U.S. Environmental Protection Agency

Environmental Financial Advisory Board

March 19–20, 2007

Meeting Summary

Atlanta Hilton Hotel
Atlanta, Georgia

CONTENTS

Tuesday, March 20, 2007

Opening Remarks and Introductions—Jim Barnes & Stan Meiburg

EFAB Chair Jim Barnes opened the meeting, noting that the Advisory Finance Board was named EPA's outstanding advisory backup group. Designated Federal Official Stan Meiburg announced that this is Billy Turner's last meeting as a member of the board—he has made outstanding contributions and will be missed—and he welcomed three new board members:

- Jim Gebhardt, Chief Financial Officer for the New York State Environmental Facilities Corporation;
- Scott Haskins, Executive Director of Seattle Public Utilities; and
- Lindene Patten, Senior Vice President and Counsel for Zurich North America.

Participants introduced themselves. Jimmy Palmer, Administrator for EPA Region IV, welcomed the group to Atlanta and EPA Region IV. As the largest, most populous, and fastest growing, Region IV suffers incredible stresses on its infrastructure. Meanwhile, many small, declining, and disadvantaged communities could be destroyed by EPA requirements and restrictions on discharges into the waterways, so the question of how to achieve sustainable water infrastructure is very serious here. He noted that the Sustainable Infrastructure Meeting and the Local Government Advisory Committee (LGAC) meeting, focusing on wetlands, watersheds, and coastal issues, are also meeting at this time, and that all three meetings have connecting threads.

Workgroup Reports

Environmental Management Systems—Rachel Deming

Members are planning a workshop in June (hopefully the 20th) in Washington, DC to discuss valuation of environmental management systems, how financial sectors can assess them, and how environmental performance can be measured. The workgroup has identified three sectors—the equity market, the debt market, and the insurance market—and are convening three panels, one for each market sector. Each panel will include three participants: one from stock analysis (perhaps Inovest), one from an index that lists companies on a socially responsible index with an environmental component, and one on the "buy side," i.e. a stock analyst involved in analyzing environmental issues for stock picks. The insurance panel will include someone from underwriting; the others will be discussed in the next conference call. The panels will be given broad, but continually evolving questions, for example: Do you assess environmental performance? How do you do it? What is the role of environmental management systems? Additional questions will be developed in a second conference call, as well as the banking or debt side panel. The Environmental Banking Association will have its meeting in Washington, DC in June, and the workgroup hopes to have someone from that group.

Q&A

- ***Stan Meiberg*** asked for clarification on reframing the charge from the narrow question, how can EPA develop market value for implementation for environmental management systems? ***Ms. Deming*** explained the workgroup's rationale. Since many people do not know what an environmental management system is, they have been trying to "brand" systems and tease out those things that add value and that EPA could measure. It is an interactive process centered around how the market perceives environmental management and then what they do about it. They will assemble the panels and then get a sense of the direction they should take from panel members. The environmental component is becoming increasingly important across all sectors, and the workgroup is trying to be broader about voluntary add-ons that might enhance value. There is an environmental component to prominent financial deals and in manufacturing. However, some reaction to that component seems to be cynical.

- ***John Wise*** endorsed this plan, saying that, notwithstanding the expertise on this board, convening a workshop to reach out to a broader group has always enriched the dialogue.

Smartway Transport Partnership—Michael Curley

Upgrade kits for trucks, also called retrofits, are devices that increase fuel efficiency and capture emissions, but costs about $20,000. This workgroup discovered that there are millions of small polluters who do not have superior credit. Furthermore, in construction, thereis no financial benefit for the pollution devices 9only for long-haul trucking). The report on the Smartway Transport Program has grown to be more aptly called the Financial Innovation Programs for Air Pollution Abatement.

One productive idea is synthetic aggregation of small, independent truckers so they can get a discount card to help pay for the Smartway. Cascade Sierra Solutions (Oregon) is an NGO that serves as a go-between and acts as an agent to sell Smartway components. By aggregating truckers, Cascade put together financing programs and negotiated volume discounts. In response to the financial regime of small trucking companies, which is negotiating three-year loans at 14%, Cascade brokered 10-year loans at 4%. For example, the Port of Seattle could buy the trucks, and truckers could pay for them over 10 years, the average life of a truck. It makes a huge difference. Another enormous discount results from an aggregator's purchase of fuel futures by which truckers with annual contracts to companies have a fixed price for fuel throughout the year. In addition, an opportunity may be offered to the regional entities to take advantage of private activity bonds. Cascade Sierra may be involved with this.

In sum, this workgroup recommends:

1. Because reduction of air pollution is as much in the public interest as removing contaminants from water, the Agency should bring the power of tax-exempt financing through public agencies to bear on the problem of air pollution.

2. The Agency should seek groups like Cascade Sierra to be intermediaries for forming synthetic aggregations.

Q&A

- In terms of public interest, there is no difference between air and water pollution, but tax exemption was given for water because recipients were primarily municipally owned. The report should address why reducing air pollutants is in the public interest because it would be a move of tax exemptions for public entities to private entities. There is a $15 billion exemption from private activity bond exemptions in the Transportation Bill that could easily be financed. The question is whether moving in this direction will lead to stationary sources. If so, the report must provide the rationale for that change.
- Tax-exempt bonds are attractive, but taxable will be acceptable because there is only about a 2% difference. Allegedly, Congress is now on "pay-as-you-go," that is, if you recommend something that results in a tax expenditure, you also recommend something to offset it. Nevertheless, the tax code is flexible, so the board should not be inhibited.
- This is exciting because it is very different from what the Board has done previously. But it seems that even without tax-exempt financing, aggregation would provide significant benefits. The committee could look at the benefits of aggregation both with and without tax exemption. The New York–New Jersey Port Authority has a new executive director who may well be interested in this idea.
- Ports are very interested in programs such as Smartway that help them address the fact that they are air pollution sources. This is because they are concerned about regulations from the EPA. Port financing for Smartway Upgrade Kits is a good option to pursue. Ports can get better deals on loans than individuals.
- ***John Wise****:* The notion of aggregation has power and also opens future inquiries that might be useful for the board. The workgroup wants to explore more sources. For example, ports are an enormous source of diesel emissions, which creates enormous opportunity to improve air quality. Truck stops, where thousands of trucks idle all night, are another source. ***Stan Meiburg****:* The Agency has been pursuing the issue of trucks idling at truck stops; one in Atlanta has been successful as a private sector issue. Mobile-source air pollution is another issue: fleets of cars and small trucks turn over in a short period, but not heavy-duty trucks, and anything that encourages retrofitting the existing fleet will be beneficial. There seems to be continued scientific pressure downward on the air pollution control standard for fine particles. ***Michael Curley****:* The workgroup's conversation with other people at EPA has been technical rather than policy-oriented. The reaction from the truckers has been terrific. If truckers are aggregated, they could offer financing for new trucks, as well. The workgroup wants to meet with the head of air quality in the Maryland Water Quality Financing Administration (Mr. Sawyers' department).
- ***Bill Jarocki****:* For communities that are having trouble meeting the standard, this could also offer an economic development opportunity. A community could attract trucking firms to its area knowing they could offer a financial

advantage even without a port. ***Michael Curley:*** But, we may be at the wrong part in environmental financing to suggest that.

