The Basic Hydrology course supports the Environmental Science, Industrial Hygiene, and Water Technology Programs. The 5-day course covered introductory material, surface water processes, groundwater processes, well

design and construction, water quality, water pollution, and water management and legislation. The EFC team taught the water management section of the course.

New Mexico EFC Organization

Management

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EFC at California State University, Hayward, Region 9

Executive Overview

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 by the U.S. Environmental Protection Agency (EPA). The Mission of EFC9 is to promote support and sustain the environmental goods and services industry through a variety of programs and services including but not limited to: small business outreach, environmental business directories, environmental industry Charrettes, environmental export assistance, pollution prevention assistance and Charrettes, technology transfer and an environmental business information clearinghouse. The EFC is making information available on the World Wide Web at **http://www.greenstart.org/efc9**

Summary Statement

EFC9's mission to help small business is derived from recent research revealing the poor performance of the environmental goods and services industry in the US. The current worldwide market for the environmental goods and services industry (EGSI) is about $450 billion (1997) and the largest national market, comprised primarily of small and medium-sized firms, is the United States, accounting for roughly 35 percent of the world trade. Nevertheless, the US industry is starting to mature in most sectors, and is expected to grow at a slower rate than the rest of the world market. In addition, the EGSI faces numerous barriers to future growth including uncertainty in the regulatory process, uneven enforcement, multiple testing requirements and lack of financing for technology commercialization and beyond.

Pollution prevention technology has been identified as the key to success for the EGSI. Pollution prevention technology is the fastest growing and most innovative sector in the environmental industry. Because it reduces or eliminates waste production, it is considered by most experts to be the future and natural path of the industry. However, like the environmental industry as a whole, there are several barriers to pollution prevention implementation, from a lack of equity capital to a lack of appropriate test sites for new technologies.

As a result, EFC9's mandate is threefold:

< Help small business,

< Advance the environmental industry, and

< Promote pollution prevention.

1998 In Review

EFC9 completed a series of tasks in 1998 including five workshops at the National Marketplace for the Environment Conference in Los Angeles, the San Francisco Pollution Prevention Demonstration Project which included two Charrettes focused on alternatives to dry cleaning, an expansion of the 1997 directory, *Financing Environmental Technology: A Funding Directory for the Environmental Entrepreneur*, and an environmental finance workshop held at the National Energy Conference on the Future of Alternative and Sustainable Technologies in Nevada. The following is an overview of the EFC's major accomplishments in the past year.

National Marketplace for the Environment Conference - Los Angeles:

May 6-8, 1998

On May 6 through 8, the Environmental Finance Center (EFC9) presented five Environmental Finance Workshops at the National Marketplace for the Environment Conference in Los Angeles. The three day Marketplace for the Environment Conference was a national conference hosted by Eco Expo and the Environmental Education Foundation, and included a number of informative sessions and workshops as well as an exhibit hall of over 100 innovative environmental technologies. The conference included seven theme tracks consisting of five sessions each. The conference themes included, 1) Transportation, 2) High Performance Buildings & Energy Efficiency, 3) Pollution Prevention: H2O/Air, 4) Green Purchasing, 5) Waste Management/Recycling, 6) The Hazards and Opportunities of De-Regulation, and 7) Environmental Financing. The Environmental Finance Center in Region 9 was a Charter Sponsor of the event.

The conference attracted over 1,000 participants and was an extremely high-profile event for the Environmental Finance Center. In addition to its workshops, EFC9 hosted its own booth on the exhibition hall floor where hundreds of small business owners, and local, state, federal and international agencies were provided with information on the Center and the EFC Network. Finally, EFC9 hosted the following workshops

Workshop #1: Wednesday, May 6 - Pulling Yourself Up: Bootstrapping And Beyond

Workshop 1 offered information on more creative, less known options for funding a small environmental business through private sourcing opportunities.

Workshop #2: Wednesday, May 6 - Getting Government Financing

Workshop 2 included a variety of state and local program representatives who presented public financing opportunities for small environmental businesses.

Workshop #3: Thursday, May 7 - Investment Opportunities in Energy and The Environment (Equity Financing, Venture Capital and Angels)

Workshop 3 provided information on a variety of equity options for the environmental entrepreneur.

Workshop #4: Thursday, May 7 - Small Business Hatcheries: Environmental Incubators

Workshop 4 allowed the audience to meet environmental incubator directors and their tenants.

Workshop #5: Friday, May 8 - Accessing Foreign Markets: Financing and Services for Export

Workshop 5 was designed to help the environmental entrepreneur find programs and funding opportunities to guide them into the export market.

San Francisco Pollution Prevention Demonstration Project C Dry Cleaning Charrettes

In the Fall of 1997, the Environmental Finance Center for EPA Region 9 (EFC9) received a grant from the Environmental Finance Center for EPA Region 5 (EFC5), in conjunction with the US EPA to target a specific industry and produce a plan for stimulating more Pollution Prevention (P2) activities in that San Francisco Bay Area industry. After consultation with EFC5, EPA Region 9 and the Bay Area Hazardous Waste Reduction Committee, EFC9 determined that the dry cleaning industry would make the most suitable target.

As a result, between December 1997 and October 1998, EFC9 conducted numerous informal interviews with regional, county and local government agencies including economic development agencies, small business organizations and representatives, community organizations, dry cleaners, environmental non-profit organizations, and industry insiders concerning the dry cleaning industry. In addition, EFC9 organized and held two Charrettes to identify future pollution prevention approaches and strategies to use with East Bay dry cleaners. The goal of these informal interviews and Charrettes, more specifically, was to solicit the help of dry cleaners, regulatory agencies, local governments and environmental non-profit organizations to determine effective ways to encourage dry cleaners to reduce perchloroethylene (perc) usage, a chlorinated hydrocarbon synthetic solvent, without reducing their profits.

Expanding The Environmental Finance Directory

In 1997, EFC9 completed research on a number of sources of debt and equity capital potentially available to environmental businesses in California. These results were compiled in a comprehensive Directory on financing for environmental technology development and commercialization. This Directory is entitled: *Financing Environmental Technology B A Funding Directory for the Environmental Entrepreneur*. Because of the ensuing popularity of the original volume, EFC9 prepared a 1998 *Directory Update* which

includes expansions and updates of old sections and several new sections including a review of funding sources throughout Region IX. The 1998 Directory has the following chapter headings:

< An Environmental Industry Overview
< General Funding Options
< Venture Capital Investment in the Environmental Industry
< Finding Angels
< Technology Incubators
< Private Funding Sources (including):
  - Online Networks
  - Forums and Fairs
  - Socially Responsible/Environmental Investment Funds
  - Environmental Investment Management Firms
  - Environmental Venture Capital
  - Socially Responsible Banks and Credit Unions
< Federal Government Programs
< Programs in California, Nevada, Hawaii and Arizona, and
< International Opportunities.

EFC9 Workshop: Global Energy Futures Exchange - National Energy Conference on the Future of Alternative and Sustainable Technologies

EFC9 conducted an environmental finance workshop at the Global Energy Futures Conference in Las Vegas on October 28. The conference, national in scope, was hosted by the Nevada Test Site Development Corporation, and was sponsored by numerous national organizations including:

- US Department of Energy,
- Lawrence Livermore National Laboratory,
- Los Alamos National Laboratory,
- Oak Ridge National Laboratory,
- Sandia National Laboratory, and

- President's Council on Sustainable Development,

The title of our workshop was "Renewables: From Concept to Commercialization" and the focus was finance for small environmental businesses from start-up phases to commercialization. The event was designed to provide information on opportunities for finance through little-known resources.

For full details, please see the 1998 Annual Report.

California State, Hayward EFC Organization

Management

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EFC at Boise State University, Region 10

Executive Overview

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, Region 10, 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 BSU 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. The EFC is making information available on the World Wide Web at **http://sspa.boisestate.edu/efc**

Summary Introduction:

The Environmental Finance Center at Boise State University concentrates its resources in performing the following tasks and activities:

- Developing and delivering educational programs including workshops, conferences, training seminars and formal education programs to improve the ability of public and private sector leaders and managers in addressing and resolving environmental finance dilemmas.
- Developing new tools to improve the financial management and management capabilities of small public, private and private not-for-profit water systems.
- Preparing and disseminating practical guides, handbooks and reports on financial and management issues relative to the public sector and environmental system needs.
- Assisting local and tribal governments and other public water and wastewater systems to increase their use of alternative and innovative approaches to financing environmental protection; particularly approaches that provide alternatives to traditional taxation methods.
- Offering training, education, facilitation and policy initiatives that will improve the ability of regional, state and local officials in meeting the challenges of the capacity development requirements relative to the SDWA Amendments of 1996.
- Providing federal and state policy makers with information about the particular needs of small communities for financing assistance and financial tools necessary for meeting regulatory compliance standards. The EFC informs the policy debate regarding the financing of environmental infrastructure projects and the utility of conventional infrastructure financing mechanisms. The EFC also tests and

then suggests new tools and assistance mechanisms that could be utilized at the local, state and federal government levels.

Summary of Core Activities

The Environmental Finance Center at Boise State University has focused on delivering tools to local government and other community water and wastewater system officials for creating sustainable environmental infrastructure operations.

In 1998 the EFC staff conducted six utility rate design workshops within Region 10. The workshops were organized based upon local demand for assistance. Fifty officials from communities in Oregon, Washington and Idaho participated in the EFC's full-day training sessions.

EFC staff also provided utility rate setting and financial management training at several workshops, conferences and training seminars during 1998.

Developing EFC Network Capabilities for Delivering Utility Rate Setting Training

One of the important side benefits of the EFC10's investment in utility rate design training has been the development of staff capability within the EFC network to share information about the use of this important tool. In 1998, EFC10's Director provided technical assistance and training to staff at three sister Environmental Finance Centers; EFC2 at Syracuse University, EFC3 at the University of Maryland and EFC5 at the University of New Mexico.

Safe Drinking Water Act Capacity Development

In 1996, S. 1316 amended Title XIV of the Public Health Service Act, commonly known as the Safe Drinking Water Act. In part, S. 1316 seeks to improve the capacity of regulated public water systems in meeting compliance standards and the general standards of operational efficiency and effectiveness.

A central goal of each of the EFCs is to help create sustainable environmental systems in the public and private sectors. Sustainable systems have the financial, managerial, and technical capabilities to operate in compliance with federal and state environmental protection and health protection requirements. Since 1992, the EFC network has provided training, educational, and analytical services designed to address the "how to pay" issues of environmental compliance.

In 1998, with significant financial support from the EPA Office of Ground Water and Drinking Water, the EFC10 joined the Environmental Finance Center at the University of New Mexico (EFC6) to continue

assisting state drinking water programs in USEPA Regions 2, 6, 7, 8, 9, and 10; and Native American Tribal Governments located within USEPA Region 6 in fashioning capacity development strategies required by the 1996 Safe Drinking Water Act (SDWA) Amendments [Section 1420(c)]. Through this work -- begun in the summer of 1997 -- the EFCs are adding capacity 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 assisted the states of Oregon and Idaho in facilitating the citizen/stakeholder process of presenting findings of fact that will contribute to establishing state capacity development strategies. The EFC has advised the State of Alaska in the formulation of rules setting technical, financial and management standards for new public water systems.

