



ENVIRONMENTAL FINANCIAL ADVISORY BOARD:
Providing Advice and Recommendations to EPA
A Compendium of Reports 2001-2010



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EFAB OVERVIEW

The Environmental Financial Advisory Board (EFAB) is an independent advisory committee chartered in 1989 under the Federal Advisory Committee Act (FACA). Committees under FACA, which provide a role for the public to participate in the federal government's decision-making process, allow the government to draw on the experience and points of view of committee members, providing federal officials information and advice on a broad range of issues affecting federal policies and programs.

EFAB members are appointed by EPA's Deputy Administrator and represent federal, state, and local governments; tribes; the finance and banking communities; business and industry; national and regional organizations; and all levels of government. EFAB produces policy and technical reports on a wide range of environmental finance matters of interest to EPA, often examining the impact of these issues on local governments and small communities.

EFAB initiates projects when EPA requests advice on a specific environmental financing question, or when EFAB members identify important environmental challenges that they believe the Agency should address. Following the identification of work projects, EFAB holds public meetings, workshops, roundtables and working group sessions to gather information used to develop advisories, reports, and letters. When work is complete on a project, EFAB issues its findings to EPA senior managers.

Each year the Board develops a Strategic Action Agenda comprised of projects that supports one or more of the Agency's major goals. EPA's FY 2011-2015 *Strategic Plan* organizes implementation of EPA's mission to protect human health and the environment around five goals:

- 1) Taking Action on Climate Change and Improving Air Quality;
- 2) Protecting America's Waters;
- 3) Cleaning Up Communities and Advancing Sustainable Development;
- 4) Ensuring the Safety of Chemicals and Preventing Pollution; and
- 5) Enforcing Environmental Laws.

In its work, EFAB seeks to provide advice and recommendations to EPA that focus on:

- lowering costs;
- increasing public and private investment; and
- building state, local, and tribal financial capacity.

Over the years, EPA has adopted many of the Board's recommendations, contained in a variety of environmental policy and technical reports, advisories, and letters. To view the Board's current Strategic Action Agenda and completed work products, please visit EPA's website at www.epa.gov/efinpage/efab.htm.

ABSTRACT

This compendium of reports highlights the work of the U.S. Environmental Protection Agency's (EPA) Environmental Financial Advisory Board (EFAB) over the past ten years. The compendium contains summaries of all of the reports and recommendations that EFAB transmitted to the Agency during this period. It also includes summaries of actions EPA took that relate to the report recommendations.

The compendium has been developed in response to requests from Board members and EPA stakeholders for more information on how EPA made use of EFAB research and recommendations. The expectation is that this additional information will inform future EFAB work.

The compendium is divided into four sections relating to major EPA program areas and FY 2011-2015 Strategic Plan goals. Areas covered by these EFAB reports include public and private partnerships, drinking water and wastewater financing mechanisms, solid waste financial assurance tools, and air pollution reduction financing innovations. Examples of report topics include investment options for state water financing authorities, financial assurance issues associated with the long-term storage of carbon dioxide in underground wells, solid waste financial assurance issues related to commercial insurance and cost-estimation, and financing mechanisms to address the reduction of greenhouse gas emissions and other air and non-point source water pollution problems.

The compendium reveals that over the ten year period from 2001 to 2010, EFAB was a productive Federal advisory board for EPA. During the period, EFAB produced thirty-six reports covering four of the five Agency's strategic goals¹. The thirty-six reports were distributed among the following EPA media areas: twenty-four water-related reports; four air-related reports; four solid waste/cleaning up communities-related reports; and four reports that span across all five of the Agency's strategic goals.

Of the twenty-four water reports, ten involve the Clean Water and Drinking Water State Revolving Loan Fund (SRF) programs, recognizing the significant nature of these programs. The remaining fourteen water reports relate to the operations of local public-purpose utilities, the use of public-private partnerships approaches and tools, and watersheds and innovative finance issues.

¹ The safety of chemicals and preventing pollution goal was not addressed as the Board did not receive any EPA requests in that area.

SUCCESS HIGHLIGHTS FROM EFAB REPORTS TO THE AGENCY 2001-2010

The four EFAB projects described in this section represent just a few examples of the many successful outcomes and follow-up actions taken by the Agency and others in response to the thirty-six EFAB reports issued during this period. The projects selected provide a good overview of the variety of important environmental media and finance issues examined by the Board in response to specific Agency requests.

Report

Private Sector Initiatives to Improve Efficiencies in Providing Public Purpose Environmental Services (July 2001) - Page 39

Recommendations

EFAB recommended that EPA call publicly for private activity bond reform to support urgent environmental infrastructure needs. The Board urged the Agency to support the exemption of private activity bonds (PABs) from state volume caps, whose proceeds finance public-purpose drinking water and wastewater facilities.

Actions/Outcome of Report

In the FY 2007 President's Budget, EPA proposed to exempt PABs used to finance drinking water and wastewater infrastructure from the state volume caps.

Report

Innovations in Watershed Financing (January 2005) - Page 29

Recommendations

EFAB recommended that EPA sponsor a roundtable involving states, localities, financial institutions, businesses, nonprofits, and others to explore the full range of possible financing options for watershed programs and activities. The Board further recommended that EPA expand training for watershed groups using innovative financing and funding tools, local resources and networks to increase knowledge about, and the potential use of, a wide variety of financing and funding options.

Actions/Outcome of Report

On March 9, 2006, EPA's Office of Wetlands, Oceans and Watersheds (OWOW) funded a watershed finance roundtable focused on diversifying funding options, utilizing private sources of funding and building watershed organizations' business strategies. The roundtable provided a forum for discussion and the creation of action items that participants could pursue. OWOW also developed a number of online tools and training modules to help watershed organizations prioritize activities that require funding and to learn about the basic steps involved in obtaining

SUCCESS HIGHLIGHTS (CONTINUED)

watershed funding. **Examples:** The University at Southern Maine and Boise State University Environmental Finance Centers² developed a watershed planning tool, called *Plan 2 Fund*, that estimates the costs of watershed plans, goals and objectives, assesses local resource match needs, and determines the funds needed to meet goals and objectives. Boise State developed an *EFC Financial Dashboard* to help communities assess the financial status of their water systems.

Report

Innovative Finance Program for Air Pollution Reduction (November 2005) - Page 8

Recommendations

EFAB recommended that EPA encourage States to create Air Quality Finance Authorities, or empower existing environmental finance authorities to finance certain types of air emission reduction equipment; or at least, create a state-wide or regional air emissions reduction program.

Actions/Outcome of Report

Congress appropriated funds for FY 2008 to help reduce harmful emissions from heavy duty diesel engines. With those funds, EPA's Office of Transportation and Air Quality issued a \$3.4 million grant solicitation as part of the SmartWay Clean Diesel Finance Program to establish innovative finance projects, including air financing authorities.

Report

Financial Assurance for Underground Carbon Sequestration Facilities (March 2010) - Page 11

Recommendations

The Board recommended that EPA use a blend of RCRA subtitle C financial assurance requirements (substantial business relationship) and SDWA financial assurance requirements for Class I wells. Further, EFAB urged EPA to require a periodic review of the scope of obligations covered by financial assurance as well as the continued viability of the financial instruments used.

Actions/Outcome of Report

EPA referenced the EFAB report findings and recommendations in detail in the final rule, *Federal requirements Under the Underground Injection Control (UIC) Program for Carbon Dioxide (CO₂) Geologic Sequestration Wells*, published in the Federal Register on December 10, 2010.

² EPA supports ten Environmental Finance Centers around the country through a grant program.



EPA'S STRATEGIC GOALS



EPA's Strategic Goals

Goal 1 – *Taking Action on Climate Change and Improving Air Quality*



Reduce greenhouse gas emissions and develop adaptation strategies to address climate change and protect and improve air quality.

Goal 2 – *Protecting America's Waters*



Protect and restore our waters to ensure that drinking water is safe, and that aquatic ecosystems sustain fish, plants, and wildlife, and economic, recreational, and subsistence activities.

Goal 3 – *Cleaning Up Communities and Advancing Sustainable Development*



Clean up communities, advance sustainable development, and protect disproportionately impacted low-income, minority, and tribal communities. Prevent releases of harmful substances and clean up and restore contaminated areas.

Goal 4 – *Ensuring the Safety of Chemicals and Preventing Pollution*



Reduce the risk and increase the safety of chemicals and prevent pollution at the source.

Goal 5 – *Enforcing Environmental Laws*



Protect human health and the environment through vigorous and targeted civil and criminal enforcement. Assure compliance with environmental laws.

Cross-Goal Reports



Reports in this category span across all five of the Agency's strategic goals and provide recommendations and solutions that can be used to advance work in all five of the goal areas.

SECTION 1

TAKING ACTION ON CLIMATE CHANGE AND IMPROVING AIR QUALITY





Name of Report: Financing Mechanisms for Reducing Greenhouse Gas Emissions, and Other Air and Water Pollution Problems

EPA Program Offices: Office of Air and Radiation and Office of Water

Date of Report: March 2010

Summary

This report looked at ways to create finance mechanisms to address the reduction of greenhouse gas emissions and other air and non-point source water pollution problems. The report called for the implementation of programs at the state and local levels to finance the installation of energy efficiency and environmental improvement devices at public and not-for-profit facilities such as: local government buildings; colleges and universities; hospitals; schools; and churches.