- ***Kelly Downard:*** The components of this program are cheaper fuel, cheaper products, and discounts. For the people involved in this industry, these are foreign concepts, so the most important part of aggregation is a third-party administrator. If someone does this, it will sell. The pieces are all there, but no one has known how to put them together. The government has to teach someone how to do this or be part of it.
- ***Jennifer Hernandez:*** Facility-expanded permits have been successful in California. Many people in the trucking fleet have bought the green principle and want ideas about what to do. Leveraging vendors is one, and this would just be added to the list of what would qualify as a green principle. Businesses, such as Walmart and REI, are taking a public position on sustainability; therefore, the price will go down and efficiency will go up. We need to explore the private sector. For example, school buses are among the worst offenders, and everyone can support the health of children, so tax-exempt financing would be a politically easy place to start.
- ***Lang Marsh:*** The marvel of Cascade Sierra is the collaborative approach between truckers and local government—all are on the board, so they have input into how things will work. It's a good model. And, there will be an increase in this movement as a result of our expanding trade. EPA is looking for ways to help communities disproportionately affected by added traffic. Pollution is a particular challenge to communities near densely trafficked areas, such as ports and distribution centers.
- Using navigation facilities that are already in place with zillions of dollars of investment could reduce the number of trucks on the road, which might contribute to the end result if a number of trucks could be replaced with a single barge.
- ***Keith Hinds:*** Using the profit motive, we can eliminate the need to have ports trained on these things. What about maintenance of the Smartway systems? ***Michael Curley:*** The truckers' association says they are not a burden and do not require additional maintenance; the user only has to clean the filter.
- Another model Cascade uses is technical advisory committees to deal with these issues.

Update: Financial Assurance Compliance Reviews—Susan Bromm

Mr. Meiburg introduced Susan Bromm, who is responsible for enforcement for EPA clean-up programs. She assured everyone that financial assurance is a hot topic in the world of waste. Ms. Bromm noted that the data being provided is not statistically representative, but comes only from the facilities they have targeted. Chris McCulloch and Greg Madden began.

Chris McCulloch: Financial responsibility is a national priority, and it relates not only to the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental

Response, Compensation, and Liability Act (Superfund; CERCLA), but also to underground storage tanks and the like. EPA wants to promote proper and safe management for handling hazardous wastes, to prevent the taxpayer from having to pay the bill for closure or cleanup, and to facilitate revitalization and reuse of contaminated properties. Since 2005, OECA has been gathering information related to the priority. OECA believes it is in everyone's best interest to provide viable financial responsibility mechanisms to inspire confidence among all affected. The reviews EPA has conducted have provided a "snapshot in time." For this "snapshot" in time, for closure/post-closure self-assurance mechanisms are used at 37% and third party assurance are used at 64% of facilities. However, this snapshot also shows that 56% of costs are covered by self assurance mechanisms, and 44% are covered by third party mechanisms. While this is less pronounced than an earlier snapshot, we continue to see a trend toward self-assurance. For insurance, there is also the question of the number of facilities vs the number of instruments. One insurance instrument may cover multiple facilities in an "umbrella policy." The workgroup found that one instrument covered two to 24 facilities for amounts of money varying from a few thousand to several million dollars.

Greg Madden*:* The cleanup work has focused on facilities further along in the RCRA corrective action and CERCLA clean-up process in order to target higher dollar facilities. For RCRA corrective actions, generally focused on the 2008 Government Performance and Results Act (GPRA) baseline facilities to identify targeted facilities for initial file reviews: 64% of those on the targeted list have had an initial file review. For facilities with an identified cost estimate 43% of facilities, but 58% of the costs are covered by the financial test and corporate guarantee (total costs of $535,000,000). For all instruments, average is $5 million per facility. Over a third of the total estimated costs are covered by the financial test ($7.6 million per facility); corporate guarantees are also a high cost per facility mechanism ($5.8 million). The costs for facilities with an insurance mechanism falls between those two ($6.4 million on average). For a small group of facilities, corrective action is estimated to cost nearly $1 billion. Third-party secured mechanisms are at the lower end of the scale in average cost per facility.

They approached CERCLA with the same philosophy of focusing on high dollar sites and saw the same results: Have reviewed 82% of those targeted settlements and orders, $2.4 billion of clean-up work is secured by these settlements and orders. In CERCLA even higher proportion was covered by self-assurance. 82% of financial assurance was self insurance, including annual reports. Some $971 million is spent on annual reports, and one facility has about $700 million in costs covered by an annual report.

Susan Bromm*:* Cost estimates—how good are they? States and regions conclude that costs are regularly underestimated. Lack of cost estimates and use of out-dated cost estimates are both problems. Of facilities whose files they reviewed, 37% had no independent cost estimate; and 19% had a cost estimate but it was outdated, and 12% had a cost estimate and a financial instrument, but the costs did not match. These results do not necessarily equate to noncompliance, but they do point to the need to ask more questions and delve further into the world of cost estimation to determine whether cost assurance is meeting its goal.

***Chris McCulloch**:* A number of companies and facilities use insurance to provide financial assurance. Of companies (vs facilities) using insurance for closure/post-closure assurance, 28 are privately held. This information is based only on 12 public companies. There were 13 commercial insurers, rated from A+ to A. Of the six "captive insurers," only one was rated; it was good (B++). For RCRA closure/post-closure obligations, 28% were covered by captive insurance, and there were two RCRA corrective actions. Using Altman z-scores for 18 to 24 months, three had less than 1.8, which would indicate that bankruptcy was likely.

Q&A

- ***Jim Barnes**:* Captive insurance is a subset of this analysis. Using A&M Best Ratings, most captive insurers would fail the government test. ***Greg Madden**:* But, in fact, only 10% of the captives were rated. ***Lindene Patten**:* Everyone is focused on the permittee, not the insurer. The people who bought the insurance are the ones at fault.
- ***Susan Bromm**:* If a company can pass the financial test, it will probably rely on that because there is no cost associated with it, and those companies would not be motivated to look for commercial insurance.
- ***Lindene Patten**:* How many permitted facilities were looked at, and how many are there nationwide? Since the data presented are not representative, we may be looking at the worst of the worst. ***Chris McCulloch**:* There are more than 2600 treatment, storage, and disposal (TSD) sites, and a priority for 2006 and 2007 will be 25 to 35% of that universe. About a third has been studied so far. ***Greg Madden**:* For corrective action, the workgroup did not target the ones they thought would have violations, but targeted those that had big obligations, that is those with public exposure, the ones that, if they did have problems, would have bigger consequences for the public. ***Susan Bromm**:* It was intended to be the highest risk sites. ***Greg Madden**:* The universe in corrective action is not nearly so large as closure/post-closure. Some facilities have completed all their corrective actions, and no longer need insurance.
- ***Lindene Patten**:* For those who do not operate in this area, companies will use the most efficient mechanism. The variance of distribution of customers is state regulations that will permit various financial mechanisms. ***Rachel Deming**:* Many TSD facilities are driven away from corporate guarantees and self-assurance. The presumption is that companies will use the most economically effective means, but many buy third-party insurance because the parent corporation does not keep the right kind of records and wants to remain separate from the subsidiary.
- ***Jennifer Hernandez:*** Data are not complimentary to captives, but captives are not a big segment of the market. Many captives are unrated. The board may want to suggest that there be a rating system in place**.** ***Susan Bromm**:* It is very hard to know why they are not rated and we cannot draw conclusions about that. Whether an objective was facilitating reuse of these properties was not included in the analysis. You wind up with situations where people are desperate to turn a bankrupt facility into a viable situation for the community, rather than having the site unaddressed. The money has been enough to make the deal economically viable for the new owner, but not enough to really clean it up. ***Peter Meyer**:* An increase in the number of properties getting reviews may lead to third-party assurance to make it possible for sites to be reused. ***Cherie Rice**:* Captives may not be rated because they didn't need to be and it costs money to do so. Altman z-scores were developed for manufacturers, so for the waste

services industry (with little inventory), they may not be useful and we should identify another method.