California's Drinking Water Program received assistance in developing a tool for assessing financial capability, as well as specific training for the program's field staff on financial and management capacity. Approximately two hundred officials attended a two-week series of training workshops in Sacramento, Berkeley, Santa Ana and Madera.

At the end of 1998, the EFC began assisting two states in Region 7; Missouri and Iowa. Both states requested the EFC's help in facilitating the citizen/stakeholder advisory processes. Missouri asked for additional help in drafting rules establishing technical, financial and management standards for new public water systems.

SDWA Capability Analysis and DWSRF Loan Application Technical Assistance

As mentioned earlier, significant amendments were made to the Safe Drinking Water Act (SDWA) in 1996; notably in regard to the responsibility of the primacy agencies to improve the capacity of public water systems (PWSs) to comply with safe drinking water standards. 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.

< Assistance to the State of Idaho: Since the establishment of the Drinking Water State Revolving Fund (DWSRF), the EFC10 has assisted the Idaho State Drinking Water Program in developing a capability screening mechanism for DWSRF loan applications as well as providing technical review of loan applications based on that screening mechanism.

< Assistance to the State of Alaska: The EFC at Boise State University provides ongoing assistance to DWSRF administrators in the State of Alaska on SRF issues. For example, the EFC produced a white paper on the issue of depreciation.

Region 10 Lower Boise River Water Pollution Trading Demonstration Project

In the fall of 1997, the State of Idaho was selected as the site of an experimental study on pollution trading by the Region 10 office of Innovation. Idaho's proposal to study the feasibility of pollution trading was selected from three state proposals offered by Region 10 states. The pollution trading feasibility project is focusing on the potential for water pollution trading among point and non-point sources in the lower Boise River watershed area. 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. TMDLs are usually set in order to meet beneficial use conditions for those waterways.

The examination of water pollution trading has created excellent opportunities for the EFC10 to participate in the policy discussions as well as the financial analysis necessary to determine least cost financing options for meeting pollution control targets.

SUMMARY OF NEW PROJECTS

Charrettes

In 1998 the EFC at Boise State University took its first steps in emulating the success of the EFC at the University of Maryland by conducting four charrette events. Based on this experience and the establishment of staff capabilities for conducting these events, it is expected that charrettes will be a standard service offering of the EFC in the future.

- Confederated Tribes of the Siletz Indians Charrette
- South Lake Water and Sewer District Charrette
- City of McCall Water System Financing Charrette
- City of Pocatello Brownfields Project Charrette

AWWA PNS Financial Management Practices Survey

In 1997, the Finance Committee of the Pacific Northwest Section of AWWA (AWWA PNS) collected data from a selected sample of member water systems in Oregon as part of a two-stage effort to develop detailed information regarding water system financial practices. AWWA PNS asked the EFC to submit a project proposal addressing the completion of the second stage of this survey research effort; a survey of AWWA

member water systems in Washington and Idaho. Additionally, this stage includes a compilation of the survey data and a detailed analysis and report of findings.

City of Eagle - Sewer Consolidation Study

In 1998 the City of Eagle, Idaho asked if the Environmental Finance Center at Boise State University could assist the City of Eagle in evaluating the feasibility of consolidating the services provided by the Eagle Sewer District under the City. The City identified the crucial question to be, "Would the citizens of Eagle be better served, politically and financially, if the sewer district were to go under the jurisdiction of the city of Eagle". A list of questions was provided to the EFC by the city of Eagle for consideration in development of a scope of work. The EFC agreed to conduct the study that will provide a list of advantages and disadvantages to consolidation for citizens of the city of Eagle, but will not recommend specifically a proposed action. The advantages and disadvantages will be described within the areas of finance, management and capacity.

Capital Improvement Planning and Financing Tool

The EFC, in cooperation with the BSU College of Engineering, began the development of capital improvement planning and financing tool for small water and wastewater utilities. The goal is to offer a tool that will help small utilities assess their capital facilities and on the basis of that assessment, prepare a multi-year financing plan. This financial information will greatly aid small water and wastewater systems in meeting the full-cost pricing needs of their operations. Beta testing of the tool is planned for the summer of 1999. Multi-state testing of the model should occur in late 1999.

EFC Network Collaborations

The EFC at Boise State University relies upon the partners in the EFC Network to offer assistance to communities, the states and the regional entities in Region 10 EPA. The following are some examples of collaborative efforts with EFC partners:

- Pocatello Brownfields Conference and Charrette. Great Lakes EFC's recognized expert in Brownfields redevelopment joined Boise State EFC staff in conducting two Brownfields mini-conferences and a charrette in Region 10.
- The BSU EFC joined its network partners in Syracuse for the first annual EFC Forum organized by the EFC at Syracuse University. EFC at BSU Director conducted two workshops on financial capacity building and participated in a charrette addressing the financing challenges of the Hamlet of Long Eddy, New York.
- The EFCs at BSU and the University of New Mexico are partners in delivering assistance to states in the area of drinking water system capacity building strategies.

- The Boise State University EFC is providing assistance to the Great Lakes EFC at Cleveland State University relative to their work with Tribal governments in the Midwest.
- EFC Director assisted the EFC at the University of Maryland in conducting financial management training workshops for officials in Pennsylvania and Maryland.

Boise State EFC Organization

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April 1999

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D. MORE INFORMATION ON EFIN

Accessing the EFIN Database

EFIN Search Form Instructions

EFIN Keyword Index

EFIN Abstracts - Publications and Case Studies

ENVIRONMENTAL FINANCING INFORMATION NETWORK

ACCESSING THE EFIN DATABASE

THROUGH THE EPA'S ONLINE LIBRARY SYSTEM WEB SITE:

The EFIN database is available via the OLS Web site. There are two access points:

1. Go to the OLS Web site at **http://www.epa.gov/natlibra/ols.htm** and click on Search OLS.

- Go to the list for Special Collections, click on the Environmental Financing Information Network.

2. Go directly to the EFIN Search page via the Web site at: **http://www.epa.gov/efinpage/efindata.htm**.

For assistance searching the EFIN database, call the EFIN Infoline at (202) 564-4994.

The searching instructions and EFIN Keyword Index are also available via the above Web page. See also the OLS Help page for additional instructions.

For technical assistance, call EPA's National Computer Center at 1-800-334-2405 or (919) 541-7862 (outside the U.S.).

Ordering documents:

All of the records in the EFIN database include ordering information for the documents. The EFIN Center distributes EPA publications produced by:

* the Environmental Finance Program (EFP),
* the Environmental Financial Advisory Board (EFAB), and
* the Environmental Finance Centers (EFCs)

For those EPA documents that are not published by the above mentioned offices of EPA, the EFIN center will refer callers to the appropriate EPA source for the document. Note: The EPA Public Information Center (PIC) has been closed and incorporated in the Headquarters Information Resource Center. Those EFIN database records that feature publications produced by non-EPA sources provide directions for obtaining those publications from the appropriate source.

SEARCH FORM

The following are the primary search fields on the Search Form. There are boxes with options for each field. For Text Fields, the search engine has the options "all the words", "exact phrase" and "any words". The Record Number field has the options "equals" and "is not". The Year Published field includes the options "=", "less than" and "greater than".

Record Number:

Enter record number, if known.
Usually used when a record is cross-referenced.

Ex:123-EFIP

Keywords:

Enter keyword(s) to be searched. See the EFIN Keyword Index.
Ex: stormwater
Ex: wastewater treatment

Main Title:

Enter one or more words from the title excluding words like "a" or "the".

Ex: brownfields financing

Description:

Enter one or more words to be searched in the description of the document.

Ex: municipalities
Ex: financing mechanisms

Author:

Enter any known portion of the author's name.
This includes organizations or individuals.
Word order is not important.

Ex: EFAB
Ex: Environmental Financial Advisory Board

Publisher:

Enter the publishers name, must be specific. For example entering EPA gives a different number of results than entering Environmental Protection Agency.

Year Published:

Enter the year of publication or a range of years.

Ex: 1995

Ex: 1992:1995

Contact:

Enter any word or words from the name of the organization responsible for distributing the document.

Ex: Environmental Finance Program

Note: The OLS Web site also provides the records in a bibliographic format.

EFIN Keyword Index

BOND banks
BOND pools
BONDS
general obligation BONDS
industrial development BONDS
municipal BONDS
private activity BONDS
registered BONDS
revenue BONDS
tax allocation BONDS
tax exempt BONDS
BROWNFIELDS
BUDGETING
BUSINESS

volume CAP
financial CAPABILITY
state CAPACITY
CAPITAL funding
CAPITAL improvements
CAPITAL planning
CAPITALIZATION grants
CASE studies
CERTIFICATION fees
operator CERTIFICATION
user CHARGE systems
effluent CHARGES

COST reduction
COST sharing
COSTS
compliance COSTS
service COSTS
COVENANTS
CREATIVE financing
CREDIT assistance
tax CREDITS

environmental DATA
DEBT financing
DECISION making
DEDICATED tax
DEFAULTS
community DEVELOPMENT
DEVELOPMENT
industrial DEVELOPMENT bonds
DEVELOPMENT fees
federal DIRECT loans
DIRECTORY
solid waste DISPOSAL
DRINKING water
DRINKING water facilities

ECONOMIC analysis
ECONOMIC impact

cost EFFECTIVENESS

EFFICIENCY

energy EFFICIENCY

EFFLUENT charges

EFFLUENT tax

ENERGY efficiency

ENERGY technology

ENFORCEMENT

infrastructure ENHANCEMENT

ENTREPRENEURS

ENVIRONMENTAL assessment

ENVIRONMENTAL data

EROSION

EQUITY

ESTUARIES

EXACTIONS

tax EXEMPT bonds

tax EXEMPTIONS

EXCISE tax

sewer EXTENSIONS

drinking water FACILITIES

solid waste FACILITIES

wastewater FACILITIES

FACILITIES management

FEDERAL direct loans

FEDERAL funding

FEDERAL grants

	FEDERAL programs
fiscal	FEDERALISM
	FEDERAL program
	FEDERAL programs
	FEES
access	FEES
certification	FEES
connection	FEES
development	FEES
impact	FEES
laboratory	FEES
license	FEES
maintenance	FEES
operating	FEES
permit	FEES
tipping	FEES
user	FEES
public	FINANCE
public	FINANCE survey
	FINANCIAL analysis
	FINANCIAL assistance
	FINANCIAL capability
	FINANCIAL incentives
	FINANCIAL management
	FINANCIAL planning
	FINANCING
creative	FINANCING

debt FINANCING
infrastructure FINANCING
alternative FINANCING mechanisms
FINANCING strategies
FINES
FISCAL federalism
FISCAL impact
capital FUNDING
federal FUNDING
state FUNDING
FUNDING
alternative FUNDING
FUNDRAISING
state revolving FUNDS

