

material. There are fundamental issues of institutional commitments, ethics, and other things that I think will be more of a problem in the long run. We can discuss the scientific and public policy legitimacy of cost-benefit analysis as it relates to decision making, but we also must recognize that this type of analysis is very different from the USACE's internal cost-benefit considerations affecting whether and how it moves forward with projects. We must consider how the USACE identifies a viable disposal alternative using its internal cost-benefit analysis approach, which is a mind-numbing exercise.

There is a failure to recognize what problem we are trying to manage. What is it that we are trying to manage? Institutionally, the USACE perceives itself more as managing a program, which is dredging harbors and channels. The USACE does not necessarily view this as a problem specifically of managing the sediments; the programmatic approach is much broader. You find within USACE regulations a great deal of forced consistency among the various programs, including inland navigation and flood control, which also creates institutional constraints to solving this problem.

Similarly, the EPA traditionally has focused on managing problems through a regulatory perspective, although increasingly the EPA is divided against itself. It is adopting the rhetoric of watershed management planning, the rhetoric of working with the states on performance partnership agreements to establish cross-programmatic priorities to adopt, at least in a generic sense, some of the recommendations that Tom Wakeman mentioned about environmental controls. Yet the EPA mission is fundamentally regulatory, and most agreements with the EPA have a clause at the end that says, "This is not to give up any of our traditional regulatory authority, but thank you very much for working with us on these issues." These things will continue to plague us as we try to address these issues.

I will conclude by making a couple of general observations. First, with regard to the states, I am paid to say that the states do not perceive themselves as "just

another stakeholder." We have a very significant role to play, not only in regulating but also in trying to manage these problems and respond to the public concerns about these problems. This point is not recognized in the report, which contains inaccurate descriptions of the states' role with regard to water quality certification and particularly state consistency determinations under coastal zone management programs. From the outset, the report takes a federal and academic perspective. I think the decisions on management of sediment, contaminated or otherwise, will be made—and are being made—most effectively at the local level by local decision makers, including state and county governments. For example, the Great Lakes region is way out in front in addressing some of these issues on a regional and state-specific basis. That is where the action will be, and I urge you, when looking at these recommendations, to think in terms of how you can facilitate decisions at that level.

Second, I often see diagrams of the myriad environmental and state controls and regulations and so forth, accompanied by statements about what a problem that is. Presented like that, this issue becomes like the "simple" questions John Haggard presented earlier. They are simple as he presents them, because he knows what answers he wants. When you present those issues in a certain way, they are not complex. But we get what we want; we get what we ask for. At the moment, that is still what the public wants. They want to be able to respond to specific problems, and those regulations are probably the best way to do that.

Despite all the discussion about wanting to respond to things in more broad-based ways, I think our decisions will continue to be driven by media specifics, storm surges, and so forth. We must recognize that reality and deal with it in the short term while also coming up with a long-term scientific and regulatory approach to address those issues. In the long term, that is the real issue for the environment. The real public health issue is the insidious, creeping nature of these problems.

LEGAL PERSPECTIVE

Konrad Liegel

I am a practitioner in Seattle, Washington, EPA Region 10, a region of the United States that has had, for more than a decade, a comprehensive, joint federal/state program for managing contaminated sedi-

ments. We in the Northwest like to think we are on the cutting edge of sediment management, whereas others around the country may feel that we are far more on the lunatic fringe.

From the previous members of the panel, we know that contaminated sediments profoundly affect ports, municipalities, industries, and transportation entities that have to work with sediments as part of dredging, source control, natural resource damage, and environ-

mental cleanup activities. As an environmental attorney, the challenge for me is to advise you in how to shepherd a project through regulatory approvals so that it remains cost-effective, environmentally sound, timely (the biggest challenge of all), and fair with respect to your actual contribution to the contamination.

Like the other panel members, I am in general agreement with the conclusions and recommendations of the report, in particular the importance of the USACE and EPA continuing to work together to develop consistent methodologies to assess, evaluate, and manage sediments. There should be no difference between a dredging action and an environmental cleanup with respect to the particular sediments in question. I also want to emphasize, as Frank Bohlen did, the importance of involving relevant stakeholders at the beginning and throughout the process.