Recommendations

1. The Agency urge the States to adopt programs as described in the report to facilitate the financing of both energy efficiency and environmental improvement projects for the benefit of public agencies as well as nonprofit organizations.
2. The Agency urge states to enact statutes that: a) create Air Quality Finance Authorities which, as conduit bond issuers, can access the municipal bond market to finance such programs, or b) empower counties and other units of local government to issue bonds for such purposes.
3. The Agency urge the States to enact statutes to enable localities to: a) enter into voluntary contracts with homeowners, farmers, local government agencies, and nonprofit organizations, to finance energy efficiency and environmental improvement projects on their premises; b) finance such projects through the issuance of taxable or tax-exempt bonds, as applicable; and c) secure such financings by liens and assessments against the program participants' real property.
4. The Agency initiate discussions with the Departments of Energy, Housing and Urban Development, Transportation, Treasury, Office of Management & Budget, and any other relevant agency to determine whether the Administration should recommend to the Congress that Section 503(b)(3) of the Internal Revenue Code be amended to recognize applicable tax credits for energy efficiency and environmental improvement projects.
5. The Agency should work closely with individual states that are developing and implementing their own new and innovative programs to finance energy efficiency, air quality improvement, and non-point source water pollution projects.

Outcomes

- EPA is encouraging state and local air agencies to implement innovative financing options for homeowners who want to replace older biomass appliances with more efficient, less polluting units. The Agency knows of suggestions to explore biomass as an energy efficiency option for the Department of Energy's Property Assessed Clean Energy (PACE) program. As states pass legislation to allow the PACE program, EPA is encouraging them to broaden this legislation to include other environmental projects.

Financing Mechanisms for Reducing Greenhouse Gas Emissions, and Other Air and Water Pollution Problems Outcomes (continued)

- EPA is exploring a Voluntary Environmental Improvement Bond pilot with a state air agency to help homeowners finance the replacement of older woodstoves along with improved weatherization.

Note: This pilot was interrupted on July 6, 2010 when the Federal Home Finance Agency (FHFA), caretaker of Freddie Mac and Fannie Mae, announced that it would no longer honor mortgages with liens securing residential energy improvements. As a result of this, these residential pilots came to a halt.



Name of Report: Voluntary Environmental Improvement Bonds (VEIBs): An Innovative, Local, Environmental Finance Concept for Mitigation of Climate Change Risk; Air Pollution Reduction; and the Reduction of Non-Point Source Water Pollution

EPA Program Office: Office of Air and Radiation and Office of Water

Date of Report: June 2009

Summary

In this report, EFAB discusses the concept of VEIBs, which produce long-term, low-cost incentives for installing improvements to reduce green house gas emissions, improve air quality and reduce non-point source water pollution. The report urges EPA to encourage states and local governments to adopt VEIB programs that embrace the types of environmental improvements needed across the nation.

Recommendations

1. The Administrator request the President of the United States create an inter-agency task force to examine security interest in property, specifically to define the characteristics of a Property Secured Obligation (PSO) based VEIB program and encourage the adoption of such VEIB programs by state and local governments. The task force could be composed of EPA, the Department of Agriculture, the Department of Housing and Urban Development, the Department of Energy, the Department of Treasury and other agencies.
2. The Administrator encourage this inter-agency task force to study and recommend changes to the federal tax code and other initiatives to enable the issuance of tax-exempt bonds to finance energy efficiency and environmental improvements owned and operated by property owners with appropriate linkages to the wider public good.
3. The Administrator create an intra-agency task force, with representatives from the Offices of Water and Air and Radiation and regional offices, to educate and advocate the adaption of PSOs as the essential underlying security for VEIB programs throughout the country.
4. EPA reviews its discretionary grant and other authority in programs where properly designed VEIBs can create further financial incentives for communities to adopt their own VEIB programs.

Outcomes

- EPA's Office of Air and Radiation (OAR) supports the VEIB concept and is exploring the program's potential to finance a variety of environmental and energy efficiency programs.
- OAR has followed with interest the development of the City of Berkeley's VEIB program to encourage private adoption of greenhouse gas (GHG) reducing technology and is supporting the use of such finance tools to help communities with air pollution problems.
- OAR is investigating ways to work with other federal agencies for promoting this sort of innovative financing option.

Voluntary Environmental Improvement Bonds (VEIB): An Innovative, Local, Environmental Finance Concept for Mitigation of Climate Change Risk; Air Pollution Reduction; and the Reduction of Non-Point Source Water Pollution (continued)

Note: On July 6, 2010 when the Federal Home Finance Agency (FHFA), caretaker of Freddie Mac and Fannie Mae announced that it would no longer honor mortgages with liens securing residential energy improvements, all future environmental and energy efficiency programs were halted.



Name of Report: Financial, Underwriting, Risk Mitigation and Consumer Protection Considerations for the Adoption of Voluntary Environmental Improvement Bond (VEIB) Programs

EPA Program Office: Office of Air and Radiation and Office of Water

Date of Report: June 2009

Summary

This report discusses specific underwriting and risk management considerations that should be followed in the implementation of properly designed VEIB programs to assure that the maximum public and private environmental and economic benefits can be derived on a sustainable basis. The report details the design structure and uses of VEIBs and contains specific recommendations about underwriting their deployment to achieve real environmental benefits. The seven recommendations below are suggested to amend or enact statutes to adopt Property Secured Obligations (PSO) authority for VEIB programs.

Recommendations

1. The statute must define public improvements – such as energy efficiency and environmental improvements – to include those owned and maintained by individual property owners.
2. The statute must authorize as many types of such improvements as feasible.
3. The statute must enable sponsoring local governments or special taxing districts to distinguish between improved and unimproved properties.
4. The statute must authorize localities or special taxing districts to impose a discretionary special tax or assessment based on property improvements rather than on the property assessment.
5. The statute must authorize sponsoring local governments or special taxing districts to impose the discretionary special tax or assessment on those improved properties whose owners have consented to the imposition of the special tax or assessment.
6. The statute must authorize the issuance of property secured debt by the sponsoring local government or a special taxing district and authorize the execution of property secured debt.
7. The statute must authorize, if a special taxing district is required, the sponsoring local government to accelerate district formation by petition of property owners requesting the improvements and consenting to the imposition of a special tax or assessment.

Outcomes

- EPA's Office of Air and Radiation (OAR) supports the VEIB concept and is exploring the program's potential to finance a variety of environmental and energy efficiency programs.
- OAR has followed with interest the development of the City of Berkeley's VEIB program to encourage private adoption of greenhouse gas (GHG) reducing technology and is supporting the use of such finance tools to help communities with air pollution problems.

Financial, Underwriting, Risk Mitigation and Consumer Protection Considerations for the Adoption of Voluntary Environmental Improvement Bond (VEIB) Programs Outcomes (continued)

- OAR is investigating ways to work with other federal agencies for promoting this type of innovative financing option.

Note: On July 6, 2010 when the Federal Home Finance Agency (FHFA), caretaker of Freddie Mac and Fannie Mae announced that it would no longer honor mortgages with liens securing residential energy improvements, all future environmental and energy efficiency programs were halted.



Name of Report: Innovative Finance Program for Air Pollution Reduction

EPA Program Office: Office of Air and Radiation

Date of Report: November 2007

Summary

This report reviewed the SmartWay Transport program to determine which financing options could help make diesel truck retrofit kits more attractive. The Board examined a number of issues related to the use of the kits, including the possibility of parties receiving monetary credits for emissions reduction, identifying or setting the values for credits, enabling national tradability of the credits, and the bundling of credits for use by sources of financing for the kits. During this examination, EFAB decided to expand its review to include the impact of millions of small polluting diesel engines, stationary or mobile.

Recommendations

1. EPA should encourage states to create Air Quality Finance Authorities (AQFAs) or empower existing environmental finance authorities to finance certain types of air emission reduction equipment or, at least, create a state-wide or regional air emissions reduction financing program.
2. EPA should encourage state AQFAs to offer long-term, low-rate financing to small private owners of pollution equipment to upgrade their equipment or, if applicable, to retrofit it to reduce emissions.
3. EPA should encourage state AQFAs be the nominal purchasers of such pollution reduction equipment for the purpose of achieving volume discounts which can be passed on to end users.
4. EPA should encourage state AQFAs to negotiate fleet fuel discounts on behalf of those companies who use their programs.
5. EPA should encourage state AQFAs to acquire the rights to the emission reduction credit on each transaction and use or sell those emission credits to further reduce the cost of the program.
6. EPA should review all of its funding programs that have a nexus to air emissions with a view to, wherever possible, using them as an incentive to encourage states to take the above actions.
7. EPA should approach the Department of Transportation regarding the use of a portion of the untapped \$15 billion in private activity bonds to underwrite mobile source air emissions reduction efforts.
8. EPA should form regional task forces in each EPA region to facilitate dialogue with states on these matters, bearing in mind differences in state laws and differences in state priorities with respect to air emission reductions.
9. EPA should consider: a) undertaking the development of new rules which would permit the trading of mobile emission reduction credits (MERCs) generated through financing programs such as those described herein; b) obtain advice on generic questions such as bond counsels' opinions on the questions of tax-exempt bond issuance that are raised above; c) coordinate the work of the

Innovative Finance Program for Air Pollution Reduction Recommendations (continued)

respective Regional Task Forces; and d) disseminate information about advances made in developing innovative financing programs among them.

Outcomes

- Under the Energy Policy Act (2005), Congress appropriated funds for fiscal year 2008 to help reduce harmful emissions from heavy duty diesel engines. With those funds, EPA's Office of Transportation and Air Quality (OTAQ) issued a \$3.4 million grant solicitation as part of the SmartWay Clean Diesel Finance Program to establish innovative finance projects. OTAQ also entered into a cooperative agreement with the Environmental Finance Center at Cleveland State University to conduct demonstration projects on the issuance of bonds, financial and tax incentives, and other financial mechanisms to support clean diesel projects.