- ***Susan Bromm**:* Although anecdotal information indicates that states are trying to collect on financial assurance instruments and have had to litigate; state attorneys general do not want to pursue such cases because the cost of pursuit is not merited in light of the money that can be recouped. However, no valid analytical analysis has been done on that.
- ***Keith Hinds**:* Should we require costs estimates be updated for inflation to compensate for underestimation of costs? ***Susan Bromm**:* Some cost estimates are already updated for inflation. We can do a cost estimate early on in the corrective action process, but it will be less accurate. As we progress in the process, the estimate will be more accurate. The facilities we looked at were at the remedy select phase and quite far along in the process. ***Dale Ruhter**:* The regulations for closure and post-closure require the cost estimates to be updated for inflation. The idea behind the regulations is that cost is based on a third party to perform the work when the facility would be most expensive to close. They do not allow credits for waste that may have value as a product. We have limited information about the cost to close a facility vs the estimate of that cost.
- ***Rachel Deming**:* Considering only the insurance component, could we gain information to move forward by evaluating the identified failures for insurance instruments, or letters of credit, or surety bonds? Is the problem the language of the endorsement or policy, or the financial condition of the issuer? ***Chris McCulloch**:* Only the states can provide that sort of information.
- ***Jim Wise**:* Federal facilities are not required to do these estimates, so, although some are bad actors, we have no data on them. EPA has no statutory authority, but as the nation's environmental overseer, EPA must tell the Department of Defense and the Department of Energy that they need to do these estimates because sometimes the appropriations they rely upon do not materialize. ***Chris McCulloch**:* When they are permitted, they give the estimate, but they don't have to have the financial mechanism to pay for it because it is assumed the government will pay. ***Dale Ruhter**:* The regulations exempt state and federal governments from the subpart regarding cost estimates and requiring that they post a financial assurance instrument.
- ***John Wise**:* Many things determine whether they make the financial test. ***Chris McCulloch**:* Yes, but it's up to the government to verify. ***Dale Ruhter:*** At the Office of Solid Waste, the reporting requirements are that you file within 90 days of the close of the fiscal year. The filing includes a letter from the Chief Financial Officer of the company listing how they pass the financial test and what environmental obligations are covered, and a statement from an independent auditor. This goes to the state, but an EPA regional office can review it. ***Chris McCulloch**:* EPA has not given this area priority in the past. States say the reports are difficult to review because they do not have the necessary expertise in house. ***John Wise**:* Perhaps the Board should recommend that the federal government be required to do this and should study the self-examination. ***Rachel Deming**:* Whether or not they get a shadow bond rating (with the recommendation to further verify the financials), the Chief Financial Officer has to verify the figures, under threat of perjury. Companies that want to self-assure have to have audited financial statements. They then go to state agencies and project

managers for review. Because of the Sarbanes-Oxley legislation, auditors evaluate this closely; whether that is sufficient, is another matter.

Workgroup Reports

Financial Assurance—Stan Meiburg for Mary Francoeur

Ms. Francoeur's report covers the letter and report to the Administrator on captive insurance, and continuation of the workgroup. This workgroup worked on this draft of the letter for about 6 months; the draft is in the packet previously distributed to the board members. It recommends independent credit analysis to demonstrate financial strength of captive insurers, e.g., as is done in Vermont. If a financially responsible affiliate uses a captive, the affiliate should pass the financial test and must be formally reviewed by the rating Agency annually. Guidance may be faster, but regulations provide more certainty. The letter recommends strengthening the degree of independent evaluation, but there are three small changes: page 1, page 5, paragraph 2, and page 5, the last sentence in that paragraph. The workgroup asks the Board to approve the transmittal of this letter to the Administrator.

Q&A—Letter to the Administrator

- ***Michael Curley**:* Except for Lindene Patten, people on this Board have little experience with commercial insurance; perhaps she could explain some of these things during the next conference call.
- ***Jennifer Hernandez**:* The workgroup should think about breaking out of the RCRA financial assurance category and ask whether other forms of financial assurance warrant this group's attention, particularly Brownfield sites. The issue with Brownfield and some postclosure RCRA sites is that there is no good mechanism. Developing sites change ownership many times over; a viable real estate model would be an obligation (assessment or trust) that tracks with the land, such as is used for landslide repair. Any state with a master-plan community has the legal framework in place for this kind of regime. The RCRA model, designed to apply to the land, is a total breakdown from the real estate model, designed to apply to the owner or occupier of the land. ***Lindene Patten**:* An assessment or accrual on a go-forth basis must be discussed. Many mechanisms do not have the money now.
- ***John Wise**:* We need to inform ourselves about the insurance industry and its changing nature. Many insurers are changing their risk paradigms because of natural disasters and climate change. Can we continue to rely on insurance as the traditional model for providing this kind of environmental liability assurance? We need to look at alternatives, such as instruments that run with the land or with the title. There's a sea change in the insurance industry about their accumulated liability. ***Lindene Patten**:* This class of liability is serviced by a sub-sector of the industry, which may not be directly and significantly affected by some of these issues. It may be the ultimate repository of certain risk that cannot be accommodated under any other model. Often the more catastrophic risks are moved into such a sub-category.

- A $30,000 to $50,000 cost is an obligation; insurance is for an unknown risk. In the post-closure world, where land is being managed over time, there is a need for a known pot of money annually. Insurance does not quite fit this situation.
- ***Rachel Deming**:* Taking it back to corrective action and the Superfund context: the RCRA financial assurance regime was built for operating facilities that have a lifetime over which it would be closed, so during the operation of the asset you would accumulate sufficient resources during its lifespan. Alternative paradigms to the current RCRA regime include the regime as it applies to a sudden imposition of a large liability for historical operations. RCRA regulations do not fit that.
- ***Peter Meyer**:* This is a question of how much the Board wants to relate methods used for RCRA and Superfund on one side with brownfields on the other. (The term brownfield means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.) The issue of closure/post-closure in the RCRA context reflects the increasing concern to risk-based, corrective action and long-term stewardship (the brownfields context). From the point of view of managing these risks and coming up with the finances to address issues in the future, there is a distinct parallel. The original question came from us (brownfields) and it seems logical to continue in this direction in the future.

Mr. Meiberg called for a vote, and the Board voted by acclaim to transmit the letter to the Administrator.