GENERAL obligation bonds
GENERAL revenues
GOVERNMENT programs
local GOVERNMENTS

GRANTS
block GRANTS
capitalization GRANTS
construction GRANTS
federal GRANTS
supplemental GRANTS
GREEN lights
GROUNDWATER

loan GUARANTIES

HAZARDOUS waste

self HELP

economic IMPACT

fiscal IMPACT

IMPACT fees

capital IMPROVEMENTS

financial INCENTIVES

INCOME tax

INDOOR air pollution

INDUSTRIAL development bonds

INFORMATION management

INFRASTRUCTURE

INFRASTRUCTURE banks

INFRASTRUCTURE enhancement

INFRASTRUCTURE financing

public INFRASTRUCTURE

INTEREST rates

INTERGOVERNMENTAL organizations

INTERGOVERNMENTAL relations

INTERJURISDICTIONAL competition

legal ISSUES

LABORATORY fees

LANDFILLS

LEASE purchasing
LEGAL issues
LEVERAGING
aggressive LEVERAGING
LIABILITY
limited LIABILITY
LICENSE fees
LIMITED liability
green LIGHTS
LOAN guaranties
LOANS
federal direct LOANS
LOCAL governments
LOCAL programs

MAINTENANCE
MAINTENANCE fees
decision MAKING
MANAGEMENT
facilities MANAGEMENT
financial MANAGEMENT
information MANAGEMENT
solid waste MANAGEMENT
stormwater MANAGEMENT
MANDATES
MARINE waters
alternative financing MECHANISMS
MODELS

computer	MODELS
	MUNICIPAL bonds
	NEEDS
	NONPOINT source pollution
	NONPOINT sources
	NPDES permits
general	OBLIGATION bonds
	OCCUPANCY tax
	OPERATING fees
	OPERATIONS
	OPERATOR certification
intergovernmental	ORGANIZATIONS
	OUTREACH
combined sewer	OVERFLOW
public private	PARTNERSHIPS
public private	PARTNERSHIPS coordinator
tribal	PARTNERSHIPS
	PERMIT fees
npdes	PERMITS
	PESTICIDE control
	PLANNING
capital	PLANNING
financial	PLANNING
	POINT source pollution

air POLLUTION
indoor air POLLUTION
nonpoint source POLLUTION
point source POLLUTION
water POLLUTION
POLLUTION control
POLLUTION prevention
bond POOLS
pollution PREVENTION
waste PREVENTION
unit PRICING
PRIVATE activity bonds
public PRIVATE partnerships
public PRIVATE partnerships coordinator
PRIVATIZATION
federal PROGRAM
government PROGRAMS
local PROGRAMS
state PROGRAMS
voluntary PROGRAMS
research PROJECTS
resource recovery PROJECTS
PROPERTY tax
coastal resource PROTECTION
wellhead PROTECTION
PUBLIC confidence
PUBLIC finance

PUBLIC finance survey

PUBLIC infrastructure

PUBLIC private partnerships

PUBLIC private partnerships coordinator

PUBLIC services

PUBLIC works

lease PURCHASING

water QUALITY

water QUALITY fees

RADON

RATE structure

interest RATES

sewer RATES

wastewater RATES

water RATES

RECLAMATION

cost RECOVERY

resource RECOVERY projects

RECYCLING

urban REDEVELOPMENT

cost REDUCTION

source REDUCTION

tax REFORM

REGIONAL coordinators

REGISTERED bonds
REGULATORY activities
intergovernmental RELATIONS
site REMEDIATION
urban RENEWAL
RESEARCH projects
coastal RESOURCE protection
RESOURCE recovery projects
water RESOURCES
REVENUE bonds
REVENUE sharing
REVENUES
general REVENUES
state REVOLVING funds
RULES
RURAL communities

SALES tax
SELF help
SEPTIC systems
SERVICE costs
public SERVICES
SEWAGE treatment
combined SEWER overflow
SEWER extensions
SEWER rates
SEWER systems

combined	SEWERS
cost	SHARING
revenue	SHARING
	SITE remediation
	SLUDGE treatment
	SMALL communities
	SMALL systems
	SOLID waste
	SOLID waste disposal
	SOLID waste facilities
	SOLID waste management
nonpoint	SOURCE pollution
point	SOURCE pollution
	SOURCE reduction
nonpoint	SOURCES
revenue	SOURCES
	STATE
	STATE assistance
	STATE capacity
	STATE funding
	STATE programs
	STATE revolving funds
	STATISTICS
	STATUTES
underground	STORAGE tanks
	STORMWATER
	STORMWATER management

financing STRATEGIES

rate STRUCTURE

case STUDIES

toxic SUBSTANCES

SUPERFUND

SUPPLEMENTAL grants

water SUPPLY

SURFACE water

public finance SURVEY

SURVEY

septic SYSTEMS

sewer SYSTEMS

small SYSTEMS

user charge SYSTEMS

underground storage TANKS

dedicated TAX

excise TAX

effluent TAX

income TAX

occupancy TAX

property TAX

sales TAX

TAX allocation bonds

TAX credits

TAX exempt bonds

TAX exemptions

TAX reform

TAXES
TECHNICAL assistance
energy TECHNOLOGY
TIPPING fees
TOXIC substances
TRAINING
sewage TREATMENT
sludge TREATMENT
wastewater TREATMENT
TRENDS
TRIBAL partnerships

UNDERGROUND storage tanks
UNIT pricing
URBAN communities
URBAN redevelopment
URBAN renewal
USER charge systems
USER charges
USER fees
UTILITIES
wastewater UTILITIES
water UTILITIES
UTILITY rehabilitation

VOLUME cap
VOLUNTARY programs

hazardous WASTE
solid WASTE
solid WASTE disposal
solid WASTE facilities
solid WASTE management
WASTE prevention
WASTEWATER facilities
WASTEWATER rates
WASTEWATER treatment
WASTEWATER utilities
WATER
drinking WATER
drinking WATER facilities
surface WATER
well WATER
WATER pollution
WATER quality
WATER rates
WATER resources
WATER supply
WATER utilities
marine WATERS
WATERSHEDS
WELL water
WELLHEAD protection
WETLANDS
public WORKS

NOTE: YOU MAY ALSO SEARCH BY STATE NAME

EFIN ABSTRACTS - Publications and Case Studies

These titles can be accessed on the Environmental Finance Program's World Wide Web site at **http://www.epa.gov/efinpage/titles.htm**.

E. GLOSSARY

Accelerated Cost Recovery System (ACRS): The tax depreciation, or cost recovery, method for Internal Revenue Service (IRS) purposes, was introduced by the 1981 Economic Recovery Tax Act and was effective for all depreciable property placed in service after December 31, 1980 and before January 1, 1987. ACRS replaced the Asset Depreciation Range (ADR) system and was replaced by the Modified Accelerated Cost Recovery System (MACRS) of the 1986 Tax Reform Act.

Accelerated Depreciation: Any depreciation method that allows for greater deductions or charges in the earlier years of an assets depreciable life, with charges becoming progressively smaller in each successive period. Examples would include the double declining balance and sum-of-the-years digits methods.

Accountant's Equation: The equation which is the basis of a balance sheet. It is as follows: Assets= Liabilities + Owners' Equity.

Accounts Receivable: An asset account reflecting amounts owing on open account from private persons or organizations for goods and services furnished by a government (but not including amounts due from other funds of the same government). Although taxes and special assessments receivable, are covered by this term, they should be recorded and reported separately in Taxes Receivable and Special Assessments Receivable accounts respectively. Amounts due from other funds or from other governments should also be reported separately.

Accrual Accounting Method: A form of reporting profits or losses based on: the consummation of a transaction being accepted by form of contract or invoice without the realization of cash or an expense that has been incurred but has not yet been disbursed.

Accrual Basis: The practice of record keeping by which income is recorded when earned and expenses are recorded when incurred, even though the cash may be received or paid out until later.

Acid-Test Ratio: Also called the quick ratio, the ratio of current assets minus inventories, accruals, and prepaid items to current liabilities.

Administrative Feasibility: A measure of the difficulty of administering an alternative financing mechanism (AFM). Factors affecting administrative feasibility include whether the implementing government can take advantage of existing administrative structure, whether any data required are available (for example, for a commodity tax whether sales of the commodity are easy to track), and the number of employees required to administer the mechanism.

Ad Valorem Tax: A tax based on the assessed value of property. Counties, school districts, and municipalities usually are authorized to levy ad valorem taxes. Special districts can also be authorized to levy ad valorem taxes.

Advance Payments: Payments made by the Lessee at the inception of a leasing transaction.

Advance Refunding: The replacement of debt prior to the original call date via the issuance of refunding bonds.

Advance Refunding Bonds: Bonds issued to refund an outstanding bond issue prior to the date on which the outstanding bonds become due or callable. Proceeds of the advance refunding bonds are deposited in escrow with a fiduciary, invested in U.S. Treasury Bonds or other authorized securities, and used to redeem the underlying bonds at maturity of call date and to pay interest on the bonds being refunded or the advance refunding bonds.

AFM: See Alternative Financing Mechanism [also Financial Tools].

Alternative Financing Mechanism (AFM): Refers to any technique used to fund environmental programs or services, including both capital and operating costs, at the state and local level.

Amortization: A breakdown of periodic loan payments into two components - a principal portion and an interest portion. The gradual reduction of a debt by means of equal periodic payments sufficient to meet

current interest and liquidate the debt at maturity. When the debt involves real property, often the periodic payments include a sum sufficient to pay taxes and hazard insurance.

Angel: An individual who buys into a company at its very beginning.

Angel Lender: An individual who provides funds in the form of a loan to someone of which he is very close and generally does not require rules and restrictions of a formal lender. More commonly, an angel lender is friend, family member or close acquaintance of the borrower.

Annual Percentage Rate (APR): The nominal or effective rate of interest for a specified period (usually a year).

Annualization: The process of adjusting a utility company's annual historical information to reflect a full 12-month period for known changes reasonably expected to continue into the future. Annualization adjustments are routinely made in developing a utility company's total cost of service.

Annual Percentage Rate (APR): The effective rate taking into account compounding and other fees. The nominal rate of interest for a specific period (usually one year).

Appreciation: The increase in the value of an asset in excess of its depreciable cost which is due to economic and other conditions, as distinguished from increases in value due to improvements or additions make to it.

Arbitrage: The investment of low interest bond or note proceeds at higher interest rates. Arbitrage earnings are fully taxable with few exceptions. Municipal issuers are allowed to make arbitrage profits under certain restricted conditions, but Section 103© of the Internal Revenue Code prohibits the sale of tax-exempt bonds primarily for the purpose of making arbitrage profits.

Asset: Anything owned by an individual or a business, which has commercial or exchange value. Assets may consist of specific property or claims against others, in contrast to obligations due others. (See also Liabilities).

Asset Based Lending: A loan to an individual or company collateralized by a specific asset or group of assets. Typically asset based loans do not require real property as collateral.