SECTION 2

PROTECTING AMERICA'S WATERS





Name of Report: Financial Assurance for Underground Carbon Sequestration Facilities

EPA Program Offices: Office of Water and Office of Air and Radiation

Date of Report: March 2010

Summary

This report identifies and examines financing issues related to implementing a carbon dioxide (CO₂) underground injection control program. Such a program would include the provision of the financial assurance needed to address potential current and future liabilities associated with the underground injection of CO₂ in storage wells for the purpose of carbon capture and long-term sequestration.

Recommendations

1. EPA should use a blend of the RCRA subtitle C financial assurance requirements and the SDWA financial assurance requirements for Class I wells as the model for establishing financial assurance for new Class VI wells.
 - EPA should extend the RCRA acceptance of a party with a “substantial business relationship” to the guarantee provisions for SDWA.
 - EPA should allow the SDWA Class I bankruptcy notification provision be applied to the Class VI wells.
 - EPA should allow the SDWA Class VI regulations extend the RCRA provisions to include bankruptcy or loss of authority of the trustee.
 - EPA should consider adding a new category of financial assurance to the Class VI program that provides the Agency with the flexibility to approve a “functional equivalent” to the established RCRA financial tests.
2. EPA should periodically review the scope of obligations covered by financial assurance as well as the continued viability of financial instruments being used. (The Agency could link the amount of financial assurance required to cost estimates that are upgraded on a regular basis; e.g., every five years.)

Outcome

The Board’s findings informed EPA’s Office of Water’s guidance document, “Financial Responsibility for Underground Injection Control Program Class VI Geologic Sequestration Wells.” The guidance included the Board’s recommendations and was published with the geological sequestration rule after completion of the public comment period.



Name of Report: Water Loss Reduction Financing Mechanisms for Drinking Water Distribution Systems

EPA Program Office: Office of Water

Date of Report: March 2010

Summary

This report addresses the current scope of water loss; practices, benefits, and obstacles to implementing water loss control programs; case studies of successful water loss control programs, and an overview of funding mechanisms available. EFAB examined financing alternatives to detect and reduce leaks and to improve water and energy conservation in water distribution systems.

Recommendations

To make water loss programs effective and encourage water utilities to implement these programs, EFAB made the following recommendations:

1. EPA should encourage utilities to initiate practices to improve asset management and implement environmental management systems.
2. Increased utility funding will be necessary to initiate, implement, and continue water loss control programs. This can be accomplished through existing funding mechanisms such as user charges; federal, state, public, and private grant and loan programs; and revenue bonds.
3. Obstacles to implementing utility full cost rate pricing should be addressed. By maximizing the use of reasonable financing mechanisms and incorporating a household affordability rather than community affordability focus to rate making practices, communities can better meet their capital requirements and minimize the cost burden on their low income residents.
4. EFAB endorses water audit and asset management programs as excellent tools to assist in decreasing water losses. However, whether a state mandates or provides incentives to perform water audits and asset management programs as part of the SRF funding process should be determined on a state by state basis. EFAB noted that where Green Project Reserve qualification requires that a business case for improved efficiency be demonstrated, a water audit and an ongoing asset management program are the best means to accomplishing a successful business case. States may consider ranking strategies for SRF funding applications that provide an incentive for projects that include implementing water loss control and for systems with existing, successful water loss control programs.
5. States should be encouraged to implement or clarify requirements for water loss reporting and control. Further, state regulatory agencies should provide assistance for implementing water audit practices, especially for small water supply systems.
6. Water projects that do not automatically meet categorical criteria for “green project” status should still be able to qualify for the Green Project Reserve program provided that sufficient business case for improved efficiency is established.

**Water Loss Reduction Financing Mechanisms for Drinking Water Distribution Systems
Recommendations (continued)**

7. Where feasible and appropriate, regulatory agencies should facilitate small utility consolidation or other service provider relationships, usually with larger neighboring utilities that can provide infrastructure management and financing more efficiently.

Outcome

The recommendations provided support EPA's ongoing efforts for water loss reduction and substantiate the need for water loss reduction projects.



Name of Report: Relative Benefits of Direct and Leveraged Loan Approaches for State Revolving Fund (SRF) Programs

EPA Program Office: Office of Water

Date of Report: August 2008

Summary

This report provided guidance on leveraging the Clean Water and Drinking Water State Revolving Fund (SRF). EFAB conducted a detailed analysis of National Information Management Data for both the Clean Water and Drinking Water SRF programs and supplemented the analysis with EFAB members' experience working with the state SRFs. Based on its analysis, the Board concluded that state programs that leverage their SRF funds have provided greater assistance as a percentage of their capitalization grants than those that use the direct loan approach.

Recommendations

1. EPA should encourage direct loan states to improve SRF sustainability by showing those states how leveraging can be used to increase their retained earnings.
2. EPA should assist states in developing sustainable SRFs by administratively allowing states to accelerate capitalization grant draws, modifying its interpretation of the perpetuity rule, and by advocating for arbitrage relief focused specifically on SRF programs.

Outcome

EFAB's recommendations have been shared with states and representatives from communities that rely on SRF assistance and other stakeholders. The recommendations may require changes in law and regulation. The Agency continues to work on a number of ideas and proposals to further enhance the purchasing power of the SRF programs.



Name of Report: Public-Private Partnerships in the Provisions of Water and Wastewater Services: Barriers and Incentives

EPA Program Office: Office of Water

Date of Report: April 2008

Summary

This report examined how public-private partnerships could, where appropriate, address wastewater and drinking water infrastructure needs over the next five to ten years. EFAB identified the barriers and incentives to successful partnerships and examined successful partnership models. This work involved a review of past public-private partnerships work undertaken by the Board and EPA, as well as ongoing partnership developments in infrastructure areas, particularly transportation.

Recommendations

For Action by the U.S. Congress

1. Eliminate the state-level caps on public-purpose Private Activity Bonds (PABs) issued for construction of drinking water and clean water infrastructure.
2. Modify or terminate the federal interest in clean water facilities constructed with assistance from the former EPA Construction Grant Program so that communities are free to consider Public Private Partnership (PPP) in connection with these facilities.
3. Make privately-owned, public purpose clean water facilities eligible for loans and grants from the Clean Water State Revolving Fund (SRFs) on the same footing as government-owned systems.

For Action by EPA

State and Federal Subsidies

4. EPA should conduct and publish a survey of state and local programs, linked to or separate from the SRFs, that offer grants or other forms of subsidy to government-owned drinking water or clean water agencies, but which deny such assistance to privately owned, public purpose systems.

State-Level Statutory Barriers

5. Conduct and publish a survey of existing state statutes which restrict or prohibit various forms of PPPs, either through procurement policies or other means.
6. Assist the states in identifying and correcting these restrictions, including the preparation of draft model legislation, similar to the U.S. Department of Transportation (DOT) efforts on highway projects.
7. Monitor the results of this initiative.
8. Examine the initiative undertaken at the U.S. DOT with respect to PPPs as a model for federal agency activity in this arena. EPA should adapt/adopt those activities that would advance the use of such partnerships where beneficial for environmental utilities.

Public-Private Partnerships in the Provision of Water and Wastewater Services: Barriers and Incentives - Recommendations (continued)

Tax Policy Barriers

9. Conduct and publish a survey of existing state and local taxing policy with respect to government-owned vs. investor-owned drinking water and clean water utilities. The survey should address access to state-tax-exempt bond financing, real and personal property taxes, inventory taxes, gross receipts, etc.
10. Assist the States in identifying and correcting tax policy distinctions which discourage consideration of some kinds of PPP.
11. Monitor the results of this initiative.

Information Barriers

12. Continue to disseminate information on PPPs, including case studies which document specific situations in which these arrangements were beneficial to the community. In particular, describe the process of tailoring a PPP to a community's needs, so that it:
 - Is cost-effective
 - Protects the interest of all parties
 - Avoids unacceptable impacts on customers including low income households, and
 - Maximizes gains to the community as a whole.
13. Disseminate information on structural reform of government-owned utilities, as an alternative or as adjunct to PPPs. The EPA should encourage state and local initiatives to regionalize water and sewer utilities where cost reductions and operational improvement are likely to result.

Monitoring Progress

14. EPA should consider funding a governmental organization to track progress in eliminating barriers to PPPs, at both federal and state levels, and to monitor the results of these changes.

Outcome

EPA continues to examine the period of federal interest to determine potential limits and reexamine the definition of public ownership. The Agency regularly examines the initiatives taken by the DOT that may be useful in the water industry.



Name of Report: Public-Private Partnerships in the Provision of Water and Wastewater Services:
The Canadian Experience

EPA Program Office: Office of Water

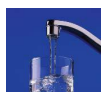
Date of Report: August 2008

Summary

This report considered the potential for public-private partnerships (PPPs) to alleviate chronic funding problems in the drinking water and clean water industries. The Board approached this task by examining the role of PPPs in the U.S. water sector, the kinds of PPPs that had been implemented or proposed, and the barriers that may discourage or prevent implementation. The Board offered lessons learned about certain government initiatives in Canada designed to promote PPPs. Canadian initiatives have been innovative and aggressive and have succeeded in expanding the role of the private sector in providing public infrastructure.

Recommendations

This brief report contains EFAB's observation and summary of the innovative PPPs in Canada. The Board offered no formal recommendations to the Agency.



Name of Report: Combined Sewer Overflows – Guidance for Financial Capacity Assessment and Schedule Development

EPA Program Office: Office of Water

Date of Report: May 2007

Summary

This report assessed EPA's 1997 Combined Sewer Overflows (CSO) guidance in order to provide comments on necessary revisions and updates. The guidance outlines a two-part test to determine the financial capability of the CSO system, with one part addressing household impact indicators and the second part addressing system-wide impact indicators. While EFAB found the existing guidance to be fundamentally sound, the Board suggested a number of improvements to the indicators used in both parts of the guidance.