I want to digress for a moment to mention a project that a client started about 10 years ago. The client was a pulp and paper company, which had just purchased a plant in a Superfund region near Tacoma, Washington. The company had put in source control measures and was thinking about cleanup. The record of decision (ROD) for the Superfund site was about a year away. The company determined that the best approach for the contaminated material was to leave it in place, move some additional contaminated material to that place (it was a depositional environment), and then cap it, bringing it up to the intertidal elevations to produce a habitat. The agencies were uncertain, given the concerns about in situ capping and the fact that an ROD was on its way. Because the company had approached the environmental community early on and discussed the project, the environmental folks weighed in at the last moment, saying that, in this case, they believed the proposed remedy would produce habitat benefits and that action at this time was more important than inaction. The cleanup went forward. After 10 years of extensive monitoring, they have proven to be right. The contaminants have stayed in place, and the habitat is flourishing.

I want to call particular attention to the portion of the report focusing on beneficial reuse of sediments. In this case, the pulp and paper company built up habitat in that area while managing the sediment. I believe that the report, with its emphasis on risk management, fails to give sufficient recognition to the role of habitat. Sediments are habitat, as we well know, and in our region of the country—maybe because of habitat considerations, maybe because we are about to have a listing of Chinook salmon—habitat considerations are invariably complicated and delay remediation efforts. In considering how to deal with contaminated sediments, there needs to be an increased focus on the role of sediments as habitat.

One important conclusion that I derive from this issue is also deserving of more emphasis in the report. Specifically, decision making and project implementation would be improved if the goals of land use and resource management planning were combined more often to develop project plans that are both environmentally sound and economically attractive. What follows from this perspective that I feel should be added to a strategy for addressing contaminated sediments? First, there should be an emphasis on source control, because sediments, as we know, are a sink for contaminants. When it comes to sediments, an ounce of prevention is worth a pound of cure, a reality that is given insufficient emphasis. Second, it is important to allow for natural attenuation. Sediments keep building up in certain regions, and that means, through the processes of natural recovery and natural attenuation, the risk posed by contaminated sediments will diminish with time if they are left in place. Third, there should be a focus on beneficial reuse. When dredging, we should use this material for something rather than simply disposing of it. Fourth, we should look for ways to integrate cleanup with habitat restoration and industrial development, so that a project will get the most bang for the buck.

Because I am supposed to provide the legal perspective, I will conclude with a few observations on needed regulatory reform. There is not so much a need to legislate wholesale changes to existing laws as there is a need—and this was recognized in the report—to promote policies that interpret regulatory requirements based on the intent of the underlying laws. What do I mean by this? First, when it comes to Superfund, it is important to view in-place capping as a permanent control under certain circumstances. My earlier example of the pulp and paper company shows that, in certain instances, in-place capping can be a long-term, permanent solution that also has important habitat benefits.

Second, with respect to Section 404 of the CWA, although there is an emphasis on selecting the practicable alternative that has the least in-water effect, there is also an element of the 404(b)(1) analysis that is not looked at much. While you focus on the least damaging alternative with respect to the aquatic environment, you also should consider the environmental consequences of other practicable alternatives, so that, in the end, you look not only at the risk but also at the costs and benefits associated with all of those alternatives.

Third, as I mentioned before, we should use the laws to encourage projects that integrate sediment remediation, habitat restoration, and industrial redevelopment. Fourth, building on a point that Frank Bohlen made earlier, it is important to encourage the development of regional approaches to the management of contaminated sediments, because the needs and the dynamics in

different regions are different. Through that process, we can allow for the development of consistent federal and state approaches to contaminated sediments rather than settling for conflicts among federal, state, and local approaches.

Finally, I will weigh in on the debate of who is responsible and who should bear the risk. I think we need to work toward no longer making ports a target of opportunity when it comes to sediment remediation. When it comes to dredging, this means confining the

analysis of impacts to the dredging prism targeted by the ports; facilitating, in the case of Superfund or even in CWA Section 404, the ability to institute cost-recovery actions so that the costs are allocated fairly between the ports and the upstream dischargers; and looking at things in a watershed context and in a source-control context, so that—perhaps through the process of total maximum daily loads or the like, as indicated in the report—there is a means of progressively limiting the contribution of contaminants from upstream sources.