Asset Sale: An asset sale is the transfer of ownership of government assets, commercial-type enterprises, or functions to the private sector. In general, the government has no role in the financial support, management, or oversight of a sold asset. However, if the asset is sold to a company in an industry with monopolistic characteristics, the government may regulate certain aspects of the business, such as utility rates.

Assurance/Performance Bonding: Performance or assurance bonding is a requirement that users of environmental resources place in an escrow account a sum of money adequate to cover potential future environmental damages.

Authority (Lease Revenue): A bond secured by the lease between the authority and another agency. The lease payments from the "city" to the agency are equal to the debt service.

Balance Sheet: A balance sheet is an itemized statement which lists the total assets and the total liabilities of a given business to portray its net worth at a given moment of time. The amounts shown on a balance sheet are generally the historic cost of items and not their current values.

Banking Program: See economic incentive programs.

Basis Point: One one-hundredth of a percent (.01%).

Basis Risk: The uncertainty about the basis at the time a hedge may be lifted. Hedging substitutes basis risk for price risk.

Beneficiary Pays Principle: See equity.

Business Plan: A written document that gives an overview of your company, its future and its financials.

Business Risk: The risk that the cash flow of an issuer will be impaired because of adverse economic conditions, making it difficult for the issuer to meet its operating expenses.

Betterment: An addition made to, or change made in, a fixed asset that is expected to prolong its life or to increase its efficiency over and above that arising from maintenance, and the cost of which is therefore added to the book value of the asset. The term is sometimes applied to sidewalks, sewers, and highways.

Bond: An interest-bearing certificate issued by governments and corporations when they borrow money. The issuer agrees to pay a fixed principal sum on a specified date (the maturity date) and at a specified rate of interest. In measuring municipal bond volume, a bond is a security maturing more than one year from issuance; shorter-term obligations are usually termed notes or commercial paper.

Bond Anticipation Note (BAN): A note issued by public agencies to secure temporary (often partial) financing for a project that will eventually be fully financed (and the BAN repaid) through the sale of bonds.

Bond Bank: A state-chartered organization that purchases the bonds of local governments and secures its own debt with the pool of local bonds. This arrangement cuts borrowing costs for the local issuers because the bond bank's debt usually carries higher ratings than that of the municipalities, whose issues are usually too small to be rated anyway. Credit enhancements, such as bond insurance, are also cheaper when purchased for larger issues. Localities' use of the bond bank is voluntary.

Bond Counsel: A lawyer who reviews the legal documents and writes an opinion on the security, tax-exempt status and issuance authority of a bond or note.

Bond Discount: The excess of the face value of a bond over the price for which it is acquired or sold. The price does not include accrued interest at the date of acquisition or sale.

Bond Election: The process by which voters approve or reject bond issues.

***Bond-Equivalent Yield*:** The annualized yield to maturity computed by doubling the semiannual yield.

Bond Fund: A fund formerly used to account for the proceeds of general-obligation bond issues. Such proceeds are not accounted for in a capital-projects fund.

Bond Indenture: The contract that sets forth the promises of a corporate bond issuer and the rights of investors.

Bond Insurance: Insurance that can be purchased by an issuer for either an entire issue or specific maturities, which guarantees the payment of principal and/or interest. This security usually provides a higher credit rating and thus a lower borrowing cost for an issuer.

Bond Issued: Bond sold.

Bond Premium: The excess of the price at which a bond is acquired or sold over its face value. The price does not include accrued interest at the date of acquisition or sale.

Bond Proceeds: The money the issuer receives from its bond sale.

Bonded Debt: That portion of indebtedness represented by outstanding bonds.

Bonds Authorized and Unissued: Bonds that have been legally authorized but not issued and which can be issued and sold without further authorization. This term must not be confused with the terms "margin of borrowing power" or "legal debt margin," either one of which represents the difference between the legal debt limit of a government and the debt outstanding against it.

Bonds, Debenture: A form of long-term loan included in debt capital, which is secured by the general credit worthiness of the utility.

Bonds, Mortgage: A form of long-term loan, included in debt capital, which is secured by the utility's property.

Book Value: An accounting term, which usually refers to a business' historical cost of assets less liabilities. The book value of a stock is determined from a company's records by adding all assets (generally excluding such intangibles as goodwill), then deducting all debts and other liabilities, plus the liquidation price of any preferred stock issued. The sum arrived at is divided by the number of common shares outstanding and the result is the book value per common share. Book value of the assets of a company may have little or no significant relationship to market value.

Bridge Financing: A form of interim loan, generally made between a short term loan and a long term loan, when the borrower requires more time before taking on long term financing.

Bubble Program: See economic incentive programs.

Budget: A budget is an itemized listing of the amount of all estimated revenue which a given business anticipates receiving, along with a listing of the amount of all estimated costs and expenses that will be incurred in obtaining the above mentioned income during a given period of time. A budget is typically for one business cycle, such as a year, or for several cycles (such as a five year capital budget).

Callable Bond: A bond that can be redeemed by the issuer prior to its maturity. Usually a premium is paid to the bond owner when the bond is called.

Capacity Credit: A reservation of future capacity in a public facility purchased generally by private real estate developers prior to the construction of that facility. Typically, the revenue generated from selling capacity credits is used to finance facility construction. For example, some communities have built new wastewater treatment facilities by selling capacity credits.

Capital: Funds necessary to establish or operate a business.

Capitalization: Also called financial leverage ratios, ratios that compare debt to total capitalization and thus reflect the extent to which a corporation is trading on its equity. These ratios can be interpreted only in the context of the stability of industry and company earnings and cash flow.

Capital Budget: This is the estimated amount planned to be expended for capital items in a given fiscal period. Capital items are fixed assets such as facilities and equipment, the cost of which is normally written off over a number of fiscal periods. The capital budget, however, is limited to the expenditures which will be made within the fiscal year comparable to the related operating budgets.

Capital Costs: Expenditures that typically result in the acquisition or addition to fixed assets that have a useful life of over one year and a cost greater than a threshold value established by the owner. Capital costs include expenditures for replacements and major additions, but not for repairs.

Capital Lease: A lease that meets at least one of the following criteria, and therefore must be treated essentially as a loan for book accounting purposes: title passes automatically by the end of the lease term; lease contains a bargain purchase option; lease term is greater that 75% of estimated economic life of the equipment; present value of lease payments is greater than 90% of the equipment's fair market value.

Capital Outlay: Expenditures that result in the acquisition of or addition to fixed assets.

Capital-Projects Fund: A fund created to account for financial resources to be used for the acquisition or construction of major capital facilities (other than those financed by proprietary funds, special funds, and trust funds).

Cash Basis: The practice of recording income and expenses only when cash is actually received or paid out.

Cash Flow: This term may have different meanings depending upon who is using the term and in what context. Bankers usually define it as net profits plus all non cash expenses, but it can also be defined as the difference between cash receipts and disbursements over a specified period of time.

Cash Flow Loan: A loan that is made to an individual or a company over a short period of time, typically 12 months or less.

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act.

Certificates of Participation (COP): Financing whereby an investor purchases a share of the lease revenues of a program rather than the bond being secured by those revenues. Usually issued by authorities through which capital is raised and lease payments are made. The authority usually uses the proceeds to construct a facility that is leased to the municipality, releasing the municipality form restrictions on the amount of debt that they can incur.

Collateral: Assets pledged as security against a loan in case of default. The intangible or tangible property given as security to the lender by the account credit for any obligations and indebtedness of account creditor.

Collateral Trust Bonds: A bond in which the issuer (often a holding company) grants investors a lien on stocks, notes, bonds, or other financial asset as security. Compare mortgage bond.

Commercial Loan: A loan from a privately-owned bank at market rates.

Common Stock: Capital stock, other than preferred, which is bought by utility shareholders and becomes part of a utility's equity. Its value is determined in the marketplace, and its return is not a contracted rate as with preferred stock.

Community Water System: A water system which supplies drinking water to 25 or more of the same people year-round in their residences.

Conditional Sale Lease: See tax-exempt lease.

Connection Fee: A charge assessed to new users of a utility system to cover the costs of constructing capacity for their use.

Contracting Out: Contracting out is the hiring of private-sector firms or non-profit organizations to provide goods or service for the government. Under this approach, the government remains the financier and has management and policy control over the type and quality of goods or services to be provided. Thus, the government can replace contractors that do not perform well.

Conventional Mortgage: A loan neither insured by the FHA nor guaranteed by the VA.

Cost of Capital: The weighted-average cost of funds that a firm secures from both debt and equity sources in order to fund its assets. The use of a firm's cost of capital is essential in making accurate capital budgeting and project investment decisions.

Cost of Equity: The return of an investment required by the equity holders of a firm. Cost of equity can be calculated using any number of different theoretical approaches and must take into consideration the current and long-term yield requirements of a firm's cost of capital is essential in making accurate capital budgeting and project investment decisions.

Counterparty Risk: The risk that the other party to an agreement will default. In an options contract, the risk to the option buyer that the option writer will not buy or sell the underlying as agreed.

Coupon Rate: The interest rate specified on interest coupons attached to a bond. The term is synonymous with nominal interest rate.

Covenant: A written agreement or restriction on the use of land or promising certain acts. Homeowner Associations often enforce restrictive covenants governing architectural controls and maintenance responsibilities. However, land could be subject to restrictive covenants even if there is no homeowner's association.

Coverage: The ratio of not revenue available for debt service to the average annual debt service requirements of an issue of revenue bonds.

Credit Enhancement: Credit enhancements enable a state or local government to improve its credit rating and/or acquire capital by providing additional assurance of repayment. Some forms of credit enhancement are subsidized, such as the Rural Development Administration's loan guarantees. Others, such as commercial bond insurance, require the debtor government to pay a fee for the credit enhancement.

Credit Guaranty: A form of guarantying a debt from the debtor in the event of debtor insolvency.

Credit Risk: The risk of default on a bond or a loan.

Current Assets: current assets are those assets of a company which are reasonable expected to be realized in cash or sold, or consumed during the normal operating cycle of the business (usually one year). Such assets include cash, accounts receivable and money due usually within one year, short-term investments, US government bonds, inventories, and prepaid expenses.

Current liabilities: Liabilities to be paid within one year of the balance sheet date.

CWA: Clean Water Act.

Debenture Bonds: See Bonds, Debenture.

Debt: An obligation resulting from the borrowing of money or from the purchase of goods and services. Debts of governments include bonds, time warrants, and floating debt.

Debt to Equity Ratio: A return on investment; an investment created by a form of debt, i.e., bank loan, investor funds, etc. of which is converted to profit than retained in earnings which is referred to as "owner" or "stockholder" equity.

Debt Financing: Raising funds for a business by borrowing, often in the form of bank loans.

Debt Limit (Ceiling: The legal maximum debt-incurring power of a State or locality. Debt limits are often imposed by constitutional, statutory, or local charter provisions.

Debt, Long-term: Debt that is payable more than one year from the date it was incurred.