Recommendations

1. EPA develops a residential indicator which considers actual household expenditures based on average water use, using the rate structures expected to be in effect after the combined sewer overflow (CSO) improvements are implemented, rather than assume that the entire cost of controls is spread evenly across households.
2. EPA considers both the cumulative impact of pollution control services as well as the incremental impact of CSO control initiatives.
3. EPA revisit the portions of the Financial Capability Assessment (FCA) guidance which discuss system financial capability and include additional management indicators to better reflect advances since the document was written in 1997. Areas recommended for improvements include debt indicators, bond ratings, socioeconomic indicators, and financial management indicators.

Outcomes

- EPA is reviewing the assessment of the FCA guidance and is considering revising it in the near future.
- EPA decided to table further consideration of updating and revising the 1997 Combined Sewer Overflows-Guidance for Financial Assessment and Schedule Development policy.



Name of Report: EFAB Supports EPA's Private Activity Bond Initiative

EPA Program Office: Office of Water

Date of Report: April 2007

Summary

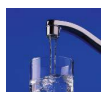
This letter reasoned that the unified state volume caps were constraining tax-exempt financing in a way that was limiting the supply and/or increasing the cost of investment funds for environmental facilities. Accordingly, the Board recommended that bonds for environmental purposes be either (1) reclassified as government bonds or (2) specifically exempted from the state volume caps.

Recommendation

EFAB supports the President's budget proposal for Fiscal Year 2008 to exempt, from the unified state volume cap, qualified private activity bonds (PABs) used to finance the "furnishing of water" and/or "sewage facilities."

Outcomes

- EPA included in the President's FY 2008 budget a proposal to exempt PABs used to finance drinking water and wastewater infrastructure from the unified state volume cap.
- EPA's senior management from the Office of Water acknowledged receipt of the letter and thanked the EFAB for its public support of the Administration's efforts.



Name of Report: Sustainable Financing for Watersheds

EPA Program Office: Office of Water

Date of Report: January 2007

Summary

This report addressed issues involving the capacity of local governments and groups to finance actions and projects to implement watershed plans, including Total Maximum Daily Loads (TMDLs). EFAB held a roundtable with environmental experts to discuss sustainable financing approaches, equitable cost allocations, and collaborative governance models.

Recommendations

1. EPA should foster use of collaborative governance approaches for achieving sustainable finance in all watersheds, using the many forums that EPA hosts or participates in. EPA should disseminate success stories that demonstrate the use of collaborative governance principles and techniques in achieving successful financing outcomes.
2. EPA should designate an Environmental Finance Center (EFC) to maintain a directory of innovative finance and market techniques. EPA and the EFCs should disseminate information about these successes and model techniques.
3. EPA should partner with university research centers and others to determine whether and to what extent ecosystem service values can be used to make local taxing, fee or other revenue raising systems more equitable, fair and acceptable to payers. EPA should work with the Department of Agriculture and other organizations which are exploring how to pay for and make markets in ecosystem services to determine how loans and grants from both agencies can be used to leverage payments for markets in these services.
4. EPA should continue to review its existing financing tools under the Clean and Safe Drinking Water Acts to determine how they might be leveraged with local efforts to obtain additional funds and markets to help close the funding gap.
5. EPA should, with the assistance of the EFCs and EFAB, develop a compendium of the potential entities that would be appropriate to implement whole watershed finance strategies agreed upon.
6. EPA should fund or otherwise assist several watershed scale demonstration projects that incorporate sustainable finance techniques and that use collaborative approaches.

Outcomes

- Through its National Estuary Program (NEP) and other programs, EPA's Office of Wetlands, Oceans & Watersheds (OWOW) fostered collaborative governance that achieved sustainable watershed finance and disseminated examples of this funding via the internet and workshops. For example,

Sustainable Financing for Watersheds – Outcomes (continued)

the San Juan Bay NEP worked collaboratively with stakeholders to establish the San Juan Bay Estuary Special Fund. The fund will receive voluntary donations from an income tax check off, a license plate program, and voluntary donations from cruise ship passengers with these sources expected to generate \$100,000-\$200,000 annually.

- OWOW conducted numerous finance training workshops and webinars that provided strategies from the NEP and other collaborative governance organizations to help watershed organizations create funding policies, goals, and objectives in a transparent and inclusive manner. OWOW posted examples of successful funding efforts undertaken by the NEPs on its website at www.epa.gov/owow/estuaries/fundexamples.html.
- OWOW developed a watershed finance website that complements and links to the Office of the Chief Financial Officer's Environmental Finance Program website with a compendium of environmental finance tools. The site is accessible at www.epa.gov/owow/funding.html.
- OWOW explored the idea of developing a compendium of entities which would be appropriate to implement watershed finance strategies. While valuable, OWOW concluded that a more effective approach would be to develop a watershed finance Request for Proposals to broadly solicit proposals from such entities. This announcement, published in the Federal Register, made available \$40,000 to federal, state, and local entities interested in pursuing watershed finance strategies on a watershed basis.
- OWOW is supporting a watershed-scale demonstration project that incorporates sustainable finance techniques. The Charles River Watershed Association (CRWA) developed an online stormwater permit trading system to generate funds and reduce costs related to phosphorus stormwater controls. The trading system lists potential buyers and sellers of phosphorus reduction credits so that the most effective stormwater controls are financed at the lowest possible price. The system was developed in coordination with a general stormwater permit that EPA Region 1 issued for large impervious surfaces in the upper Charles River watershed. The pilot online trading program for stormwater was developed for two towns – Franklin and Bellingham – in the watershed. The online system is equipped with a Geographic Information System (GIS) for limited mapping of discharge points and towns/basins boundaries. The pilot online trading system was designed to be a flexible and cost-effective alternative to traditional regulatory approaches for mitigating stormwater.



Name of Report: Expanding the Definition of State Revolving Fund Financial Assistance

EPA Program Office: Office of Water

Date of Report: January 2007

Summary

This EFAB report examined how more funding might be made available to meet environmental goals and objectives by allowing the Clean Water and Drinking Water State Revolving Funds (SRFs) to provide a form of financial assistance to eligible projects that would not be yield-restricted under the IRS arbitrage regulations. EFAB examined how this new form of SRF assistance to eligible projects (funding capital and operating costs) could provide support equivalent to that which is currently provided as a debt service subsidy without triggering the IRS rules restricting yields on arbitrage earnings. EFAB's report summarized this approach and the programmatic changes that would be necessary to implement these recommendations.

Recommendation

The EFAB recommends EPA permit SRF assistance to eligible projects for capital or operating costs.

Outcome

The Agency has undertaken an ambitious effort in collaboration with states, the water utility industry, and many other stakeholders to develop innovative ways to bolster limited financial resources and promote the sustainability of local water infrastructure. One important part of this effort was the conference on Paying for Sustainable Water Infrastructure in Atlanta, GA March 21-23, 2007. The conference brought together stakeholders from all levels of government and the private sector to explore creative methods to pay for sustainable water infrastructure today and into the future.



Name of Report: Establishment of a New State Revolving Fund Loan Guarantee Program

EPA Program Office: Office of Water

Date of Report: May 2006

Summary

In this report, EFAB explored the potential benefits of creating a new guarantee program, as contrasted with what can be achieved under existing legislation. In evaluating the potential incremental benefit of a new loan guarantee program, the primary consideration was whether or not a new program would stimulate or accelerate environmental protection activities. A secondary consideration was whether or not a new program would increase the amount of private money involved in supporting environmental programs. Any benefits that could be achieved through the creation of a new loan guarantee program could also be achieved using the existing loan guarantee programs.

Recommendations

Although EFAB has not identified an area in which a significant benefit would be realized from the establishment of a new loan guarantee program, two areas may warrant further study.

1. Consideration might be given as to whether existing loan guarantee authority for environmental programs could be more effectively leveraged; and
2. Consideration might be given as to whether a new loan guarantee program targeted at small, unrated borrowers could accelerate environmental activity in that sector.

Outcome

EPA agreed with the recommendations of EFAB that these areas warrant further study and asked EFAB to further assist the Agency in developing/researching these topics.



Name of Report: Application of Useful Life Financing to State Revolving Funds

EPA Program Office: Office of Water

Date of Report: May 2006

Summary

In a previous report, EFAB concluded that the use of extended amortization periods, corresponding to the useful life of the financed facility, is a reasonable approach both to making environmental facilities more affordable and to allocation of costs of environmental facilities among various generations of taxpayers or ratepayers that benefit from such facilities. In this report, EFAB reports that making extended term financing of environmental facilities available through the State Revolving Loan Funds is just as applicable. The extended term of useful life financing can result in lower annual debt service. While this benefit accrues at the community level, the resulting reduced rate structures also benefit households, thereby facilitating household affordability. For further reference, please see *Affordability Rate Design for Households* on page 25 and *Useful Life Financing of Environmental Facilities* on page 28.

Recommendations

1. To the extent that a financing period beyond 20 years is currently authorized by statute, EFAB recommends that EPA approve requests by State Revolving Funds (SRF) for approval of useful life financing up to 40 years.
2. To the extent that an extended financing period is not currently authorized by statute, EFAB recommends that EPA be supportive of a statutory amendment specifically authorizing useful life financing up to 40 years.
3. To the extent that an extended financing period may benefit small or disadvantaged communities manage loan repayment schedules, EFAB recommends that EPA give full consideration to affordable rate designs when granting approval of state requests for extended financing periods.