Workgroup Continuation
Workgroup members would like to continue and to focus on commercial insurance and other issues, such as cost estimation—a critical area, reporting obligations, the nature of policy being issued for financial insurance, availability and reliability of insurance, or federal facilities. Workgroup members would like to reflect on Ms. Bromm's presentation and get input on what the Agency would like the workgroup to pursue next.

Q&A—Workgroup Continuation

- ***Lindene Patten**:* Best practices are a good concept to work on—today it was best financial practices. There is an underlying need to have a level of technical expertise and a set of best practices to have the best outcome, nor can we ignore best practices for implementation. If we recommend an alternative, there must be best practices for that. We must decide where the expertise stops in this group and where we need outside input.
- ***Kelly Downard**:* Insurance is undergoing a paradigm change. We asked how someone pays to fix something. With the real estate context, once someone fixes it and some assurance puts in money, and there is a value left. The market is not looking at the person who wants to use it next. We do this with designated historic properties. When real estate changes, the value changes. The site ends up with the value of the real estate. This is true also with military base closings. The next developer is another person standing at the table with money. And we have not thought about that.
- ***Lindene Patten**:* There are a tremendous number of those transfers, which are supported by structured financial instruments. Funds are set aside to address those

issues. Successful models are available. We have to analyze them and take the pieces we want.

- ***Terry Agriss**:* We need to know more about what has failed and what caused problems in the past. ***Lindene Patten**:* Another thing we need to understand is where the insurance regulations and environmental regulations intersect in terms of what has worked and what hasn't. There is a lot of information and misinformation. However, there will be limitations to evaluating this because much data is not public for a variety of reasons, and we'll have to be extraordinarily skeptical about whatever data are available. ***Terry Agriss**:* Insurance is an important tool, but not a tool to pay for planned costs. We need to focus not on the developer, but on the land. Remediating a landslide area involves planned costs; money for that can be borrowed and bonded. There may be special assessment districts, community-based funds, or NGO-based funds. They come with disclosures, fee requirements, and third-party enforcement rights by public agencies. They are a robust, but different, set of tools, and it would be valuable to understand them, both for planned costs and contingency funds. ***Lindene Patten**:* In certain circumstances, insurance can be a funding tool for such expenses. It is part of the financial services industry and to suggest that insurance is limited to catastrophic risk or fortuitous events may result in inefficiencies. We need to look at flexible structures.
- ***Jim Tozzi**:* The government gets all of these reports, which are audited. Therefore the information is available to the public. Dr. Tozzi would like someone to take Mr. Dell's forms and see if the system is working. Are people in fact paying?
- ***Stan Meiburg**:* Reporting is an issue for discussion. Our challenge is to not bite off more than we can chew. Which would the Agency most like us to focus on?

Update: Environmental Finance Center Network—Sam Merrill

The nine universities represented (with nine different mission statements) discussed a diverse set of activities and projects, a few of which are described:

***Sam Merrill**:* The New Hampshire Department of Environmental Services wanted help evaluating how to do infrastructure forecasting, building on Jeff Hughes' work in Region IV in 2003. This group helped them think through top-down vs bottom-up approaches and cost vs accuracy trade-offs and how to hybridize a plan for New Hampshire's particular needs.

The other project is a tool to help individual communities wrestle with how to take questions. A huge portion of people has neither the level of sophistication in tools and approaches, nor the economic level to adopt these methods. Many small, rural communities do not have tools available to evaluate their own conditions. A few hundred are nearly unorganized townships with no Internet access. To assess a water system's health, the Environmental Finance Center created a 25-question, self-driving survey, e.g.: Does your system have a capital investment plan and system to invest in capital projects? The questionnaire is scored and suggestions made.

***Heather Himmelberger**:* This workgroup used to be focused on how to get more cost effective environmental management. Asset management was the common-sense way to do things better, but there is a need to blend what Steve Albee was doing. At a recent New Mexico meeting, everybody was at the table except for state regulators and financial agencies. New Mexico finances and regulate many water systems and is trying to adapt principles for small systems and is doing a great deal of outreach to the New Mexico state agencies. Systems that do asset management will get 10 points, as part of the community development block grant (CDBG) application process, which will help them get funded. The Water Investment Investigation Team (WIIT) looked at different aspects of management, which they hope will lead to a requirement to do asset management. They asked the Environmental Finance Center Network to look at three small communities' water systems, and the workgroup put together a guide using Steve Albee's approach at a simpler level. They hope this will tie them into the future and help get Region VI states moving into sustainability, using tools such as asset management.

***Jeff Hughes**:* The Environmental Finance Center Network partnered to try to get as many rate structures and rate sheets as possible for water and wastewater from across Georgia; they got 415, which accounts for 95% of the people served by centralized water and sewage in Georgia. These figures are computerized so that for any place in Georgia, the rate can be calculated, grouped, and mapped for all consumers. Pricing has huge effects on finance and the message sent to consumers. Institutionally and regionally, some of the biggest battles have been over pricing. Also, they want to promote responsible use of comparative data, and this database could help people compare like data. Many state agencies use pricing for their criteria for, e.g., preferential interest rate–based policies. This project was also an excellent way for the Environmental Finance Center to partner with a number of other organizations. In this way, other organizations will know who we are and what we can do for them.

In Georgia, unlike other states, the number of accounts and size of the utility had almost no effect: Small utilities charge the same as large utilities because small utilities use groundwater and large ones use surface water. In other states, the larger the utility, the lower the rate. In Georgia, there is a big variation in high consumption amounts, but not in the average amounts (the average user is assumed to use 6000 gallons per month), which has implications for price-setting. We tried to determine the message a utility's rate structure sends their customers: increasing-block rates promote conservation (the more water used, the higher the rate), but there are also uniform rate structures (the user pays the same regardless of actual use) and decreasing-block rate structures (the more water used, the less it costs). However, for the decreasing-block rate structure, the base is so high, that the decreased cost actually has little effect. The group intends to continue these analyses state by state in Region IV.

Q&A

- Private utilities are not included here, but, on the side, we did a little analysis. The private sector has very small utilities serving maybe one community, and prices tend to be higher. In North Carolina, we included not-for-profit water corporations, which were in line with government, but it is difficult to make accurate comparisons for investor-owned corporations because they are so small.
- Whether there is a trend toward privatization, reflected in the rate structure, will be discussed in a session in the Paying for Water Conference.

- ***John Wise:*** North Georgia is different from the rest of Georgia because of their efforts to impose the increasing-block rate structure, but is the rate structure higher or lower? ***Jeff Hughes:*** Of local utilities, with decreasing-block tariffs, 30% charged higher marginal prices than those with increasing-block tariffs. ***John Wise:*** The marginal price creates conservation, not the rate structure.
- This information is extremely useful. In Maryland, the question is how we know the number of gallons used per month. In Georgia, we did not ask what customers actually used; past experience is that it would be 4500 to 7500 per month. Much depends on the weather, which varies greatly every year.
- ***Greg Madden:*** Arizona has surveyed all 1200 utilities in the state every year since 1999, and they have found that privately owned utilities are more likely to charge full-cost rates, whereas publicly owned utilities are living off depreciation and deferring maintenance and investments. These statistics are now used by USEPA to score their utilities.

In conclusion, regarding data collection problems for rate structure Mr. Merrill shared a quote they received: "The city is being abolished and things are in disarray right now. The city clerk has left and we are completely confused by this matter. We cannot find records to compare and we are looking for them.