Debt Per Capita: Bonds divided by population. When compared with other jurisdictions, this statistic serves as an indicator of the use of public debt capacity in the area in question.

Debt Ratio: The ratio of an issuer's debt outstanding to a measure of property value.

Debt Service: The amount of money necessary to pay interest and principal charges on an outstanding debt.

Debt Service Fund: A fund created by a bond indenture and held by the trustee, usually amounting to principal and interest payment for one year, and used only if normal revenues are not sufficient to pay debt service.

Debt Service Fund Requirements: The amount of revenue that must be provided for a debt service fund so that all principal and interest payments can be made in full on schedule.

Debt Service Requirements: The amount of money required to pay interest on outstanding debt, serial maturities of principal for serial bonds, and required contributions to accumulate monies for future retirement of term bonds.

Debt Service Reserve Fund: A fund created by a bond indenture and held by the trustee, usually amounting to principal and interest payment for one year, and used only if normal revenues are not sufficient to pay debt service.

Debt, Short-term: Debt that falls due in a period of under a year.

Declining balance method: An accelerated method to depreciate property. The General Depreciation System (GDS) of MACRS uses the 150% and 200% declining balance methods for certain types of property. A depreciation rate (percentage) is determined by dividing the declining balance percentage by the recovery period for the property.

Default: The failure to make timely payment of interest or principal on a debt instrument; or the occurrence of an event as stipulated in the indenture of trust resulting in an abrogation of that agreement. An issuer does not default until it fails to make a payment.

Depreciation: The amount of expense charged against earnings by a company to write off the cost of a plant or machine over its useful live, giving consideration to wear and tear, obsolescence, and salvage value. If the expense is assumed to be incurred in equal amounts in each business period over the life of the asset, the depreciation method used is straight line (SL). If the expense is assumed to be incurred in decreasing amounts in each business period over the life of the asset, the method used is said to be accelerated. Two commonly used variations of the accelerated method of depreciating an asset are the sum-of-years digits (SYD) and the double-declining balance (DDB) methods. Frequently, accelerated depreciation is chosen for a businesses' tax expense but straight line is chosen for its financial reporting purposes.

Direct Cost: A cost that can be economically traced to a single cost object.

Direct Net Debt: Gross direct debt less debt that is self-supporting (revenue bonds) and double-barrel bonds (general-obligation bonds secured by earmarked revenues that flow outside the general fund).

Discount Rate: The time value of money or the rate of interest a company wants to earn on its investments.

Divestiture: Divestiture involves the sale of government-owned assets or commercial-type functions or enterprises. After divestiture, the government generally has no role in the financial support, management, regulation, or oversight of the divested activity.

Double-Barreled Bond: A bond with two pledged sources of revenue, generally earmarked monies from a specific enterprise or aid payments and the general obligation taxing power of the issuer.

Due Diligence: Process undertaken by venture capitalists, investment bankers or others to investigate a company before financing it; required by law before securities are offered for sale.

EA: See Environmental Assessment.

Easement: In most states, an easement is a legal restriction contained within a deed that prohibits certain land uses in perpetuity. For example, an easement might prohibit development of more than one house on

twenty acres of oceanfront property. Private landowners who place easements on their property for natural resources protection can take a tax write-off representing the value lost on the property due to the deed restrictions.

Earmarking: Statutory or constitutional dedication of revenues to specific government projects or programs.

Economic Impact: Refers to the effects of AFM implementation on state and local economies. Some AFMs could have a disproportionate impact on a particular area or population. For example, a tax on watercraft sales might affect the competitiveness of a particular state's shipbuilding industry. Other AFMs can have a diffuse economic impact on a large population. For example, a motor vehicle license fee may have a small impact on a large population.

Economic Incentive Programs: Economic incentive programs use market-based tools to encourage reduction in polluting behavior. The programs can be structured in a variety of ways. "Bubble" programs treat multiple pollution sources as if they were included in an imaginary bubble, allowing existing sources to adjust pollutant levels within the bubble as long as an aggregate limit is not exceeded. "Offset" programs allow new sources to obtain credits from existing sources to offset pollutant emissions, while "netting" programs allow sources within a single plant undergoing modifications to avoid new source review processes if plant-wide emissions are reduced. "Banking" programs allow sources to store pollution reduction credits for future use or sale.

Economic Life of Leased Property: The estimated period during which the property is expected to be economically usable by one or more users, with normal repairs and maintenance for the purpose for which it was intended at the inception of the lease.

Elasticity: Elasticity is an economic measure of consumer response to price changes. A product or service has an elastic demand if the demand for the product will decrease very quickly as the price increases. Concert tickets typically have an elastic demand -- as prices increase, fewer consumers buy tickets. A product or service has an inelastic demand if the demand for the product is not sensitive to price change. Alcohol and tobacco typically have inelastic demands; consumers will be less sensitive to price changes on these products and are more likely to continue buying them. When considering implementing taxes or fees on products that will be sold, state and local governments need to consider the

elasticity of demand, in order to determine whether the tax or fee will reduce sales, and thereby reduce revenues.

Electronic Bulletin Board: An information service operated from a central computer that allows information to be transmitted electronically to multiple users who dial in with a computer modem.

Emissions: Pollution discharged into the atmosphere from smokestacks, other vents, and surface areas of commercial or industrial facilities; from residential chimneys; and from motor vehicle, locomotive, or aircraft exhausts.

Emissions Trading Programs: Emissions trading programs allow sources of air pollutants to trade pollutants in some fashion, either geographically, over time, or among other sources. See economic incentive programs.

Encumbrances: A lien or any form of indebtedness owed against real or personal property. An encumbrance is also recognized as an unearned equity.

Environmental Assessment: A written environmental analysis that is prepared pursuant to the National Environmental Policy Act (NEPA) to determine whether Federal action would significantly affect the environment and thus require preparation of a more detailed Environmental Impact Statement (EIS).

Environmental Cost Accounting: The addition of environmental cost information into existing cost accounting procedures and/or recognizing embedded environmental costs and allocating them to appropriate products and processes.

EPA: Environmental Protection Agency.

EPCRA: Emergency Planning and Community Right-to-Know Act.

Estimated Useful Life: The period in which an asset is expected to be useful in trade or business.

Estoppel: The act of being prevented from denying or asserting something on the ground that to do so contradicts what has already been admitted or denied either in works or by actions.

Eurodollar Bonds: Eurobonds denominated in U.S. dollars.

Exactions: Exactions are money, land, or construction services and materials provided by a developer or property owner to a public jurisdiction. Also known as proffers, exactions are sometimes required in order for developers or homeowners to gain public approval for building. Local governments can use exactions to require developers to extend wastewater treatment, solid waste management, and other environmental services to new areas.

External/Societal/Social Costs: Costs resulting from impacts on the environment and society for which firms are not held financially responsible. These can include environmental degradation and adverse health impacts. Such costs are intangible in nature and need to be valued by nontraditional methods. Some private costs can also be less tangible.

Equity: Equity reflects the fairness of the distribution of the funding burden for an AFM among individuals. Equity can be approached from two directions -- those who create or contribute to environmental problems should bear the funding burden (the "polluter" pays), or those who benefit from program activities should bear the funding burden (the "beneficiary" pays.)

Equipment leasing: Contracting to pay monthly fees to use equipment, instead of buying it.

Factor: Factors buy current receivables at a discount rate, typically 10% to 25%.

Factoring: The outright purchase of accounts receivable.

Fair market value (FMV): The price for which a wiling seller will sell, and a willing buyer will buy, in an arm's length transaction when neither is under compulsion to sell or buy and both have reasonable knowledge of relevant facts.

Fair market value lease: A lease which includes an option for the lessee to renew the lease at a fair market value at the end of the lease term. Though often referred to as tax leases, not all so qualify.

Fee: A fee is generally a charge for services rendered. Although laws vary widely, many states require that fees be set at rates that will cover only the costs of the services provided.

Finance Lease: A lease used to finance the purchase of equipment; not a true lease. Finance leases are generally considered to be capital leases from an accounting perspective and non-tax leases from a tax perspective.

Financial Statement: Written account of the financial condition of your company; includes a balance sheet and income statement.

Fines and Penalties: Fines and penalties require offenders to pay monetary damages for violating government laws or regulations.

Fixed assets: Those assets of a permanent nature required for the normal conduct of a business, and which will not normally be converted into cash during the ensuring fiscal period. For example, furniture, fixtures, land, and buildings are all fixed assets. However, accounts receivable and inventory are not.

Fixed cost: Fixed costs are operating expenses that are incurred to provide facilities and organization which are kept in readiness to do business without regard to actual volumes of production and sales. Fixed costs remain relatively constant until changed by managerial decision. Within general limits they do not vary with business volume. Examples of fixed costs consist of rent, property taxes, and interest expense.

Franchising of External Services: Under the franchising of external services, the government grants a concession or privilege to a private sector entity to conduct business in a particular market or geographical area–for example, operating concession stands, hotels, and other services provided in certain national parks. The government may regulate the service level or price, but users of the service pay the provider directly.

Franchising of Internal Services: Under the franchising of internal services, government agencies provide administrative services to other government agencies on a reimbursable basis. Franchising gives agencies the opportunity to obtain administrative services from another governmental entity instead of providing them for themselves. In the federal government, these arrangements are often called inter-service support agreements (ISSA).

Full Cost Accounting: A method of financial and management accounting that allocates all direct and indirect historical costs to a product or process.

Full Cost Recovery: Full cost recovery means charging fees to completely cover costs incurred by a particular activity or service. Some state and local governments, as well as local utilities, are beginning to practice full cost recovery by legislatively requiring that fees be set to cover the complete cost of services rendered.

Full Faith and Credit: The pledge of the general taxing power of a government to pay its debt obligations.

Full Payout Lease: A lease in which the total of the lease payments pay back to the lessor the entire cost of the equipment including financing, overhead, and a reasonable rate of return, with little or no dependence on a residual value.

Fund: A fiscal and accounting entity with a self-balancing set of accounts recording cash and other financial resources, together with all related liabilities and residual equities or balances, and changes therein, which are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with special regulations, restrictions, or limitations.

Fungible commodity: A commodity of a nature that one part may be used in place of another part.

General Obligation Bond: A security backed by the full faith and credit of a state or locality. In the event of default, the holders of general obligation bonds have the right to compel a tax levy or legislative appropriation in order to satisfy the debt obligation.

Government-Sponsored Enterprises (GSE): GSE's are federally established, privately owned corporations designed to increase the flow of credit to specific economic sectors. GSE's typically receive their financing from private investment, and the credit markets perceive that GSE's have implied federal financial backing. GSE's issue capital stock and short-and long-term debt instruments, issue mortgage-backed securities, fund designated activities, and collect fees for guarantees and other services. GSE's generally do not receive government appropriations.

Grant: A monetary sum awarded to a State or local government or non-profit organization that does not need to be repaid. Typically, grants are awarded by the federal government to State or local governments, or by States to local governments, to finance a particular activity or facility.