Outcome

EPA's Office of Wastewater Management is considering drafting a rule that would amend the current Clean Water SRF regulations in order to further clarify the ability of a state to offer useful life financing. EFAB's valuable analysis of alternative SRF structures, as well as its recommendation to grant states the broadest flexibility to determine appropriate amortization periods without requirements relating to the pace of recycling, will be taken into consideration during the rulemaking process.



Name of Report: Affordability Rate Design for Households

EPA Program Office: Office of Water

Date of Report: February 2006

Summary

This report explored ways to help state and local governments, the private sector, and the general public address the costs of water and sewer services by examining issues such as bottom line costs, uneven costs and cost distributions, affordability criteria, the needs of low-income households, utility losses, and consumer concerns. The Board held a workshop featuring knowledgeable speakers from the utility industry, consumers, and local governments. Based on the workshop and other discussions, EFAB's report suggests an ideal approach for dealing with household affordability problems and utility viability issues through the careful design of utility policies involving subsidies, collections and financial assistance.

Recommendations

1. EPA should consider disseminating these findings to states and utilities since it encourages an effective method of dealing with affordability that is important because it may assist in removing existing political and economic barriers to achieve full cost recovery, while minimizing negative effects on fiscal accountability.
2. EPA should consider developing an affordability handbook that can assist utilities in structuring an effective affordability program. The handbook should include a special focus on household affordability through proper diagnosis, sound rate design, and the development of an effective subsidy program combined with an appropriate collections policy.
3. EPA should work with states to assess how information on effective affordability strategies can be disseminated through State Revolving Fund (SRF) programs.
4. EPA should continue to work with other groups and/or agencies to develop more detailed proposals for addressing the significant complexities of affordability policies in a utility environment.

Outcome

EPA made this report available to its state partners, including the SRF programs, and to utilities dealing with affordability issues in late 2006. EPA will also consider whether there would be additional value in developing a handbook for utilities to further assist them in structuring effective affordability.



Name of Report: Maryland's Bay Restoration Fund Act

EPA Program Office: Office of Water

Date of Report: December 2005

Summary

EFAB focused on innovative finance mechanisms for environmental projects such as the case of the 2004 statute in the State of Maryland called "The Bay Restoration Fund Act." Per the Board, certain provisions of the statute constitute one of the most innovative approaches to environmental finance legislation since the Congress amended the Clean Water Act in 1987 to create the Clean Water State Revolving Funds. With the help of experts, EFAB hosted a roundtable discussion in March 2006 to examine a wide variety of financing tools that will enable watershed managers and groups to leverage federal and state grants with locally raised resources. Participants highlighted Maryland's restoration fee at the roundtable as a potential source of local financial resources.

Recommendations

EPA should encourage States and other jurisdictions to review the provisions of the Bay Restoration Fund Act and consider adopting similar legislation tailored to their own needs.

Outcome

At the national *Conference for Paying for Sustainable Water Infrastructure: Innovation for the 21st Century* held in March 2007, EPA's Assistant Administrator for Water cited the State of Maryland's Bay Restoration "flush fee" as his leading example of the type of new and innovative state environmental funding ideas or tools that are needed to help address the nation's environmental infrastructure challenge.



Name of Report: Combined Operations of the Clean Water and Drinking Water State Revolving Loan Funds

EPA Program Office: Office of Water

Date of Report: May 2005

Summary

This report examined whether there is an advantage – financially, administratively or otherwise – to giving states the option to operate their Clean Water and Drinking Water Revolving Loan Funds as a single program. EFAB developed a list of questions about joint operations that explore positives and negatives, barriers, and changes needed for federal and state staffs. The Board also examined to what extent the statutory, regulatory and program policy histories of the two State Revolving Fund (SRF) programs provide insights into why they are separate programs.

Recommendation

EPA should undertake an examination of the Clean Water SRF and the Drinking Water SRF programs to determine what opportunities and advantages exist for combined SRF operations.

Outcome

- EPA sent this report, along with instructions to further study the possibilities of combined operations, to the State/EPA Workgroup. Membership includes representatives from State Clean Water and Drinking Water SRF programs, EPA regional coordinators for both programs, and EPA headquarters representatives.
- At EPA's invitation, an EFAB representative presented the report and its findings to the Office of Water's State/EPA Workgroup at its semi-annual meeting in Chicago, IL on November 2, 2005. Following the presentation and a formal vote, the State/EPA Workgroup recommended to EPA that EPA (with the Workgroup's participation) undertake an examination of the opportunities and advantages that exist across a broad array of alternatives for combined SRF operations.
- The State/EPA Workgroup subsequently conducted a survey of all 51 State SRF programs, 37 of which responded with detailed information on the management and operations of their programs. The final results of the State/EPA Workgroup survey, entitled "Review of Joint of Clean Water Revolving Loan Fund and Drinking Water Revolving Loan Fund Programs," were presented to EPA's Office of Water on March 27, 2007.



Name of Report: Useful Life Financing of Environmental Facilities

EPA Program Office: Office of Water

Date of Report: January 2005

Summary

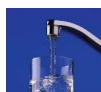
In examining how environmental goals and objectives might be made more affordable by using debt management practices that reduce the current budgetary impact of funding capital expenditures, EFAB analyzed how extending the period over which the costs of environmental facilities are amortized to more closely match their useful life can lower current debt service costs (also see “Application of Useful Life Financing to State Revolving Funds” from May 2006 on page 24). Attention was given to considering the costs, benefits, and fairness of this approach over the entire useful life of the environmental facility.

Recommendation

EFAB recommends that EPA examine the potential benefits of amortizing debt for such facilities over periods that are reflective of the useful lives of the financed facility, in place of the traditional method of amortizing debt over a shorter period of time. The use of amortization periods consistent with the useful life of the facility can make financing such facilities more affordable in the short-term, reducing annual debt service costs by 10 percent to 34 percent. These savings can be used to fund asset management or other capital projects resulting in even greater savings for current and future ratepayers.

Outcomes

- EPA is working in partnership with states, the water utility industry and other stakeholders to ensure sustainability of water and wastewater systems. This includes promoting water efficient products, full-cost pricing of water and wastewater services management techniques for reducing long-term costs and improving performance and expanding watershed approaches to identify effective local infrastructure solutions.
- In 2005, EPA proposed that EFAB convene a conference of industry representatives to examine in greater detail the situation on the ground, how a more efficient system of financing infrastructure can be implemented, and how this can be dovetailed with the four pillars of sustainability.
- EPA issued a Policy Statement on March 17, 2006 affirming the current policy on extended term financing for Clean Water State Revolving Fund assistance. The policy allows some borrowers the option to have an assistance repayment term that is greater than 20 years, resulting in lower annual payments.



Name of Report: Innovations in Watershed Financing

EPA Program Office: Office of Water

Date of Report: January 2005

Summary

EFAB looked at innovative ways to finance the wide variety of improvements needed to restore watershed health because financing infrastructure and related natural resources projects to improve and restore watershed health presents a major challenge for EPA, the states, municipalities, and watershed management groups. EFAB believes that there is a huge potential for maximizing available financing for watershed management by informing and training watershed managers, coordinators and groups to overcome the multiple financing challenges they face in getting coordinated projects underway.

Recommendations

1. EPA should sponsor a roundtable involving states, localities, financial institutions, businesses, nonprofits, and others to explore the full range of possible financing options.
2. EPA should expand training for watershed groups and others in the use of innovative financing and funding tools and of local resources and networks to increase financing and funding options.
3. EPA should develop additional case studies to provide watershed groups with finance lessons learned. Solicit the Environmental Finance Centers and other university watershed and finance centers to contribute case study materials.
4. EPA should encourage or require recipients of its watershed grants to complete watershed financing training, such as EPA's Watershed Academy finance module.

Outcomes

- EPA's Office of Wetlands Oceans and Watersheds (OWOW) funded a watershed finance roundtable in Washington, DC on March 9, 2006 that focused on diversifying funding options, utilizing private sources of funding and building watershed organizations' business strategies. The roundtable provided a forum for discussion and created action items that participating entities could pursue.
- OWOW has undertaken numerous actions to implement the development of: (1) Online tools and training modules to help watershed organizations prioritize activities that require funding and learn about the basic steps involved in obtaining watershed funding. Please visit www.epa.gov/watertrain/sustainablefinance for more information; (2) Workshops in Maryland, Pennsylvania, Virginia, and West Virginia on innovative approaches to funding non-point source projects; and (3) Webcasts that conveyed innovative watershed finance solutions to watershed leaders across the country (e.g., Watershed Financing – Moving Beyond Grants and Sustainable Financing for Watershed Groups).

Innovations in Watershed Financing Outcomes (continued)

- OWOW developed additional watershed finance case studies that feature innovative funding mechanisms, such as inter-local agreements and real estate transfer taxes. Please visit the following website to view the case studies: www.epa.gov/owow/estuaries/fundexamples.html
- OWOW is considering encouraging EPA Water Grants recipients to complete the Watershed Academy Module on Finance Planning as a grant condition. Please visit the module at www.epa.gov/watertrain/sustainablefinance.



Name of Report: Findings from EFAB's Environmental Management Systems Workshop

EPA Program Office: Office of Water

Date of Project: July 2003

Summary

EFAB, EPA's Office of Water, and EPA Region 9 co-sponsored a workshop on environmental management systems (EMS) that was designed to examine the possible financial implications of adopting an EMS. The Board wanted to find out what the link is, if any, between EMS implementation and improved financial performance. The workshop explored whether or not the financial services industry considers EMS and EMS certification as a factor in its decision-making; if so in what way(s) and, if not, what measures, incentives or other factors might encourage organizations to take EMS into account. This report provides an overview of the workshop.