Remarks from Administrator Stephen Johnson

Joe Dillon introduced and thanked Administrator Johnson, saying that he is a major supporter of EFAB. The Administrator thanked the Board members for their service and dedication, and especially he thanked Mr. Barnes for his willingness to chair the Board, and Mr. Meiburg for continuing to serve as Designated Federal Official.

The decisions EPA makes can affect the entire nation and the world, so EPA needs information to make the best decisions. The President's charge to Mr. Johnson was to accelerate the pace of environmental protection while maintaining our country's economic advantage—not one or the other, but both. The Board plays a critical role in helping to fulfill this charge. There are many common grounds on global climate change and biodiversity, and neither can be considered in isolation. And, they have to be part of sustainable economic development. So the question is how to do that?

One of Mr. Johnson's priorities is to leave EPA a stronger place than he found it 26 years ago. He supports senior executive service (SES) rotations as a way to break up "stovepipes" across the Agency and the federal government, particularly the parts EPA interacts with. Mr. Meiberg has begun a two-year detail at the Centers for Disease Control (CDC), and in only two months has learned of opportunities to collaborate. Another priority is our nation's water infrastructure. A recurring theme in the 2008 budget hearings was the significant challenge of how to take on an aging infrastructure. Financing issues are an important part, which could include lowering debt-servicing fees, or leveraging state loan funds. The 2008 budget includes the private activity bonds, something this Board worked through. The bonds will have a short-term effect on taxes, but will bring great benefit. When the RCRA cap was removed, they saw increased investment (from $1 billion to $3 billion per year). The Board will be asked for advice and counsel on approaches to dealing with combined sewage overflows as part of our guidance.

Mr. Johnson welcomed the three new members (James Gebhardt, Scott Haskins, and Lindene Patten). He paid tribute to Mayor Girardy, a member of the board, and expressed condolences to his wife. The Administrator honored Billy Turner with an award, acknowledging his seven years' service on the Board, during which he contributed more than four decades of experience.

Q&A

- ***John Wise & Terry Agriss*** asked Mr. Johnson to expand on his four priorities. *Mr. Johnson* had begun with a list of 80 or 90, from which he winnowed four: sustainable infrastructure, homeland security, a stronger EPA, and clean air.

  A $7 billion to $8 billion budget leaves a $300 billion shortfall for infrastructure, which must be addressed from a financial, technological, and public policy standpoint.

  Homeland security for water is EPA's responsibility, as are emergencies on land, such as oil spills. EPA has a critical role in detection and response to weapons of mass destruction.

  For a stronger EPA, we must think of human capital and of the fact that in the next five years, 50% of senior managers are eligible for retirement. We must be prepared by being sure we attract the brightest and the best. The intersection between energy and the environment is manifested particularly in air.

  We need to clean up the air and at the same time make sure we have affordable energy. The United States has been criticized for not signing the Kyoto Protocol, but Mr. Johnson reminded critics that no other country has done as much as we have to address global climate change. Since 2001, we have spent $29 billion on this and are continuing to do so. The Energy Star Program saved $12 billion in 2005 on greenhouse gas emissions. We have an aggressive, yet practical program with China and India. The Alternative Fuel Standard, which will raise the standard for auto efficiency, was just sent to Congress. Efforts for clean air will focus on working in collaboration with others to have clean and affordable energy. EPA needs to see that we in the United States are meeting or exceeding our standards. Improving the permitting process would help accelerate that process. EPA is responsible for writing the renewable fuel standard, overseeing its implementation, and making sure that we meet the first legislative mandate—7.5 billion gallons by 2012. Myriad opportunities will occur by working with agencies, such as the Department of Commerce and the Treasury. We need to get off the treadmill of dependence on foreign oil. This is a national security, energy security, environmental, and economic issue.

Workgroup Reports (Sustainable Water Infrastructure Projects)

Leveraging the State Revolving Funds—George Butcher

A more precise charge is the review and commentary on the relative effectiveness from a financial perspective of the leveraging approach. This will be done in two phases: data collection and data analysis. A one-page summary comparing clean water and drinking water had been distributed to board members; the data, which were not available until December, are overwhelming. Mr. Butcher thanked Kit Farber of the EPA for providing information on state programs.

States are groups according to financing structure: direct loans, hybrid states, and leveraged states. Hybrid states issue bonds to leverage federal and state contributions, but issued only 25% of loans and capitalization grants. Leveraged states (which originated 60% of all loans) within the clean water revolving fund have received half of the total federal contributions in state or federal loans. In clean water revolving funds, 16 states are above average. There is 20% growth in federal capitalization grants, and in the drinking water revolving fund, 14%. For a final report, the workgroup also looked at a finance agency's role. Direct loan states are far less likely to be assisted by a finance agency or authority; the opposite is true for leveraged states. The workgroup will compile comparative data for both clean water and drinking water.

Q&A

- ***Jim Smith:*** The Office of Management and Budget (OMB) has indicated that by 2018, there will be no more federal money. Given the reality of diminishing capital into this program, it might be useful to review what the Administrator asked the workgroup to do. The question put to us is, what can you do with the financing you have and expect to receive to multiply that and get the most efficient use possible? It was not to support leveraging as the best way. Leveraging is borrowing, but it gives more money to make more loans. ***Mr. Butcher:*** In the next conference call we will discuss various conclusions. We expect to have a completed report by the August meeting.
- ***Jim Tozzi:*** Why are retained earnings from leveraged states for both mechanisms about the same as retained earnings? Decision criteria would be helpful to see the objective function you're maximizing; the criteria are not obvious from these numbers. ***Mr. Butcher:*** More retained earnings result because the money is not being used to the fullest extent—not making as many loans or not providing as much subsidy as you could. You can't draw inferences between direct and leveraged loans. EPA's goal is to know how they can most effectively utilize the federal dollars; that is what we need to articulate. Leveraging is not robbing the fund of future capacity.
- ***John Wise:*** How much money is evolving for the two funds annually? ***Mr. Butcher:*** Earnings in 2006 are about 1.7% annualized. Whether it's revolving old capital or whether it's new capital, it's an earning capacity of the fund. The hope is that the facility will become sustainable.
- ***Andrew Sawyers:*** Planners in Maryland thought they had enough coming in that they could supply the demand for the foreseeable future, but that is no longer true. Leveraging is available, but it is not for everyone. Some states receive the minimum

allocations, which probably should not be leveraged under any circumstances. ***Greg Swartz:*** Whether a state should leverage may not depend on its having a minimum allocation; it has much more to do with the presence of a finance agency to guide them through the process. There are ways the state can fund itself to support leveraging, such as charging an annual fee on the loan. Furthermore, states are distrustful of financial people, and in some states, a finance agency is told to stay out of it.