Grant Anticipation Notes (GAN): Notes issued by public agencies to secure temporary financing for projects awaiting the receipt of permanent funding through governmental grants. The GAN is repaid from grant proceeds.

Greenhouse Effect: The theory that continued burning of fossil fuels will increase concentrations of carbon thereby trapping dioxide in the atmosphere, adding heat and moisture. Some scientists theorize that in time this could create a hothouse effect, raising the temperature of the earth, causing glaciers to melt and the sea level to rise. In 1983, estimates for carbon emissions in millions of tons were: United States and Canada 1,245; Western Europe 753; USSR and Eastern Europe, 1,279 developing nations of Asia, Latin America and Africa, 738; China and Central Asia, 482; and Central Japan and Australia, 287.

Gross Direct Debt: The total amount of bonded debt of a government (general obligation bonds plus revenue bonds).

Guarantee, loan: Promise to take responsibility for payment of part or all of a debt if the person borrowing the money fails to pay off the loan.

Guaranty or Guaranty Agreement: The agreement of a third party to pay debt service on a debt in the event of default by the issuer.

Hazardous Waste: A subset of solid waste, which can create a risk to the safety or health of people or the environment. Any solid waste that is ignitable, explosive, reactive or toxic and which may pose a

substantial or potential hazard to human health and safety or to the environment when improperly managed. Reactive refers to the ability to enter into a violent chemical reaction that may involve explosion or fumes. (Use of this term is often highly imprecise).

Home Equity: The difference between the market value of the property and the homeowners mortgage debt.

Impact Fee: A fee assessed against private developers in compensation for the new capacity requirements their projects impose upon public facilities.

Incubator: Building or complex housing start-up or young businesses, where an entity, often the government, subsidizes rent, utilities and other overhead costs.

Industrial-Revenue Bonds: Bonds issued by governments, the proceeds of which are used to construct facilities for a private business enterprise. Lease payments made by the business enterprise to the government are used to service the bonds. Such bonds may be in the form of general-obligation bonds, combination bonds, or revenue bonds.

Income Taxes: A tax charged against individual or corporate income.

Initial Public Offering: The first time a company's stock is sold to the general public (other than by a limited offering) through the stock market or over-the-counter sales.

Installment Sale: Selling property and receiving the sales price over a series of payments, instead of all at once at the close of the sale, is an installment sale. Unless you elect out, you will report the gain on that transaction as you receive it through the series of payments.

Institutional Investor: An organization that buys and sells large volumes of securities, such as a mutual fund, pension fund or bank.

Insured Bond: A municipal bond backed both by the credit of the municipal issuer and by commercial insurance policies.

Interest: The charge or cost of borrowing money, measured in terms of a percentage per annum of the principal amount.

Internal Rate of Return: A return on an investment greater than the amount described in a contract or any other investment instrument. The internal rate-of-return is measured by the ability of the investor to reduce internal expenses during the course of managing the investment; which means the investor actually makes more than what is outlined in the contract or other investment instrument.

Investment Banker: The firm that acts as an intermediary between a company issuing securities and the public; an underwriter or agent who also advises the company issuing the stock.

IPO: Initial Public offering.

Issuance Costs: The costs incurred by bond issuers in connection with bond offerings. These include underwriter spread, feasibility studies, and various professional fees.

Junk Bond: A bond with a speculative credit rating of BB or lower is a junk bond. Such bonds offer investors higher yields than bonds of financially sound companies. Two agencies, Standard & Poor's and Moody's investor Services, provide the rating systems for companies' credit.

Land Trusts: Land trusts are trust funds that can actively acquire, manage, and protect natural lands and resources on behalf of a state or local government. Land trusts can be financed by a variety of revenue sources, although many localities choose to dedicate land-related taxes, such as land transfer taxes, to this purpose.

Lease: A contract through which an owner of equipment (the lessor) conveys the right to use its equipment to another party (the lessee) for a specified period of time (the lease term) for specified periodic payments.

Lease Purchase: Full payout, net leases structured with a term equal to the equipment's estimated useful life. Because many Lease Purchases include a bargain purchase option for the lessee to purchase the equipment for one dollar at the expiration of the lease, these leases are often referred to as dollar buyout or buck-out-leases. Lease purchases are generally considered to be Capital Leases from an accounting perspective and non-tax leases from a tax perspective due to their bargain purchase option and length of lease term.

Lease Rental Bonds: Bonds for which the principal and interest are payable exclusively from rental payments from a lessee. Rental payments are often derived from earnings of an enterprise that may be run by the lessee or the lessor. Rental payments may also come from taxes levied by the lessee.

Lease Schedule: A schedule to a Master Lease agreement describing the leased equipment, rentals and other terms applicable to the equipment.

Lessee: The party to a lease agreement who is obligated to pay the rentals to the lessor and is entitled to use and possess the leased equipment during the lease term.

Lessor: The party to a lease agreement who has legal or tax title to the equipment (in the case of a true tax lease), grants the lessee the right to use the equipment for the lease term and is entitled to receive the rental payments.

Letter of Credit: A contractual obligation by a bank to pay principal and interest in the event of an issuer default.

Leverage: Debt in relation to equity.

Leveraging: The use of grant or loan funds as reserve funds for the issuance of debt. Leveraging is used by several states participating in the Water Pollution Control State Revolving Fund program to increase the amount of funds available for loans.

Liability: Claim on the assets of a company.

Liability Assignment: Liability assigned through common law or statute, whereby individuals or companies may be held financially responsible for environmental damage resulting from their activities.

Lien: An attachment, voluntary or involuntary. A lender will apply a lien to encumber real or personal property. The lien can be granted by an abstract judgment rendered by a court of law.

Life Cycle Costing (LCC): A systematic process of evaluating the life-cycle costs of a product, product line, process, system, or facility by identifying life-cycle consequences and assigning monetary values to those consequences. Also called Life Cycle Cost Assessment (LCCA).

Life-cycle Assessment/Analysis (LCA): A holistic approach to identifying the environmental consequences of a product, process, or activity through its entire life cycle and to identifying opportunities for achieving environmental improvements. EPA specifies four major stages in a life-cycle of a product, process, or activity: raw materials acquisition, manufacturing, consumer use/reuse maintenance, and recycle/waste management. LCA focuses on environmental impacts not costs.

Limited-tax general obligation bond: A general obligation bond that is limited as to revenue sources.

Line of Credit: Lines of credit assure potential lenders that a debtor government will be able to draw on a specified sum of money from another source in the event of default. Unlike letters of credit, lines of credit can be used for any purpose, so debt holders have no guarantee that the debtor will not use the line of credit for other purposes. Availability of funds by the lender based on the account debtor's ability to pay.

Long-Term Debt: Debt that is payable more than one year from the date it was incurred.

Managed Competition: Under managed competition, a public-sector agency competes with private-sector functions or services under a controlled or managed process. This process clearly defines the steps to be taken by government employees in preparing their own approach to performing an activity. The agency's proposal for providing the service, which includes a bid proposal for cost-estimation purposes, is useful in competing directly with private-sector bids.

Mandate Bond (MIFs): A new category of tax-exempt bonds known as Mandated Infrastructure Facility(MIF) Bonds. Under a proposal by the Government Finance Officers Association (GFOA), the bonds could be issued to finance facility construction, acquisition, renovation, or rehabilitation required by federal statutes or regulations. The proposal would essentially allow more private participation in such projects than is currently allowed for tax-exempt bonds.

Market Timing Costs: Costs that arise from price movement of the stock during the time of the transaction which is attributed to other activity in the stock.

Master Lease: A continuing lease arrangement whereby additional equipment can be added from time to time merely by describing that equipment in a new lease schedule executed by the parties. The original lease contract terms and conditions apply to all subsequent schedules. In contrast to a lease contract for a single transaction involving a specific unit of equipment, a Master Lease is essentially a line of credit to draw from over time in order to purchase equipment.

Moral Obligation Bond: A state or municipal bond that is not backed by the full faith and credit of the issuer. The issuer of a moral obligation bond asserts the intent of the legislative body to make appropriations sufficient to cure any deficiency in monies required to meet debt service, but the issuer has no legally enforceable obligation to do so.

Mortgage Bonds: See Bonds, Mortgage.

Municipal Bond: A debt obligation issued by a state, state agency or authority, or a political subdivision, such as county, city, town or village. They may be issue for general governmental needs or special projects. Issuance must be approved by referendum or by an electoral body.

Municipal bond insurance: Insurance policies that protect investors if a municipal bond should default–the bonds will be purchased from investors at par. The insurance may either be purchased by the issuer or the investor. Two major insurers of municipal bonds are the Ambac Indemnity Corporation and the Municipal Bond insurance Association (MBIA). Insured municipal bonds usually have the highest ratings. Subsequently, the bond's marketability increases, which lowers the costs to their issuers. However, the yield on an insured bond is usually lower than similarly rated uninsured bonds–the cost of the insurance is passed on to the investor. To obtain the extra degree of safety, many investors do not care if the yields are slightly lower.

Municipal Improvement Certificates: Certificates issued in lieu of bonds for the financing of special improvements. As a result, these certificates are placed in the contractor's hands for collection from the special assessment payers.

Municipal lease: A lease designed to meet the special needs of state and local governments. The lease contains a non-appropriation clause which states that the only condition under which the entity may be released from its payment obligations is when the legislature or funding authority fails to appropriate funds. Since the lessee is a municipality or an organization supporting the government, it is exempt from paying federal income taxes. For this reason, the IRS does not charge the lessor income taxes on leases to these customers.

National Pollutant Discharge Eliminating System (NPDES): A provision of the CWA, which prohibits discharge of pollutants into the waters of the United States unless a special permit is issued by EPA, a state, or (where delegated) a tribal government on an Indian reservation.

Municipal Securities Rulemaking Board (MSRB): A self-regulatory organization of the municipal securities industry that was created in 1975 under an amendment to the Securities Exchange Act of 1934. Its primary responsibility is to develop rules and regulations to govern the activities of municipal securities dealers, and to provide arbitration facilities to broker-dealers and bank dealers in municipal securities.

Net Financing Costs: Also called the cost of carry or , simply, carry, the difference between the cost of financing the purchases of an asset and the asset's cash yield. Positive carry means that the yield earned is greater than the financing cost; negative carry means that the financing cost exceeds the yield earned.

Net Present Value: The total discounted value of all cash inflows and outflows from a project or investment.

Netting Program: See economic incentive programs.

Non-Point-Source Pollution: Pollutants emanating from an unconfined or unchannelled source, including agricultural runoff, drainage or seepage and air contamination from landfills or surface impoundments.

Non-Recourse: Generally, accounts purchased by the lender remains with the lender. The lender accepts full credit risk for any and all accounts for which it purchases.

Non-Transient, Non-Community Water System: A water system which supplies water to 25 or more of the same people at least six months per year in places other than their residences. Some examples are schools, factories, office buildings, and hospitals which have their own water systems.

Notes: Interest-bearing certificates of governments or corporations that come due in a shorter time than bonds.