Recommendations

1. EPA should partner with environmental trade and industry organizations to develop materials and conduct workshops for development and implementation of EMS in the water industry.
2. EPA should provide incentives to regulated entities that implement proven, cost-effective EMS (e.g., point savings in SRF loans).
3. EPA should monitor existing pilot programs for results and try to identify direct financial benefits.
4. EPA should prepare case studies of tangible examples of the value (financial benefits) of EMS and the relationship between EMS and finance.
5. EPA should support and promote third party evaluation and certification of EMS.
6. EPA should support development of a national database that provides sufficient data for benchmarking the financial value of effective EMS.

Outcome

EPA continues to play a major role in promoting EMS adoption with public entities, especially local governments, and demonstrating the tangible costs savings and other financial benefits, in addition to the environmental benefits, that these systems foster.



Name of Report: Workshop on Governmental Accounting Standards Board Statement No. 34: Summary of Results

EPA Program Office: Office of Water

Date of Report: July 2003

Summary

This report clarified the implications of Government Accounting Standards Board (GASB) 34 and EPA's role; therefore, EFAB sponsored a workshop in Washington, DC in March 2002 on the new GASB requirements covering capital asset inventories and management of public utilities. The GASB 34 requirements are controversial because they will change, in many instances, previous practices affecting capital asset management. Results from the workshop were documented and provide the basis for the recommendations in this report.

Recommendation

EPA should provide incentives to reward those environmental utilities that have developed effective asset management systems compliant with GASB 34. Incentives might include: 1) economic payments for implementation of asset management compliant with GASB 34; 2) recognition by state and/or federal environmental agencies; 3) easier accessibility or more favorable terms to State Revolving Fund (SRF) funding for environmental infrastructure; 4) partnering with environmental associations in developing asset management guidance materials; 5) expanding capacity, maintenance, operations and management as a vehicle to promote asset management; and 6) preparing case studies of environmental utilities that have successfully implemented asset management systems.

Outcomes

- EPA's Office of Water continues to work with wastewater and water utilities to promote the adoption of innovative management system approaches to ensure organizations are sustainable into the future. Effective utility management contributes to infrastructure sustainability by institutionalizing management systems and other innovative approaches which can lead to reduced infrastructure costs and improved performance across a full range of utility operations.
- In 2005, EPA prepared profiles of eight leading utilities to document the types of management systems in place at these utilities, the drivers to implement those systems, costs and benefits, successes and challenges, and roles that various stakeholders can and do play in the process of developing and implementing the system.



Name of Report: Coordination of USEPA/SRF and USDA/RUS Water and Sewer Loan Assistance

EPA Program Office: Office of Water

Date of Report: August 2003

Summary

In this report, EFAB examines the operations and interactions of EPA's Clean Water and Drinking Water State Revolving Loan Fund Programs (SRFs) and the United States Department of Agriculture (USDA) Rural Utility Service (RUS) Water and Environmental Programs. These programs provide significant financial assistance in the form of loans and/or grants for small rural communities to use in developing water-related environmental infrastructure. In essence, the report evaluates coordination between these programs and considers whether improved coordination would result in more efficient use of federal resources and improved environmental and public health protection.

Recommendations

1. EFAB recommends that the Agency pursue a national-level commitment from USDA/RUS to achieve closer coordination between the SRF Programs and the RUS Water and Environmental Programs (WEP).
2. EFAB recommends that the Agency invite USDA/RUS input on integrating small community water infrastructure funding into the broader planning and development concerns of rural areas.
3. EFAB recommends that the Agency work with USDA/RUS on setting WEP interest rates that mesh with SRF interest rates to achieve greater affordability for communities with the most need.
4. EFAB recommends that the Agency include one or more experts from the state-based RUS programs as members or expert witnesses to the Board.

Outcomes

- EPA has undertaken unprecedented efforts to work with the USDA on a number of water-related issues, including our recent Combined Animal Feeding Operations (CAFO) rule and implementation of the Wetlands Reserve Program and the Environmental Quality Incentives Program of the Farm Bill of 2002.
- In September 2003, EPA sent letters to each state environmental director and agriculture commissioner calling attention to the opportunities to address sources of pollution at agricultural operations with both the Drinking Water and Clean Water SRF.
- EPA has encouraged states to integrate their SRF practices and policies with development and planning. An estimated 19 states have developed "one-stop shopping" initiatives that steer applicants to the full range of funding options, including RUS, available for water quality solutions.

**Coordination of USEPA/SRF and USDA/RUS Water and Sewer Loan Assistance Outcomes
(continued)**

- The Office of Water's Clean Water State Revolving Fund Branch (CWSRFB) is working with a network of water funding officials, including the RUS, interested in coordinating environmental infrastructure funding efforts.
- EPA has included interest rates as part of its discussions with RUS.
- EPA supports appointing someone familiar with RUS to the board.



Name of Report: Expanding Lending for Non-Point Source Projects

EPA Program Office: Office of Water

Date of Report: April 2002

Summary

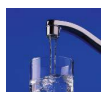
This report provided a proposal to expand lending of the Clean Water State Revolving Fund (CWSRF) program for projects designed to prevent or reduce pollution from non-point sources. The proposal envisions a cooperative arrangement between a CWSRF and a municipality where the latter borrows from the SRF and in turn passes the loan funds on, in a subsidiary lending arrangement, to a non-point source discharger to finance implementation of best management practices.

Recommendation

EFAB recommends that EPA support the demonstration of municipal conduit lending for non-point source projects with one or more SRFs and selected municipalities.

Outcome

EPA's Office of Water subsequently issued a CWSRF Activity update on innovative uses of CWSRF funds for non-point source pollution, highlighting the use of pass-through loans or conduit lending.



Name of Report: Public Sector Initiatives to Increase Efficiency and Overall Performance in the Water and Wastewater Industry

EPA Program Office: Office of Water

Date of Report: April 2002

Summary

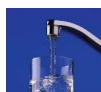
This report provides a “summary of key points” from a workshop on public sector initiatives to promote cost-effective environmental management. It highlights for the Agency a variety of techniques and strategies in both the public and private sectors that can lead to greater efficiencies and lower costs in providing public-purpose environmental and public health protection. The report argues for a significant increase in long-term, reliable federal funding of drinking water and wastewater facilities and greater State flexibility in making grants and loans.

Recommendations

1. EFAB believes that there is as much potential to reduce the costs of environmental and public health protection as there is to increase the volume of investment in it. EPA’s Innovation Council would be an excellent forum to undertake a comprehensive attempt to identify cost saving measures and what more EPA might do to encourage their adoption by the public sector.
2. EFAB recommends that demonstration grants be expanded aggressively to identify, document, evaluate, and ultimately encourage the adoption of, cost-effective management techniques and strategies. An excellent example is the use of demonstration grants for environmental management systems by the Office of Water, resulting in major advances in expanding the knowledge and application of environmental management systems in the water industry. Case studies were emphasized in the workshop as effective communication tools. They should be prepared for each demonstration project and be presented collectively on an easily accessible Agency webpage.

Outcome

In 2002, EPA released a comprehensive strategy to drive innovation in environmental programs. *Innovating for Better Environmental Results: A Strategy to Guide the Next Generation of Innovation at EPA* builds upon past successes with innovative approaches to environmental protection and lays out how EPA will continue to advance new ideas to improve the quality of their work. The report provides EPA with a practical roadmap for encouraging innovative solutions to environmental challenges and for making sure those solutions are available to everyone who shares our common goal of protecting the environment and safeguarding public health.



Name of Report: Conservation Savings Increment Loans: A Proposal Concerning the State Revolving Funds (SRFs)

EPA Program Office: Office of Water

Date of Report: September 2001

Summary

In this report EFAB examines ways in which existing environmental facilities, programs, and activities might be improved to better support the goals of the President's plan. The report also identifies energy conservation improvements at municipal drinking water and wastewater systems throughout the country.

Recommendations

1. EFAB recommends that EPA's Drinking Water and Clean Water State Revolving Fund programs should be mobilized to help finance significant energy conservation improvements at drinking water and wastewater systems nationwide.
2. EFAB recommends that EPA should consider expanding the Energy Star program to explicitly include drinking water and wastewater systems as a priority focus. Many wastewater and drinking water systems have conducted energy audits as a cost cutting measure, and their experiences would serve as a useful blueprint to identify worthwhile energy conservation projects.
3. EFAB recommends that the EPA should provide states the greatest latitude possible in structuring state-designed ways to meet national goals that would provide the greatest opportunity for success.

Outcomes

- EPA produced a new guidance in January 2008, *Ensuring a Sustainable Future: An Energy Management Guidebook for Wastewater and Water Utilities*, to help utilities systematically assess energy costs and practices, set measurable performance improvement goals, and monitor and measure progress over time.
- A fact sheet on Energy Conservation is available to assist municipal and utility managers and operators in evaluating ways to reduce energy consumption within wastewater treatment plants. For a copy of the fact sheet, visit the Energy Conservation and Management section of EPA's website at: <http://epa.gov/owm/mtb/mtbfact.htm>.
- In 2009, the American Recovery and Reinvestment Act (ARRA) funding enabled the Arizona Water Infrastructure Finance Authority to expand its traditional technical assistance package to include energy audits, as part of promoting EPA's Sustainable Infrastructure Initiative. General Energy Audits collect information about drinking water facility operations via a detailed evaluation of facility operations and opportunities for energy conservation improvements. The audits also identify energy conservation measures appropriate for a facility based on its operating parameters.



Name of Report: Arbitrage Relief Would Increase Funds Available to Meet Critical Water and Sewer Funding Needs

EPA Program Office: Office of Water

Date of Report: September 2001

Summary

This report examined the idea of removing Internal Revenue Code arbitrage restrictions on federal and state dollars used to fund the Clean Water and Drinking Water State Revolving Funds.