- ***John Wise:*** In New York, the maximum leverage with no delinquencies in 20 some years is about 100 to 1. Total capitalization grants total $24 billion—what is the financial assistance benefit going to be? That is the driver to how you use your capital. For hardship cases, they offered 0% loans. Every state uses bits and pieces of a number of instruments. For two-thirds of the market rate, you can leverage your program three times. In New York, they are capitalized to the extent that they could go into the bond market and get a AAA rating. Special reserve funds (SRF) are under-mortgaged from a financial point of view. ***Andrew Sawyers:*** The real issue is political will and making political judgments. ***Michael Curley:*** Interest rate and hardship assistance are two critical drivers. We have a meeting with the governor to discuss raising interest rates. The connection between useful life analysis and this is also important. The ability to make 30-year loans makes the SRF competitive. ***Greg Madden:*** The relationship between the interest rates and what a community could do on its own should be considered. Some compliance costs are not absorbed when you go on your own. It takes more principle to borrow from an SRF, but at a lower interest rate, it could equal the cost of a loan with less principle at a higher interest rate. There seems to be no direct relation between interest rate and leveraging.
- ***Bill Jarocki:*** What is happening to all the federal funding they are used to? States where Mr. Jarocki works are very rural, and the biggest program from these states is the SRF. He expects increased demand because it's the cheapest money available. Another issue is the lack of enforcement in the drinking water area. It might be useful for EFAB to add information about what is happening to other money and what is likely in the near term. People in the legislature don't know what is going on**. *Dave Miller:*** Federal allocations in New York have decreased from $44 million in 2001, to less than $10 million last year. Many rural states have been focusing on the value of the utility, and that's the educational piece. It is sustainable to lend at the rate of 70%, and leave 30% to grants. And, it will never be cheaper than today with construction costs doubling monthly. The demand for SRF will increase, and anything we can do to explain that will be helpful. ***Terry Agriss:*** If some communities have been borrowing through SRF, they could borrow on their own and we should let them do that. In the City of Baltimore, multiple projects need to be done, so we can help them get more projects done. Subsidized financing extends how far their available money will go.

Private Public Partnerships—John Boland

Eliminating the State Cap on Water Bonds

The workgroup drafted a letter to the Administrator on the proposal to eliminate the state cap on water activity bonds. The workgroup was concerned that anyone would interpret this as reducing the need for SRF, or that it would be interpreted as solving the infrastructure financing gap problem. However, there is a potential source of capital in the private sector that could be brought to bear on water and wastewater.

Q&A

- Privately owned facilities should be addressed for clean water, but there is as yet no paradigm or model to address this.
- ***John Boland**:* You don't know how much capital will flow if the cap is lifted. Input the workgroup received was that, if they had the same advantages as the public sector in the bond market, then they would invest more. So this might bring more capital into the market. An enormous amount of private equity money is looking for investment opportunities. It would be interesting to investigate what the barriers are to this investment. The workgroup is talking about that; Bill Riley may be a resource for this.
- ***Terry Agriss*** suggested deleting "unfortunately" in second paragraph.

The group voted by acclaim to send the letter to the Administrator.

Potential for Public Private Partnerships

Public private partnerships range from outsourcing minor activities to investor ownership of the entire utility. The workgroup wanted to find out whether barriers (real or imagined) impede otherwise desirable partnerships. Every partnership is situation-specific. EPA has published documents and handbooks on the subject, and EFAB has published a few reports on it. Formerly it was policies concerning long-term contracting. To get up-to-date, they conducted informal surveys among their peers asking what has been done lately. Were they successful? If not, why not? What were the failure modes and barriers? So far, they have collected successes, but no barriers. Continuing this learning process, Scott Haskins gave an overview of what the City of Seattle has done with water treatment plants with two different vendors. They are not ready to convene a workshop and are continuing to collect information.

Q&A

- ***Steve Grossman**:* The Milwaukee example doesn't go to ownership. A possible obstacle may be that there are buyers, but a limited number of sellers. ***Andrew Sawyers**:* An important discontinuity occurs when you transition from contractor ownership. There is plenty of money to be spent on the down-side, but not for consolidation. Smaller systems are being gobbled up and consolidated.
- ***Andrew Sawyers**:* Perhaps the workgroup should also be thinking about public corporations to consolidate small systems. ***Billy Turner**:* There is opposition to consolidation on the private side, although many are consolidated in Australia and Europe. We have 160,000 drinking water facilities that are permitted by EPA and 16,000 wastewater facilities. It is too many, especially now that we have electronics that allow us to monitor from 50 or so miles away. But, this is a political issue. ***Jennifer Hernandez:*** More package plants serve new communities, so there are many smaller and disaggregated units, typically owned or operated by a public utility district, but more often privately constructed in a new-town model.
- ***Jeff Hughes**:* A few sessions during the week discuss these issues. In other sessions, there are discussions about alternative roles for the private sector. There are a painful

number of facility ID numbers to deal with: in North Carolina one private utility owns 700 systems. Although it has one rate system, one front office, and one staffer, all 700 come in as disaggregated system. They are often the small ones nobody wants. The barrier has always been obvious with private equity firms wanting to buy colonial waterworks. Existing equity totals billions and billions of dollars in this state. Public policy in the United States comes into play. Local owners don't ask for a rate of return on that equity. The problem seems to be that equity companies do want a return on their investment. We could have an influx of capital, but if you handed it over to your customer base, they would want a rate of return. ***Heather Himmelberger**:* New Mexico tried to consolidate its water utilities two years ago. (There are 100 water systems within the boundaries of Albuquerque.) Now, when they try to consolidate, there's a bill to abolish them, and two bills to block eminent domain.

- ***Scott Haskins**:* There is a backlog of infrastructure problems, rising rates, and providing high service at low cost. Ownership, governance, and service provision can be different strategies. Regionalization, which implies consolidating debt, is one option, but there are others, e.g., high-performing utilities could offer their services to other utilities. ***Lindene Patten**:* We should focus on technology with point-of-service delivery, which is done in other places, but not the United States.
- ***Greg Madden**:* At least for private utilities, invariably every state has a public utility commission. If a single owner owns multiple systems that are not contiguous, one cannot be used to subsidize the others—why would a private utility have rates higher than need be to subsidize rates of another utility? ***Andrew Sawyers**:* Public utility commissioners are sensitive to issues of fairness and equity and will see uniform rates as a positive.
- ***John Boland**:* The abominable failure of "package plants" was one of the things that pushed passage of the 1972 Clean Water Act. Package plants were popping up everywhere and were then abandoned. The state may not be able to capably monitor many small facilities. ***Terry Agriss**:* They are not likely to be owned or operated by a private entity, but are likely to be operated as a piece of equipment managed by the district so it becomes more like a satellite.
- ***Jennifer Hernandez:*** Telling people where their water comes from when it is reclaimed water can be a problem. This moves into wastewater as a water source where aggregation will not be a trend.
- ***George Butcher**:* The workgroup will have survey results ready for discussion at the August meeting.

Expanding the Definition of State Revolving Fund Financing—George Butcher

This report represents a novel approach, but, as indicated in the report, it would require new legislation to implement. Mr. Butcher expressed appreciation for the addition to the portfolio of alternative ways to bolster financial resources and promote sustainability.

Sustainable Watershed Financing—Lang Marsh

An important issue is the Agency's financing for watershed restoration, a complex subject that generates much interest. Most responses called for EPA to do internal adjustment. The

Non-point source workgroup met this morning, and Mr. Marsh will follow-up with Craig Cooks to offer further assistance and cooperation. Then the workgroup will report to the Board in August. They intend to stage operation for the March meeting and have another discussion with the Agency some time before that. Region IV will meet with the workgroup to discuss whether they can offer some demonstration areas as a follow-up, and they are thinking about the possible use of the model in the Great Lakes states. Outreach continues, e.g., River Network (an NGO) participants have invited Mr. Marsh to speak with them. The workgroup will issue a report to the National Policy Research Center to the governor and state agencies and possibly others. After another year's work, they will review whether they can continue to be helpful.