Off Balance Sheet Financing: A lease that qualifies as an Operating Lease for the lessee's financial accounting purposes. They are referred to as off-balance sheet financing due to exclusion from the balance sheet asset and debt presentation, except for the portion of payments due in the current fiscal period. Full disclosure of transactions is usually made in the auditor's notes to the financial statements. Periodic payments are recorded as expense items on the lessee's income statement.

Offset Program: See economic incentive programs.

Operating Costs: Costs that are directly related to rendering of services, sale of merchandise, production and disposition of commodities, collection of revenues, and other ongoing activities.

Operating Lease: A lease which is treated as a true lease (as opposed to a loan) for book accounting purposes. As defined in FASB 13, an operating lease must have all of the following characteristics.

- lease term is less than 75% of estimated economic life of the equipment
- present value of lease payment is less than 90% of the equipment's fair market value
- lease cannot contain a bargain purchase option (i.e., less than the fair market value)

- ownership is retained by the lessor during and after the lease term.

An operating lease is accounted for by the lessee without showing an asset (for the equipment) or a liability (for the lease payment obligations) on his balance sheet. Periodic payments are accounted for by the lessee as operating expenses of the period.

Opportunity Costs: The difference in the performance of an actual investment and a desired investment adjusted for fixed costs and execution costs. The performance differential is a consequence of not being able to implement all desired trades.

Original Issue Discount (OID): When a long-term debt instrument is issued at a price that is lower than its stated redemption value, the difference is called Original Issue Discount (OID).

Partnership: A partnership is an unincorporated business that has more than one owner. It is different from a sole proprietorship in that a sole proprietorship can have only one owner.

Payment-in-kind (PIK) Bond: A bond that gives the issuer an option (during an initial period) either to make coupon payments in cash or to give the bondholder a similar bond.

Performance Bonding: See Assurance Bonding.

Performance Guaranty: An "assurance" that if the duties prescribed by a contract are not performed the guarantor assumes said responsibility for the contract's completion.

Personal Loan: A loan from someone you know.

Point-Source Pollution: Any pollution from a confined and discrete conveyance such as a pipe, ditch, channel tunnel, well, fissure, container, rolling stock, concentrated animal-feeding operation or vessel or other floating craft. The return flow from irrigated agriculture is generally not considered point-source pollution.

Point Source/Non Point Source Trading: Point sources discharge pollutants in a well-defined geographic location. Municipal and industrial outfalls (pipes) that discharge into lakes and rivers are examples of point sources. Non-point source pollution is diffuse, and results from a variety of human activities that take place over a wide geographic area. For example, fertilizer or other agricultural chemicals that are washed into rivers are classified as non-point source pollution sources. Point source/non-point source trading in principle involves point sources financing reductions in non-point source pollution in lieu of undertaking more expensive point source pollution reduction.

Polluter Pays Principle: See equity.

Pollution: Contamination of air, water, land or other natural resources that will or is Rely to create a nuisance or render such resources harmful to public health or which is harmful to domestic, municipal, commercial, industrial, agricultural, recreational or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other life.

Pooled Collateral: A form of security provided to a lender for the purpose of a short term or long term loan. Assets are grouped together and pledged to the lender for a single loan.

Potentially Hidden Costs: Costs that are obscured in overhead accounts or overlooked in business decision-making, including costs of up-front, operational, and back-end activities undertaken to comply with environmental laws.

Present Value: The discounted value of a payment or stream of payments to be received in the future, taking into consideration of specific interest or discount rate. Present Value represents a series of future cash flows expressed in today's dollars.

Prime Rate: The interest rate banks charge their best customers.

Priority Lien: First position; the senior lender in a transaction.

Privatization (Public-Private Partnership): Under a public-private partnership, sometimes referred to as a joint venture, a contractual arrangement is firmed between public and private-sector partners that can include a variety of activities that involve the private sector in the development, financing, ownership, and operation of a public facility or service. It typically includes infrastructure projects and/or facilities. In such a partnership, public and private resources are pooled and responsibilities divided so that the partners' efforts complement one another. Typically, each partner shares in income resulting from the partnership in direct proportion to the contracting in that the parivate-sector partner usually makes a substantial cash, at-risk, equity investment in the project, and the public sector gains access to new revenue or service delivery capacity without having to pay the private-sector partner. Leasing arrangements can be used to facilitate public-private partnerships.

Private Placement: The sale of stock in a company directly to a pre-selected buyer, often an institutional investor.

Property Tax: A tax levied on both real and personal property.

Public Offering: The offering of a company's shares to the general public.

Public-Private Partnership: These partnerships involve a variety of techniques and activities to promote more sector involvement in providing traditional government services. They can include involving a private partner in construction, financing, operation, and/or ownership of a facility.

Public Water System (PWS): Any water system which provides water to at least 25 people for at least 60 days annually. There are more than 170,000 PWS's providing water from wells, rivers and other sources to about 250 million Americans. The others drink water from private wells. There are differing standards for PWS's of different sizes and types.

Purchase Option: An option given to the lessee to purchase the equipment from the lessor, usually as of a specified date.

Ratings: Credit quality evaluation of bonds and notes made by independent rating services and brokerage firm analysts. Generally, a higher bond rating lowers the interest rate expected by debtors for

repayment, and therefore overall capital costs. State and local governments can improve their bond ratings by using credit enhancement mechanisms.

RCRA: Resource Conservation and Recovery Act.

Real Estate: Land and anything permanently affixed to it, and those things attached to the building.

Real Estate Investment Trusts (REIT): A method of investing in real estate in a group, with certain tax advantages.

Real Property: Real estate collateral that can only be perfected by a note and a Deed of Trust.

Receivables: Money owed for goods or services already rendered.

Recourse: A type of borrowing in which the borrower (as a lessor funding a lease) is full at risk to the lender for repayment of the obligation. The recourse borrower (lessor) is required to make payments to the lender whether or not the lessee fulfills its obligation under the lease agreement.

Recovery period: The number of years over which the basis (cost) of an item of property is recovered.

Refunded Bonds: Also called a prerefunded bond, one that originally may have been issued as a general obligation or revenue bond but that is now secured buy an "escrow fund" consisting entirely of direct U.S. Government obligations that are sufficient for paying the bondholders.

Return on Assets (ROA): A common measure of profitability based upon the amount of assets invested; ROA is equal to the ratio of either 1) net income to total assets or 2) net income available to common stockholders to total assets.

Return on Equity (ROE): A measure of profitability related to the amount of invested equity; ROE is equal to the ratio of either 1) net income to owner's equity or 2) net income available to common stockholders to common equity.

Revenue Anticipation Notes (RANs): Notes issued in anticipation of non-tax revenues, generally from other governmental entities (i.e., state aid to a school district).

Revenue Base: The revenue base is the value of the product, income, property, or the number of population against which a fee or tax is charged. For example, the revenue base for a state tax per ton of fertilizer sold would be the tons of fertilizer sold in the state, while the revenue base for a motor vehicle license fee would be the number of vehicles licensed in the state. The size and characteristics of the revenue base, along with the rate of the fee or tax, determine the revenue potential of fee and tax programs.

Revenue Bonds: Bonds whose principal and interest are payable exclusively from earnings of a public enterprise.

Revenue Potential: A measure of the amount of money that can be raised by a particular financing mechanism. For fee and tax programs, revenue potential is a function of the rate of the fee or tax and the size of the revenue base. State and local governments need to consider the revenue potential of an AFM in their jurisdiction in order to determine if it meets their financing needs.

Revenue Stability: Revenue stability refers to the pattern of revenues from a particular revenue source. Some sources provide revenues in stable amounts annually. Other revenue sources are unstable, providing only one-time or erratic revenues from year to year. State and local governments should match ongoing program costs to stable revenue sources, while non-recurring costs can be matched to less stable revenue sources.

Revolving Fund: A revolving loan fund program may consist of several accounts or revolving funds that make loans or other types of assistance available for various projects. Typically, the fund is initially capitalized by appropriations, grants, or other monies. After the initial loans are made, future loans are supported by repayments, making the fund "revolving."

Risk:

Basis Risk: The uncertainty about the basis at the time a hedge may be lifted. Hedging substitutes basis risk for price risk.

Business Risk: The risk that the cash flow of an issuer will be impaired because of adverse economic conditions, making it difficult for the issuer to meet its operating expenses.

Counterparty Risk: The risk that the other party to an agreement will default. In an options contract, the risk to the option buyer that the option writer will not buy or sell the underlying as agreed.

Default Risk: Also referred to as ***credit risk*** (as gauged by commercial rating companies), the risk that an issuer of a bond may be unable to make timely principal and interest payments.

Event Risk: The risk that the ability of an issuer to make interest and principal payments will change because of (1) a natural or industrial accident or some regulatory change or (2) a takeover or corporate restructuring.

Exchange Rate Risk: Also called ***currency risk***, the risk of an investments value changing because of currency exchange rates.

Financial Risk: The risk that the cash flow of an issuer will not be adequate to meet its financial obligations.

Inflation Risk: Also called purchasing-power risk, the risk that changes in the real return the investor will realize after adjusting for inflation will be negative.

Interest Rate Risk: For a bond, the risk that a rise in interest rates will decrease the bond's price. For a depository institution, also called funding risk, the risk that spread income will suffer because of a change in interest rates.

Liquidity Risk: The risk that arises from the difficulty of selling an asset. It can be thought of as the difference between the " true value" of the asset and the likely price, less commissions.

Price Risk: The risk that the value of a security (or a portfolio) will decline - in the future.

Regulatory Pricing Risk: Risk that arises when regulators restrict the premium rates that insurance companies can charge.

Reinvestment Risk: The risk that proceeds received in the future will have to be reinvested at a lower potential interest rate.

Risk Assessment: The qualitative and quantitative evaluation performed in an effort to define the risk posed to human health and/or the environment by the presence or potential presence and/or use of specific pollutants.

Risk Indexes: Categories of risk used to calculate fundamental beta, including (1) market variability, (2) earnings variability, (3) low valuation and unsuccess, (4) immaturity and smallness, (5) growth orientation, and (6) financial risk.

Systematic Risk: Also called ***undiversifiable risk*** or ***market risk***, the minimum level risk that can be obtained for a portfolio by means of diversification across a large number of randomly chosen assets. ***Related: Unsystematic Risk***

Unsystematic Risk: Also called the ***diversifiable risk,*** residual risk, or company-specific risk, the risk that is unique to a company such as a strike, the outcome of unfavorable litigation, or a natural catastrophe.

Sale/Leaseback: A lease in which a company sells an asset to another entity in exchange for cash, then leases back the same asset.

SARA: Superfund Amendments and Reauthorization Act.

SBA: Small Business Administration.

SBIC: Small Business Investment Company.

SEC: Securities and Exchange Commission.

Serial Bonds: Bonds whose principle is repaid in periodic installments over the life of the issue.

Corporate bonds arranged so that specified principle amounts become due on specified dates. **Related:** Term Bonds.