Recommendations

1. EFAB recommends that EPA consider naming a senior Agency headquarters official with financial expertise as a permanent liaison with the Department of the Treasury. This individual could meet regularly with Treasury and Internal Revenue Service officials to communicate and represent EPA's interests across all of its environmental programs.
2. EFAB also believes that some federal support will be necessary if these state governments are to continue in this role and assure that water and sewer rates remain affordable across the nation.
3. EFAB urges that EPA support amending the Internal Revenue Code to provide that monies contributed to the federally-created Clean Water and Drinking Water State Revolving Funds be freed from the arbitrage earnings restrictions.

Outcome

Beginning in 2006, senior EPA managers were publicly speaking about exploring the idea of lifting IRS arbitrage restrictions on SRF funded reserves to permit arbitrage investments in SRFs.



Name of Report: Private Sector Initiatives to Improve Efficiencies in Providing Public Purpose Environmental Services

EPA Program Office: Office of Water

Date of Report: July 2001

Summary

In this report, EFAB examined some practical alternatives to established management approaches that offer cheaper, better, faster ways of providing cost-effective environmental services in this report. They recognized the need for more EPA attention and public education regarding the many innovative and cost-effective public-private partnerships operating and owning public-purpose environmental projects across the nation.

Recommendations

Procurement Practices

1. At minimum, EPA should educate communities about successful and more efficient ways to deliver environmental services.
2. EPA should consider taking a more proactive position by issuing a policy statement supporting broader forms of service delivery and competition where it is judged most cost-effective in terms of meeting environmental goals.

Private Activity Bonds

3. EPA should call publicly for private activity bond reform to support urgent environmental infrastructure needs.
4. EPA should support the exemption of private activity bonds from state volume caps, whose proceeds finance public-purpose drinking water and wastewater facilities.

Information Services

5. EPA should create an information service on public-private partnerships for environmental services as part of the Environmental Finance Program website. This site should include extensive hotlinks to related websites within and outside government.

Outcome

EPA has begun compiling an inventory of innovative financing options at the state and local levels. These innovations will bring in new ideas about sustainability and encourage greater private sector participation. In the President's FY08 Budget request, EPA proposed an important tool – Water Enterprise Bonds – to accelerate and increase investment in the nation's water infrastructure. Water Enterprise Bonds will enhance access and flexibility for utilities to issue private activity bonds for public-purpose drinking water and wastewater facilities.

SECTION 3

CLEANING UP COMMUNITIES AND ADVANCING SUSTAINABLE DEVELOPMENT AND ENFORCING ENVIRONMENTAL LAWS





Name of Report: Financial Assurance: Commercial Insurance as a Financial Assurance Tool

EPA Program Offices: Office of Solid Waste and Emergency Response and Office of Enforcement and Compliance Assurance

Date of Report: February 2010

Summary

This report addresses the use of commercial insurance as a financial assurance tool by examining the strengths and pitfalls of insurance, the value of minimum ratings and capitalization requirements for insurers, and the feasibility and advisability of standard policy language for insurance used to provide financial assurance.

Recommendations

1. EPA should augment the existing minimum requirement that an insurer who provides policies for finance assurance be licensed in one or more states with a requirement for an objective third-party analysis of the insurer's capacity to meet its obligations. In this regard, EPA should consider minimum requirements to evidence the strength of an insurer providing financial assurance such as the use of a minimum acceptable rating from AM Best or a similar national rating agency. The Board did not agree on an appropriate minimum acceptable threshold rating.
2. EPA should not require mandatory language for insurance policies for purposes of Resource Conservation and Recovery Act (RCRA) financial assurance. The Board supports insurance policies that contain specifically negotiated provisions that meet the characteristics of each insured party and each insured facility.
3. EPA should adopt procedures that encourage all involved parties (the insured, the insurer, and the regulator) to explicitly express their expectations when using insurance as a financial assurance tool. In particular, the Agency should adopt procedures under which the regulatory authority can specifically agree to or reject limitations contained in the insurance policy before the carrier becomes legally obligated to issue the policy.

Outcome

The Agency is currently developing financial responsibility rules under Section 108(b) of the Comprehensive Environmental Response, Liability, and Compensation Act (CERCLA). The Charge specifically states that EFAB limit its evaluation to financial assurance as provided under the Resource Conservation and Recovery Act (RCRA). However, since many of the same questions concerning commercial insurance as a financial assurance tool will arise in developing the CERCLA 108(b) rules, EPA plans to also consider these recommendations in developing these rules.



Name of Report: The Use of Captive Insurance as a Financial Assurance Tool in Office of Solid Waste and Emergency Response Programs

EPA Program Offices: Office of Solid Waste and Emergency Response and Office of Enforcement and Compliance Assurance

Date of Report: March 2007

Summary

This report looked at the use of financial assurance mechanisms such as financial tests, corporate guarantees, insurance, bonds, and trust funds to help the Agency ensure that adequate resources are available to address the environmental consequences of industrial and business activities. EFAB held an informational workshop with governmental and financial community representatives who oversee and evaluate the captive insurance industry, users of captive insurance, and state government environmental representatives familiar with the use of captive insurance. EFAB's recommendations in this report address the strengths and weaknesses of the use of captive insurance by corporations to demonstrate that they have the capacity to meet their financial assurance obligations.

Recommendations

With respect to captive insurance as a financial assurance tool, EFAB recommends that EPA require that:

1. The financially responsible affiliate uses a captive insurance policy to provide financial assurance that the affiliate either (a) pass the financial test and unconditionally guarantee the obligations of the captive or (b) possess investment grade rating.
2. The captive entity issuing the insurance policy have a rating of "secure" or better by AM Best or a comparable rating agency.
3. The rating of the captive must be formally reviewed by the rating agency annually, at a minimum, and the rating report must be furnished to those states where a captive policy is being used for financial assurance. Further, states must be notified within 30 days of a ratings change, an outlook change, or a rating being placed under review.

Outcome

Based on EFAB's recommendations on the financial test, EPA's Office of Solid Waste and Emergency Response initiated EPA's Action Development Process (ADP) in 2007 to more fully analyze possible regulatory options concerning the RCRA Subtitle C financial test. By entering into the ADP, EPA is acknowledging that the current financial test presents issues that need to be explored. One of the options that will be analyzed through this process is the Board's recommendation that EPA include an independent ratings requirement to Alternative I of the current financial test.



Name of Report: Use of the Financial Test and Corporate Guarantees to Meet Financial Assurance Requirements under RCRA Programs

EPA Program Office: Office of Solid Waste and Emergency Response and Office of Enforcement and Compliance Assurance

Date of Report: January 2006

Summary

EFAB's report provided an initial analysis of the strengths and weaknesses of the current financial test used by corporations to demonstrate that they have the capacity to meet their financial assurance obligations. The financial test mechanism relies on an evaluation of the financial viability of the regulated entity; the regulated community prefers this method since all other mechanisms require an additional cost.

Recommendations

1. EPA and the states should consider the financial assurance requirements from the view of a potential creditor when evaluating financial assurances.
2. EPA should consider that all companies using the Alternative I test to meet their obligations receive an independent third-party assessment of their credit position using methodologies currently employed by the credit rating services and other financial institutions, which is already being done for the companies using Alternative II.

Outcome

EPA has asked EFAB to continue to offer assistance should the Agency move forward with changes to the financial test. With respect to the corporate guarantee or the cost estimate elements of the financial test, EFAB transmitted a separate report to EPA covering these topics. The report can be viewed at <http://www.epa.gov/efinpage/efabpub.htm>. The name of the Report is *Financial Assurance: Report on Improving Cost Estimation and Letters on the Use of Credit Ratings*.



Name of Report: Brownfields Tax Incentive Letter

EPA Program Office: Office of Solid Waste and Emergency Response

Date of Report: April 2001

Summary

This report examined financially sound ways to pay for Brownfields cleanup and redevelopment. The core conclusion of EFAB's findings is that any wide-scale and long-term success must be sustainable in the private sector. This report recommends that the Agency place a greater priority on actions that facilitate private sector involvement and that EPA emphasize initiatives that enhance the private sector's ability to manage site related environmental problems while limiting and facilitating interaction with governments.

Recommendations

1. Create a transferable tax credit equal to the cost of the environmental investigation and remediation incurred on a "qualifying site." This would enable cities to assess and clean up property and transfer the credits to the next purchaser.
2. Define "qualifying site" as contaminated property within an urban area as defined by the census. This definition includes most Brownfields but, importantly, precludes greenfield sites.
3. The tax credit be available only after certified commencement of redevelopment to avoid claiming the credit and then "warehousing" the property without actually starting the cleanup.
4. Define Property "redevelopment" to include open spaces, parks, residential living spaces, commercial use, schools and any other uses that are of benefit to the community. Irrespective of other programs, an open space component should be included in new tax incentive proposal.
5. "Qualifying remediation costs" should include the capitalized costs of ongoing remediation, including pump and treat systems. The board urges this definition be established in legislation or regulation to avoid the unnecessary progress-inhibiting uncertainty that would accompany leaving this to after-the-fact, case-by-case determination by IRS.
6. Insurance premiums covering post-remediation liabilities should qualify for the tax credit.

Outcome

Congress renewed the Brownfields Tax Incentive on October 3, 2008, retroactive to the start of 2008, and extending to December 31, 2009. With regard to the recommendation to include a transferable tax credit equal to the cost of the environmental legislation and remediation incurred on a "qualifying site," a bill was introduced in Congress but did not pass. Insurance premiums covering post-remediation liabilities now qualify for tax credits if the qualifying costs relate to cleanup liabilities.