Q&A

- ***Julie Belaga:*** We have identified a number of troublesome watershed areas. It's an attractive arena for organizations and NGO's that deal with this area. We need to analyze at least for a year and see what EPA does and how we can be helpful. Another participant concurred with the request for more time. The current finance capability of watershed coordinators is at best at kindergarten level, while EPA talks about more sophisticated things. He has asked colleagues in his state to react.
- The National Academy of Public Administration is completing a report (the Agency has a draft of it) for the Office of Management and Budget (OMB) and EPA that focuses on the challenges of environmental protection in the future. This workgroup gets strong and favorable mention for dealing with financing challenges, so these ideas are being further disseminated.
- *Andrew Sawyers:* The Maryland Greenfund, in response to discharges into the Bay, levies $2/square foot for new impervious surfaces, e.g., parking lots, driveways. In new development areas, it levies $0.25/square foot.

Ben Grumble

Mr. Grumble dropped by to say "hello" and "thank you." He said the Administrator is committed to EFAB and its usefulness and looks forward to hearing more about sustainability and financing.

Financial Capability Guidance—Andrew Sawyers

Mr. Sawyers discussed the *Financial Capability Guidance* with Jim Hanlon, who has a copy of the document. (A copy of the guidance had been distributed to board members.) Having gotten input before the meeting, Mr. Sawyers hoped the board could endorse the guidance at this meeting.

Financial Capability Guidance addresses a community's economic condition and the investments needed to make water quality improvements. It demonstrates how EPA will evaluate ability to pay, which will determine time frame for the municipality in a 2-phase process of determining a residential indicator, and then a series of financial indicators. Lastly these 2 are combined.

Jeff Hughes summarized the main recommendations. EPA wants an easy-to-explain, quantifiable, quantitative scale for utilities facing significant implementation costs. They want to be able to summarize their financial capability to implement assessments of combined sewer overflows (CSO). The working group started with the premise of customer impact and system impact, and the difference between system-level affordability and household-level affordability. The premise is that a local utility will implement CSO, and the burden placed on them will be a function of the impact of their customers and the overall health of their utility. This work was done in 1996 before the "4 pillars," which may influence the current work.

To summarize: Residential impact is a single indicator, whereas systems impact is multiple indicators. We should consider having 2 to 4 separate indicators to assess the impact on customers (right now they only collect residential data). The residential indicator is cost per median income, done on pure cost, not household expenditure. But, we should consider the rate structure, rather than household cost derived by dividing household cost by expenditures. The 1997 factors omit some things we now consider important, e.g., depreciation. Therefore if a utility wants to invest in asset management, cost per household would not give enough information. The biggest issue is whether use cost or rate impact indicates incremental cost of rate implementation or cumulative impact of CSO. Since all analyses are done with a billion dollar investment, cumulative impact may make more sense. However, if it is done cumulatively, where does it stop? If it is done incrementally, does that take into account the community burdened with other regulations? The workgroup concluded that it might be possible to do both, so the workgroup does not recommend doing one or the other.

On the financial systems side, comments mainly addressed updating the approach now that we have a different framework for finance. Few utilities now depend on property tax to finance activities, as was prevalent in the 1990s. It is more like a bond-rating process. They look at bad debt rather than tax collection rate and then convert the figure to debt per customer or per capacity. Greg Madden suggested ratings language.

Q&A

- *Andrew Sawyers:* The National Water Quality Assessment Program (NAQUA) has other creative suggestions, but is in agreement with this.
- *Jim Barnes:* Mr. Barnes thanked the workgroup for complying with an aggressive schedule. It is time to look at the 1997 report, and these recommendations will serve well for considerations to go into the process. The board received 2 white papers on methodology from NAQUA and the Senate Environment Committee. We will be beginning a process, although the process in not yet clear. On January 25, the *Federal Register* gave notice of new and invasive OMB guidance, and how the Agency will implement that is under discussion. Mr. Barnes hopes the board will be available for telephone advice and counsel; the Agency does not have this expertise. *Stan Meiberg:* This has been a different model for the Agency's work, and he commended the workgroup for pulling it together in such a short time.
- *Jim Tozzi:* The report is substantive and aggressive, but the letter is wimpish and should be rewritten to encourage people to read the report. Accumulative vs incremental cost pricing is a basic issue, however, Dr. Tozzi interprets the report to say that cumulative is of secondary ranking, so incremental is primary; therefore, the

workgroup is not truly neutral. Of all the issues addressed, is not the issue of capturing cumulative vs incremental so large that it dwarfs all the others? *Andrew Sawyers:* The letter is “wimpish” to communicate that we thought the original document was good and that this group just wanted to highlight the recommendations. The matter engendered much discussion. They wanted to look at both incremental and cumulative, and to a certain extent it is unresolved.

- *Jeff Hughes:* It might be good to rephrase it with a multi-indicator metric. *Terry Agriss* would vote for “cumulative.” We need to make a decision in a report being provided to the Agency with recommendations. She is uneasy about saying members of EFAB are decided if they have not come to consensus. Ms. Agriss recommends giving the Agency 2 options along with the benefits and disadvantages of each. *Dr. Tozzi:* Few people really understand this very complex issue. Therefore, this board is not likely to come to a conclusion in a reasonable time. *John Wise:* “Incremental” and “cumulative” are entirely different. The incremental method asks, if we do this, what is the cost? The cumulative method asks the ability to pay and is related to affordability rather than to the project per se. Incremental financial is primary; but cumulative is neither irrelevant nor unimportant. Mr. Wise agrees with the sentence as Jeff wrote it. *Mr. Sawyers* summarized the workgroup’s position: The way it is written expresses our meaning, but discussion might be expanded to incorporate Mr. Wise’s comments. We are not in disagreement; there are 2 different approaches, but they get at 2 different things. NAQUA has not proposed using incremental, but we can show that there are benefits to both. *Stan Meiberg:* The workgroup will revamp the paragraph and, in the next couple of weeks, circulate it by e-mail for comment; silence will mean agreement with the revision.

Sustainable Finance Policy—John Wise

Across the landscape of America—companies, local and state government, student activism, new curricula and degrees, and the military—we see convergences of thinking and practices about the issue of sustainability. In San Francisco last August this workgroup was established, its purpose being: to build on this convergence of activity and thinking on sustainability and to urge EPA to embrace sustainability as a strategic management agenda, fulfilling in part some of Administrator Johnson’s priorities; to focus on ecosystem assets as well as pollution control; and to use the Agency’s resources wisely to move the agenda forward. With the first draft of a report (in the packet distributed to board members), the workgroup tried to identify the notion of sustainability in terms the Agency can grasp and to identify the ecological imperative. It is not enough to control pollution to meet public health goals; we must attain an environmental objective to compliance endpoints and then reach beyond that to protect ecosystems and the things they provide.