7(a): The name for the biggest category of SBA-backed loans.

Service Shedding: Divestiture through service shedding occurs when the government reduces the level of service provided or stops providing a service altogether. Private-sector businesses or non-profit organizations may then step in to provide the service if there is a market demand.

Severance Taxes: Severance taxes are charged for the extraction of natural resources from the land or waters of a state. Examples of severance taxes include water and groundwater withdrawal taxes, oyster and shellfish taxes, timber taxes, and fuel and mineral taxes.

Shareholder: An owner of shares in a corporation.

Short-Term Debt: Debt that falls due in a period of under a year.

Small Business Administration: The federal agency that aims to assist small businesses with advice, financing, and other business development aid. The SBA itself does not make loans, but guarantees repayment of loans made by a bank or finance company.

Small Business Investment Company: Companies, affiliated with the SBA, that channel private investors' money, combined with some government money, to small, fast-growing companies.

Sole Proprietorship: A sole proprietorship is a form of business organization. The distinguishing characteristics of this form are only one owner for the business and the business is unincorporated.

Special Annuity Bonds: Serial bonds in which annual installments of bond principal are arranged so that the combined payments for principal and interest are approximately the same each year.

Special Assessment: A charge imposed against certain properties to defray part or all of the cost of a specific improvement or service deemed to primarily benefit those properties.

Special Assessment Bonds: Bonds payable from the proceeds of assessments imposed against properties which have been specially benefitted by the construction of public improvements.

Special Assessment Fund: A fund used to account for the financing of public improvements or services deemed to benefit primarily the properties against which special assessments are levied.

Special Districts: An independent unit of local government organized to perform a single governmental function or a limited number of related functions. A single purpose or local taxing district can be organized for a special purpose such as a road, sewer, irrigation or fire district. Special districts usually have the power to incur debt and levy taxes.

Special District Bonds: Bonds issued by a special district.

Special Tax Bond: A bond that is secured by a special tax, such as a liquor tax.

Step-up Bond: A bond that pays a lower coupon rate for an initial period which then increases to a higher coupon rate. **Related:** Deferred-Interest Bond, Payment-In-Kind Bond.

Straight line method: A way to figure depreciation for property that ratably deducts the same amount for each year in the recovery period. The rate (in percentage terms) is determined by dividing 1 by the number of years in the recovery period.

Strategic Partner: An agreement with another company to undertake business endeavors together on each other's behalf.

Subordinate: To assign one's collateral position whether in full or in part to another to exchange one's security interest over another.

Subordinated Debenture Bond: An unsecured bond that ranks after secured debt, after debenture bonds, and often after some general creditors in it claim on assets and earnings. **Related:** Debenture Bond, Mortgage Bond, Collateral Trust Bonds.

Superfund: The program operated under the legislative authority of CERCLA and SARA that funds and carries out the EPA solid waste emergency and long-term removal activities. These activities include establishing the National Priorities List (N.L.), investigating sites for inclusion in the list, determining the priority level on the list, and conducting and/or supervising the ultimately determined cleanup and other remedial actions.

Superior Lien: A lien issued by a Federal Court; generally the Federal Court issues superior lien rights to lenders during the course of post bankruptcy petition financing. If approved, the Federal Court will place the lender in front of all other creditors with the intent to benefit all the creditors.

Sustainable Development: The concept of using resources in an ecologically sound manner so that they will be sustainable over the long term. Put another way, by the Executive Secretary of the U.N. Economic and Social Commission for Asia and the Pacific, it is "an approach to progress that meets the needs of the present without compromising the ability of future generations to meet their needs".

Tax: A tax is generally a charge against sales, income or property. Unlike fees, most jurisdictions do not require that there be a direct relationship between a tax and the use of funds.

Tax Anticipation Notes (TANs): Short-term debt that will be retired with taxes to be collected at a later date.

Tax Base: See revenue base.

Tax Credit: A special provision of the law that results in a dollar-for-dollar reduction in tax liabilities that would otherwise be due.

Tax-Exempt Lease: A lease in which the lessee has the option of applying lease payments to the purchase of a facility for a reduced price. The lessee is owner for tax purposes. Also known as a conditional sale lease.

Tax Lease: A generic term for a lease in which the lessor takes the risk of ownership (as determined by the IRS) and, as the owner, is entitled to the benefits of ownership, including tax benefits.

Tax Increment Financing: The dedication of incremental increases in real estate taxes to repay an original investment in improved public facilities that created increased real estate values.

Tax Limit: The maximum rate of taxation which a local government may levy.

Tax Rider: A tax rider allows a locality to "piggy-back" on an existing state tax by charging an additional levy. State laws vary, but most states require the authorization of the state legislature before a locality is permitted to enact a rider on a state tax.

Tax Surcharge: An increased percentage or dollar amount charged by a taxing authority on an existing tax. Temporary surcharges can be a good method for financing non-recurring needs.

Term Bonds: Often referred to as bullet-maturity bonds or simply bullet bonds, bonds whose principal is payable at maturity. **Related:** Serial Bonds.

Term interest: A life interest in property, an interest in property for a term of years, or an income interest in a trust. It generally refers to a present or future interest in income from property or the right to use property which terminates or fails upon the lapse of time, the occurrence of an event or the failure of an event to occur.

Term Loan: A loan made to an individual or a company for over 12 months or more.

The Three C's of Banking: Credit, Capacity and Character. These are the three primary areas on which a bank focuses before lending to its borrower.

Total Cost Accounting: A hybrid term sometimes used as a synonym for either of the definitions given to "full cost accounting," or "Total Cost Assessment".

Transferable Development Rights (TDR) Programs: These programs let owners of rural or undeveloped land sell an set number of development rights to developers at a mutually-agreeable price. The developers can then use the rights purchased to exceed height and density limitations in other, already-developed areas. Ideally, a TDR program is intended to preserve rural and undeveloped land while allowing landowners to reap the full value for their property.

Transient, Non-Community Water System: A system which provides water in a place such as a gas station or campground where people do not remain for long time periods. These systems do not have to test or treat their water for contaminants which pose long-term health risks because fewer than 25 people drink the water over a long period. They still must test for microbes and several chemicals.

Trust Fund: Funds created by State and local governments to receive revenues generated by a tax or other mechanism, and disburse funds for the purposes for which the revenues are collected.

TSCA: Toxic Substances Control Act.

Turnkey Arrangement: A public-private partnership in which a public agency contracts with a private vendor to build a complete facility with specified performance standards agreed to between the agency and the vendor. Since ownership remains with the private partner until construction is complete, generally the private partner will not be bound by public procurement regulations, which often enables the facility to be completed in significantly less time and for less cost than could be accomplished under traditional construction techniques.

Unadjusted depreciable basis: The basis of an item of property for purposes of figuring gain on a sale without taking into account any depreciation taken in earlier years but with adjustments for amortization, the section 179 deduction, any deduction claimed for clean-fuel vehicles or clean-fuel vehicle refueling property, and any electric vehicle credit.

USACE: United States Army Corps of Engineers.

Useful life: An estimate of how long an item of property can be expected to be usable in trade or business or to produce income. Under MACRS, you recover the cost of property over a set period. The recovery period is based on your property's property class. Your property's class is usually determined by its class life. The class life for most property is set and listed in IRS Appendix B.

User Fees: User fees require those who use a government service to pay some or all of the cost of the service, rather than having the government pay for it through revenues generated by taxes. The fees charged for entry into public parks are an example of a user fee.

Value: A term which defines the worth of a thing. Value is usually preceded by a word(s), such as Fair or Fair Market, and defined in the document where found. Not all value for an item is the same.

Venture Capital: Money invested in new enterprises.

Venture Capitalist: An individual or firm who invests money in new enterprises.

V.C.: Volatile organic compound.

Volunteer Activities: Volunteer activities are performed via a formal agency volunteer program or a private non-profit organization. An activity in which volunteers provide all or part of a service and are organized and directed by a government entity can also be considered a form of outsourcing.

Warrant: A security entitling the holder to buy a proportionate amount of stock at some specified future date at a specified price, usually one higher than current market. This "warrant" is then traded as a

security, the price of which reflects the value of the underlying stock. Warrants are usually issued as a "sweetener" bundled with another class of security to enhance the marketability of the latter. Warrants are like call options, but with much longer time spans – sometimes years.

Water Pollution: The introduction of substances that make water impure compared with undisturbed water. Usually this comes from soil erosion, introduction of poisonous chemicals from industries and spills and introduction of domestic sewage or industrial and agricultural wastes.

Watershed: The land area from which water drains into a stream, river, or reservoir.

Wetlands Mitigation Banking: Wetlands mitigation banking programs allow developers to purchase credits in a publicly-owned and managed wetlands site that has been enhanced, restored, or created by a public agency. The developers may use these credits to fulfil wetlands mitigation requirement for impacts in other locations, generally within the same watershed or habitat area.

Working Capital: The cash available to a company for the on-going operations of the business.

Workload Analysis: A workload analysis details the cost of carrying out particular programs or activities. An analysis generally includes estimates of the time required to perform such activities as permit processing and review, compliance inspections, and enforcement activities. Workload analyses help state and local governments estimate costs for program implementation.

Zero-Coupon Bonds: Zero-coupon bonds are bonds priced at a large discount from face value. The bonds mature at full face value so the difference between the original issue price and the face value represents interest income. The issuer of the zero coupon bond saves on cash flow since the interest isn't paid out until the end of the bond holding period.

F. REQUEST FOR COMMENTS AND SUGGESTIONS

This *Guidebook of Financing Tools* is intended as a basic reference document for public and private officials with environmental responsibilities. It provides a compendium of information on more than 340 financing tools that federal, State, and local governments and the private sector can and do use to pay for environmental programs, systems, and activities. The *Guidebook* is divided into ten major sections ranging from traditional financing concepts such as raising capital and enhancing credit to important USEPA priorities such as pollution prevention and community-based environmental protection. Within this arrangement, each financing tool has a one-page write-up that includes a description of the tool, current and potential uses, advantages and limitations, and information sources. The *Guidebook* does not recommend the use of any particular tool -- leaving that decision to the responsible officials familiar with their particular circumstances.

We welcome and encourage comments and suggestions regarding the *Guidebook* and the financing tools themselves. We are particularly interested in receiving suggestions for new tools and completed one-page write-ups of new tools in the *Guidebook* format. To encourage and facilitate that end, we have provided blank one-page write-up forms for suggested new tools at the back of each major section and sub-section. We have also included ten blank one-page write-up forms in this Appendix immediately following this page. All completed write-ups submitted for consideration will be reviewed, edited for format consistency and accuracy, and included in the next update of the *Guidebook*, as appropriate. Editorial corrections of current write-ups will be handled in the same way.

Thank You.

NAME OF TOOL:

Description:

Actual Use:

Potential Use:

Advantages:

Limitations:

Reference for Further Information:

NAME OF TOOL:

Description:

Actual Use:

Potential Use:

Advantages:

Limitations:

Reference for Further Information:

NAME OF TOOL:

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