SECTION 4

CROSS-GOAL REPORTS





Name of Report: Environmental Management Systems and the Use of Corporate Environmental Information by the Financial Community

EPA Program Office: Office of Policy, Economics, and Innovations (currently Office of Policy)

Date of Report: August 2008

Summary

This report provided advice in identifying organizations and people in the financial and business communities with a potential interest in Environmental Management Systems (EMS), environmental performance improvement, and financial risks/rewards. EPA's Office of Policy, Economics, and Innovations (OPEI) asked the Board to help provide it with a better understanding of current financial services, industry beliefs, practices, conventions, and challenges with regard to the consideration of environmental performance and systems. EFAB undertook an extensive dialogue with EPA on these topics and held a workshop with representatives of the insurance and equity sectors.

Recommendations

1. EPA should take a leadership role in working with the financial sector and companies to better understand the relationship between environmental management systems (EMS), environmental performance and financial value.
2. EPA should work with companies and the three financial market segments already identified in developing environmental metrics or categories of data that would be of value to the financial markets for both operational and legacy environmental concerns.
3. EPA should make sure that the Steering Group identifies all the relevant information collection systems within the Agency, including information that may reside in the regions, so that any new system considers all the information available within the Agency.
4. EPA should consider contacting environmental regulators and organizations in Europe, Japan and Australia, which are geographical regions that have been identified as more advanced in collecting environmental performance information that is of interest to the financial markets. Examples of such information include energy use, water use, and carbon footprints.
5. EPA should coordinate the development and use of environmental metrics with other agencies, such as the Securities and Exchange Commission (SEC) and the Occupational Safety and Health Administration (OSHA), and state environmental regulators.

Outcomes

- Concurrent with the completion of EFAB's work, EPA sponsored a dialogue with the financial community to explore how to improve corporate access to, and the understanding of, EPA information and databases. A number of recommendations were incorporated in the Office of Environmental Information's database access strategy issued in Fall 2008.

Environmental Management Systems and the Use of Corporate Environmental Information by the Financial Community Outcomes (continued)

- OPEI subsequently funded the development of a report analyzing Europe's progress to date in making environmental criteria a more standard part of decision-making. EPA released this report, *"Environmental, Social, and Governance Investing in Europe: A Review and Analysis"* in April 2009.
- In the late Summer/Fall of 2009, senior management from OPEI met with senior officials from the Securities and Exchange Commission to discuss corporate environmental reporting issues related to climate, materiality, and metrics.



Name of Report: Application of Innovative Finance Techniques in the Transportation Infrastructure Finance and Innovation Act of 1998

EPA Program Office: Office of Water and Office of Solid Waste and Emergency Response

Date of Report: March 2005

Summary

This report examined the provisions of the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) to determine if any of the innovative financing techniques authorized therein could be adapted to environmental statutes to help finance infrastructure. EFAB identified the TIFIA provision relating to “backloading” as potentially useful in financing smart growth, Brownfields cleanup and redevelopment, and rural water/wastewater facilities.

Recommendations

1. As the Agency reviews its core legislation and its action programs in the water, wastewater, Brownfields and smart growth areas, it should give consideration to the use of financial mechanisms such as guaranties and direct loans that will accommodate back loaded financing.
2. EPA seeks to obtain TIFIA-like authority as a complement to its infrastructure assistance programs. EPA should consider developing the means to deploy backload repayments schedules and to implement various guarantee mechanisms.

Outcome

EPA acknowledged that the use of “back-loading” in water infrastructure financing programs is an option that will remain available to future borrowers, in cases where it is appropriate.



Name of Report: Protecting American's Land Legacy: Stewardship Policies, Tools, and Incentives to Protect and Restore America's Land Legacy

EPA Program Office: Office of Policy, Economics, and Innovation (now known as the Office of Policy)

Date of Report: February 2002

Summary

This report sets forth principles and a broad policy framework, along with the tools and incentives, to guide the long-term process of conserving our land legacy and restoring the vital functions that the lands may support. The report further sets forth the strategic direction to instill the ethic and practice of stewardship on our public and private lands.

Recommendations

1. EPA should embrace stewardship as a core value of the Agency and as a foundation for the Strategic Plan.
2. EPA should perform an internal review of its authorities, programs, and initiatives to identify contributions to individual, community, and corporate stewardship. This review would be the basis to advance stewardship as a coherent and central theme of EPA's Strategic Plan and annual budget.
3. EPA should realign its grant assistance programs to states and communities to foster and support stewardship practices.
4. EPA should create an internet-based clearinghouse dedicated to stewardship to promote the exchange of ideas, provide benchmarks of successful practices, and inform and educate.
5. EPA should work with the Council on Environmental Quality (CEQ) and the Departments of Interior, Education, and Agriculture to organize and convene a national dialogue on stewardship to engage stewards and practitioners in development of a national framework for stewardship.
6. EPA should vigorously implement the Clean Water Action Plan (CWAP) as a model for federal interagency cooperation on watershed management. EPA should support implementation of the Farm Bill and its compelling stewardship incentives for farmland conservation, wetlands restoration, and habitat protection.
7. EPA should reconsider EFAB's prior recommendation for a new financing vehicle for stewardship in the form of an Environmental State Revolving Fund (ESRF) for sustainable financing of stewardship practices.

Outcomes

- In September 2003, Environmental Stewardship was introduced as an Agency goal in the 2003-2008 EPA Strategic Plan. The agency retained this goal in the 2006-2011 EPA Strategic Plan.
- In August 2004, an Executive Order was issued on Environmental Conservation, an important component of environmental stewardship. This Order directed EPA to work with CEQ and the Departments of Interior, Agriculture, Commerce and Defense to integrate cooperative

Protecting American's Land Legacy: Stewardship Policies, Tools, and Incentives to Protect and Restore America's Land Legacy Outcomes (continued)

conservation approaches in implementing laws relating to the environment and natural resources.

- In November 2005, the Administrator asked the EPA Innovation Action Council to better define stewardship in the future of environmental protection, assess the Agency's environmental stewardship activities and opportunities for improvement, and recommend how EPA, in partnership with states and tribes, could encourage stewardship to address priorities and achieve results.
- In May 2006, the Administrator asked the National Council for Environmental Policy and Technology (NACEPT) to conduct the assessment of Agency environmental stewardship efforts (as well as cooperative conservation activities) and make recommendations on how EPA can best pursue these priorities. NACEPT issued its report entitled: *"Everyone's Business: Working Towards Sustainability through Environmental Stewardship and Collaboration"* in March 2008.



Name of Report: Small Business Innovative Research Topics

EPA Program Office: Office of Research and Development

Date of Report: September 2001

Summary

In this report, EFAB reviewed the current Small Business Innovative Research (SBIR) program research topics and suggested additional topics that meet EPA's mission or a stated Agency need. EFAB agreed that there is a need to encourage soft technologies in the marketplace, particularly with respect to the significant benefits they offer in the cost-effective management of public-purpose environmental utilities.

Recommendations

1. EFAB recommends that EPA's 2002 Small Business Innovative Research (SBIR) solicitations include strategic management tools for the public and private sectors in its list of eligible research topics.
2. EFAB recommends that EPA support development of innovative environmental accounting techniques, lifecycle analyses, environmental management systems and other techniques and systems that support the environmental industry and/or promote cleaner business.
3. EFAB recommends that the SBIR review panels include individuals with appropriate experience to review soft technology proposals.

Outcome

EPA's SBIR Program has provided approximately \$100 million through more than 700 awards to small businesses to translate their innovative ideas into commercial products that address environmental problems. These innovations are the primary source of new technologies that can provide improved environmental protection at lower cost with better performance and effectiveness. Companies have shown innovation in addressing current and emerging environmental issues by developing technologies that monitor, treat, and prevent pollution, providing significant public health benefits.

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Terry Agriss
New York, NY

Michael Finnegan
New York, NY

John McCarthy
Winchendon, MA

John Boland
Baltimore, MD

James Gebhardt
Albany, NY

Mathilde McLean
New York, NY

George Brewster
Cupertino, CA

Hon. Vincent Girardy
Gladstone, NJ

Stephen Mahfood
Jefferson City, MO

George Butcher
New York, NY

Steve Grossman
Columbus, OH

Langdon Marsh
Portland, OR

Pete Butkus
Sammamish, WA

Scott Haskin
Belluvue, WA

Gregory Mason
Atlanta, GA

Donald Correll
Voorhees, NJ

Jennifer Hernandez
San Francisco, CA

Karen Massey
Jefferson City, MO

Michael Curley
Parkton, MD

Evan Henry
Irvine, CA

Lindene Patton
New York, NY

Rachel Deming
Ann Arbor, MI

Anne Pendergrass-Hill
Portland, OR

Sharon Dixon-Peay
Hartford, CT

Michael Deane
Washington, DC

Keith Hinds
Albuquerque, NM

George Raftelis
Charlotte, NC

Hon. Pete Domenici
Washington, DC

Martin Kamarck
New York, NY

Cherrie Collier Rice
Houston, TX

Kelly Downard
Louisville, KY

Mary Kelly
Austin, TX

Arthur Ray
Columbia, MD

Mary Francoeur
New York, NY

Robert Lenna
Augusta, ME

Helen Sahi
Hartford, CT

Dr. Andrew Sawyers
Baltimore, MD

Leanne Tobias
Bethesda, MD

Mary Ellen Whitworth
Houston, TX

Douglass Scott
Springfield, IL

Sonia Toledo
New York, NY

Justin Wilson
Nashville, TN

James Smith
Bozeman, MT

Dr. Jim Tozzi
Washington, DC

John Wise
Berkeley, CA

Gregory Swartz
Phoenix, AZ

Chiara Trabucchi
Cambridge, MA

Joseph Young
Vesper, WI

Steve Thompson
Oklahoma City, OK

Billy Turner
Columbus, GA

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