The Office of Research & Development will facilitate the measurement and assessment of how we are doing. To enhance EPA’s agenda, we need more emphasis on processes to use as tools, such as life-cycle assessment, full-cost pricing, and rate structures. There are geographic ways to organize around watersheds and air-sheds that could be important vehicles for organizing and delivering financial services. We need more emphasis on emerging market places for ecosystem assets, carbon markets, water rights, and conservation banking, keeping in mind EFAB's purpose to make recommendations to the Administrator. We need to delineate the issue, as we did when we addressed how to pay for environmental protection. In sum, if we think ecosystems are important, how will we pay for them?

Q&A

- *Jim Tozzi:* The board has to look at the role of the board. Innovative financing I understand, but this paper goes to doctrine, ideology, and moral obligations, which seem too broad for this board. *Keith Hinds:* The report is well written as a thought piece, but it is much broader than a finance paper and should be narrowed to matters to which you can assign a dollar value. *John Wise:* On the other hand, the Administrator encouraged talking about sustainability.
- *Rachel Deming:* It is completely outside government. Ms. Deming sees the potential value as a vision of the Agency that gets away from the traditional compliance role to incentives for sustainable environmental performance. We should strengthen the idea that it is continuing in a direction in which has already been going—e.g., environmental management systems are not mandated by any statute—not that the direction is so different from what the Agency has been doing. This should be presented as an action by the Agency to seek enhanced environmental performance, to give incentives to reach the next level, to go beyond typical compliance and the regulatory role to suggest overarching ideas that go across the silos.
- *X:* It goes well beyond the role of advisory board. We should focus solely on financing issues. The speaker looks forward to next draft and urges caution that we recognize our mandate.
- *Bill Jarocki:* We have to look at the paper to understand the bigger context of sustainability. In a financial context, it is part of the environmental goods and management and how you bring that into the calculation. We need to look more at environmental economics. Values, judgment, and measurement come into play although they may not be measurable in a dollar amount.
- *John Boland:* Both times the Administrator has spoken to this group, he used the word "sustainability" a number of times. We will not define sustainability for the Agency, but we have to understand it for ourselves. This paper will inform us and stimulate discussion. The paper shows linkages. *John Wise:* The previous paper Dr. Boland wrote was about stewardship, which is a bold proposal. We should initially consider it as a policy piece for our own edification.
- *Peter Meyer:* Many people think sustainability is a moral issue, but it is also an economic one. A particular remediation approach can minimize financial cost in an economic system, so we should take a broader look at the economics of incorporating the issue of sustainability and whether it leads to more efficient policies. This whole issue is central to the mission of the Environmental Advisory Boards.
- To submit practical suggestions and things the Administrator can and cannot do in his remaining time, we should separate it into 2 pieces: one is big picture policy, and the other is suggestions that are practical and do-able. That is, we continue to look at the paper as a policy piece for internal use by the board, but we extract specific ideas for the administrator. Finally, we aim for a paper that would be a board product on any issue. The board as a whole has no competence for the first paper—what sustainability

is and how it affects our work. From that paper we extract things we want the board to review.

Public Comment

No comments.

Closing Remarks and Next Steps—Jim Barnes & Stan Meiberg

The next meeting will be convened August 15 and 16, 2007 in San Francisco at the Nikko Hotel (in response to an overwhelming vote).

Mr. Meiberg thanked everyone and adjourned the meeting.

Meeting Adjourned 5:15

Participants

March 19

Sue Breggum, Waste Management
Susan Bromm, EPA OECA
George Faison, EPA OSW
Greg Mason, GEFAEFAB
David Miller, USD-Rural Development
Dale Ruhter, EPA
Dick Swanson, ASTSWMO
Larry Zargon, EPA

March 20

Stacey Berahzer, UNC, EFC
Jenny Bielanski, USEPA
Sue Breggan, Waste Management
Cynthia Dougherty, EPA OGWDW
John Duffy, Mat-Su Borough, AK
George Faison, EPA
Alan Farmer, EPA Region 4
Kevin Garon, DuPont
Robert Hall, USEPA
Shana Harbour, USEPA
Greg Madden, USEPA
Chris McColloch, USEPA
Kevin Mathews, AIG
Peter Meyer, NKYU
David Miller, USDA
Cara Norton, EFC
Matt Robbins, EPA Region 4
Dale Ruhter, EPA
Bob Stewart, N-RC
Dick Swanson, ASTSWMO
Barney Turney, BNIA
Maria Vichen, EPA

EFAB Membership

Chair
James Barnes

Designated Federal Official
Stanley Meiburg, National EPA Liaison, CDC

Congressional
Pete Domenici, U.S. Senate

State & Local
Kelly Downard, Chairman, Louisville Metro City Council
Jamed Gebhardt, Chief Financial Officer for the New York State Environmental Facilities Corporation
Steve Grossman, Executive Director, Ohio Water Development Authority
Scott Haskins, Deputy Director, Utility Systems Management, Seattle Public Utilities
Gregory Mason, Assistant Executive Director, Georgia Environmental Facilities Authority
Andrew Sawyers, PhD, Program Administrator, Maryland Water Quality Financing Administration
Billy Turner, President, Columbus Water Works

Business & Industry
Terry Agriss, Vice President, Energy Management, ConEdison
Donald Correll, President and CEO, American Water
Rachel Deming, Partner, Scarola Ellis LLP
Stephen Mahfood, President, Mahfood Associates, LLC
Lindene E. Patton, Senior Vice President and Counsel, Zurich North America
Cherie Collier Rice, Treasurer and Vice President of Finance, Waste Management, Inc.
Jim Tozzi, PhD, Multinational Business Services, Inc.

Banking, Finance, & Legal
George Butcher, Managing Director, Municipal Finance, Goldman, Sachs, & Co.
Michael Curley, Executive Director, International Center for Environmental Finance
Mary Francoeur, Director, Financial Guaranty Insurance Co.
Jennifer Hernandez, Partner/Co-Chair, National Environmental Team, Holland and Knight, LLP
Keith Hinds, Financial Advisor, Merrill Lynch
Helen Sahi, Director, Environmental Services Department, Bank of America
Greg Swartz, Vice President, Piper Jaffray & Co.
Sonia Toledo, Managing Director, Merrill Lynch
Justin Wilson, Waller Lansden

Associates, Organizations, Academia, and Public Interest Groups

Julie Belaga, Co-Chair, Connecticut League of Conservation Voters
John Boland, Professor Emeritus, Johns Hopkins University
Langdon Marsh, Fellow, National Policy Consensus Center, Portland State University

Environmental Finance/Independent Consultants

James Smith, Bozeman, Montana
John Wise, Hidden Valley Lake, California
Sam Merrill, PhD, University of southern Maine
Mark Lichtenstein, Syracuse University
Dan Nees, University of Maryland
Jeff Hughes, University of North Carolina
Lauren Heberle, University of Louisville
Kevin O'Brien, Cleveland State University
Heather Himmelberger, New Mexico Institute of Mining and Technology
Sarah Diefendorf, California State University
William Jarocki, Boise State University

Environmental Finance Staff

Vanessa Bowie, Director
Alecia Crichlow, Analyst
Vera Hannigan Senior Analyst
Susan Emerson, Analyst
Pamela Scott, Analyst
Timothy McProuty, Senior Analyst
Sandra Keys, Admin Assistant